Alliance for
Internet of Things
Innovation

AIOTI Signature Event • 27 September 2022

AIOTI Testbeds Methodology and Catalogue – Role in AIOTI and Next Steps

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Co-Chairman of AIOTI IG Testbeds

Charles Sturman, Chair of AIOTI IG Testbeds

Agenda

11:55 – 12:45   **AIOTI Testbeds Methodology and Catalogue Session**

    Moderator: Rute C. Sofia, AIOTI Testbeds Co-Chair (fortiss GmbH)

    11:55-12:02 Introduction to AIOTI Testbeds and to the Session, Rute C. Sofia

    12:02-12:45: Panel - Perspective on next steps, role in AIOTI and applicability aspects

    Panelists:

    Charles Sturman, Huawei (Chair of AIOTI IG Testbeds)

    Georgios Karagiannis, Huawei (Chair of AIOTI WG Standardisation)

    Germán Corrales Madueño, Keysights Technologies Laboratories, Denmark (IG Testbeds member)

12.45   **Lunch break & networking**

Session Format

- Total duration: 50m

  - Panel duration: 43m

- Introduction by moderator, 7m

- Each speaker: 7 m for presentation

- Between speakers: 5-7 m for questions, supported by the moderator and involving the audience

- Final remarks by moderator

AIOTI Testbeds Group

A Testbed is defined as: *'A platform (hardware and / or software) implemented on a trial basis in order to explore and evaluate a set of technologies as a solution to a set of use cases, business challenges and / or domain-specific needs. '*

Scope:

- Promote the advantages of IoT and edge computing in various vertical domains using testbeds

- Facilitate AIOTI members in finding testbeds to validate new developments for specific use cases

- Create network of federated AIOTI testbeds

Deliverables:

AIOTI Testbeds Methodology

AIOTI Testbeds Published Catalogue

SCAN ME

SCAN ME

AIOTI Testbeds Portfolio
Catalogue of IoT Solutions focused on IoT Testbeds

Browse the solutions provided by AIOTI members in the table below.
If you need to return to the main page, just follow this link.

AIOTI IG Testbeds Catalogue

Name	Provider	Domains	Use-cases	Access	Testbed stage
CCC, Climate Coalition Change	,Ottawa, Canada	Cross-domain, climate action	Energy, Agriculture, Land use, Industry, Finance, Building, Transportation	not available, local and remote, based on a specific agreement	use-case

Description: The CCC Testbed series are set to demonstrate practical use cases from the Climate Chain Coalition, a global multi-stakeholder membership of over 270 organizations in over 50 countries (CCC Members). CCC Members use a variety of DLTs (e.g., Ethereum, Hyperledger, Algorand, Chia, Tezos, Stellar, IOTA, Bitcoin) in combination with other digital technologies. The DLT-enabled digital solutions are deployed for a variety of use case applications (e.g., carbon markets with tokenization and transactions, emissions accounting and MRV, supply chains and product carbon footprints, adaptation to climate impacts, innovative climate finance). Demonstrations and reports with insights into the technical layers allow observers to properly understand how DLT is applied in combination with the IoT and IT stack.

Concept:	**Technology:** Convergence of IoT, DLT, AI, Digital Twins, and legacy IT components
Hardware On-Premises, Edge and Cloud combined	**Software** Legacy IT and IoT platforms combined with different DLT protocols.

Online at:
https://aiotieu.github.io/testbeds/
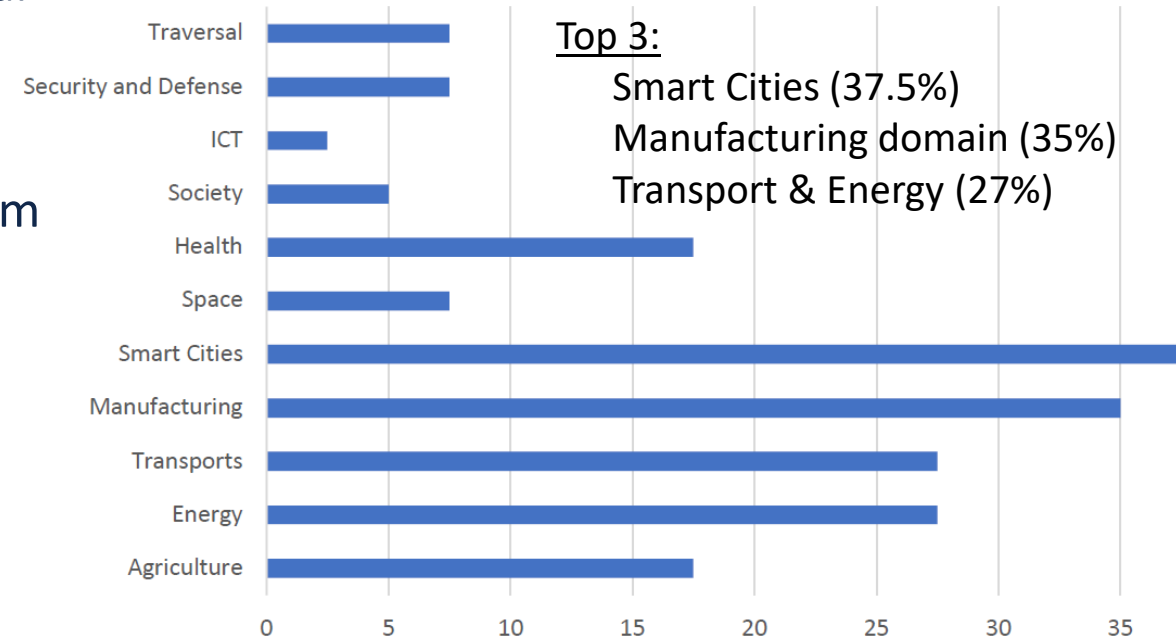
AIOTI Testbed Catalogue

Key criteria:

- Partner organisation names, Testbed URL, Target domains and Use-cases Contact details, Partner collaboration potential

- Testbed stage e.g. Use-case; Proof-of-concept; Deployed

- Testbed summary identifying key technologies and system components

First version published Q4 2021:

- 40 collected testbeds: 4 in use-case stage; 8 in Proof-of-Concept stage; 28 are deployed testbeds

- 'Live' version now online at: https://aiotieu.github.io/testbeds/

Vertical Domains addressed in Q4 2021 Release

Top 3:
Smart Cities (37.5%)
Manufacturing domain (35%)
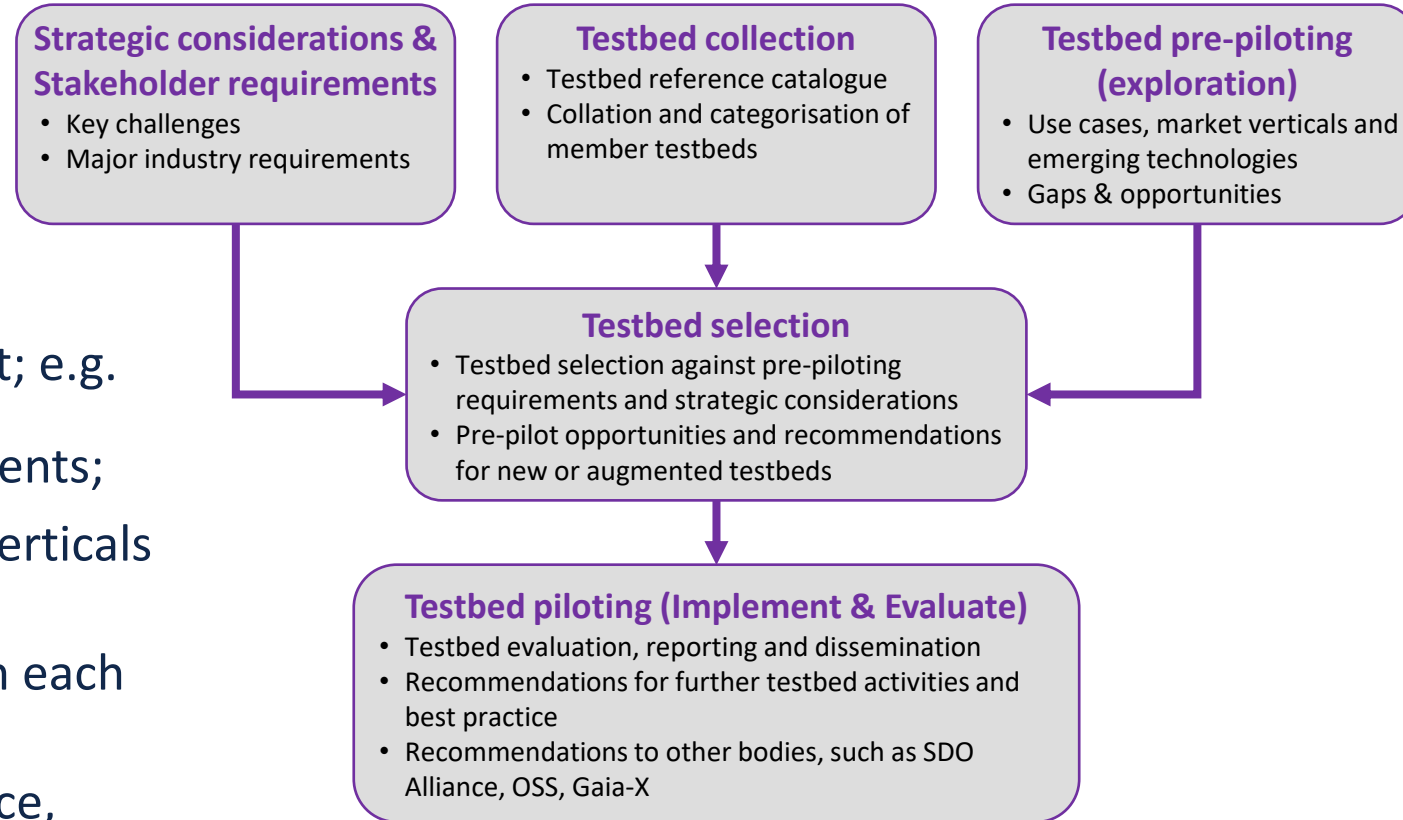Transport & Energy (27%)

AIOTI Testbed Methodology

Agreed methodology to support the collation, categorization, management and dissemination of information on AIOTI member testbeds

Key components:

- Collate and categorise member testbeds against defined criteria

- Identify key rationale for testbed deployment; e.g. technology proof, use cases and business improvements and interoperability requirements;

- Identify emerging technologies and market verticals where testbeds are strategically necessary;

- Capture important learnings and results from each of these testbeds;

- Report on and document testbed performance, best practice and gaps

Strategic considerations & Stakeholder requirements
- Key challenges
- Major industry requirements

Testbed collection
- Testbed reference catalogue
- Collation and categorisation of member testbeds

Testbed pre-piloting (exploration)
- Use cases, market verticals and emerging technologies
- Gaps & opportunities

Testbed selection
- Testbed selection against pre-piloting requirements and strategic considerations
- Pre-pilot opportunities and recommendations for new or augmented testbeds

Testbed piloting (Implement & Evaluate)
- Testbed evaluation, reporting and dissemination
- Recommendations for further testbed activities and best practice
- Recommendations to other bodies, such as SDO Alliance, OSS, Gaia-X
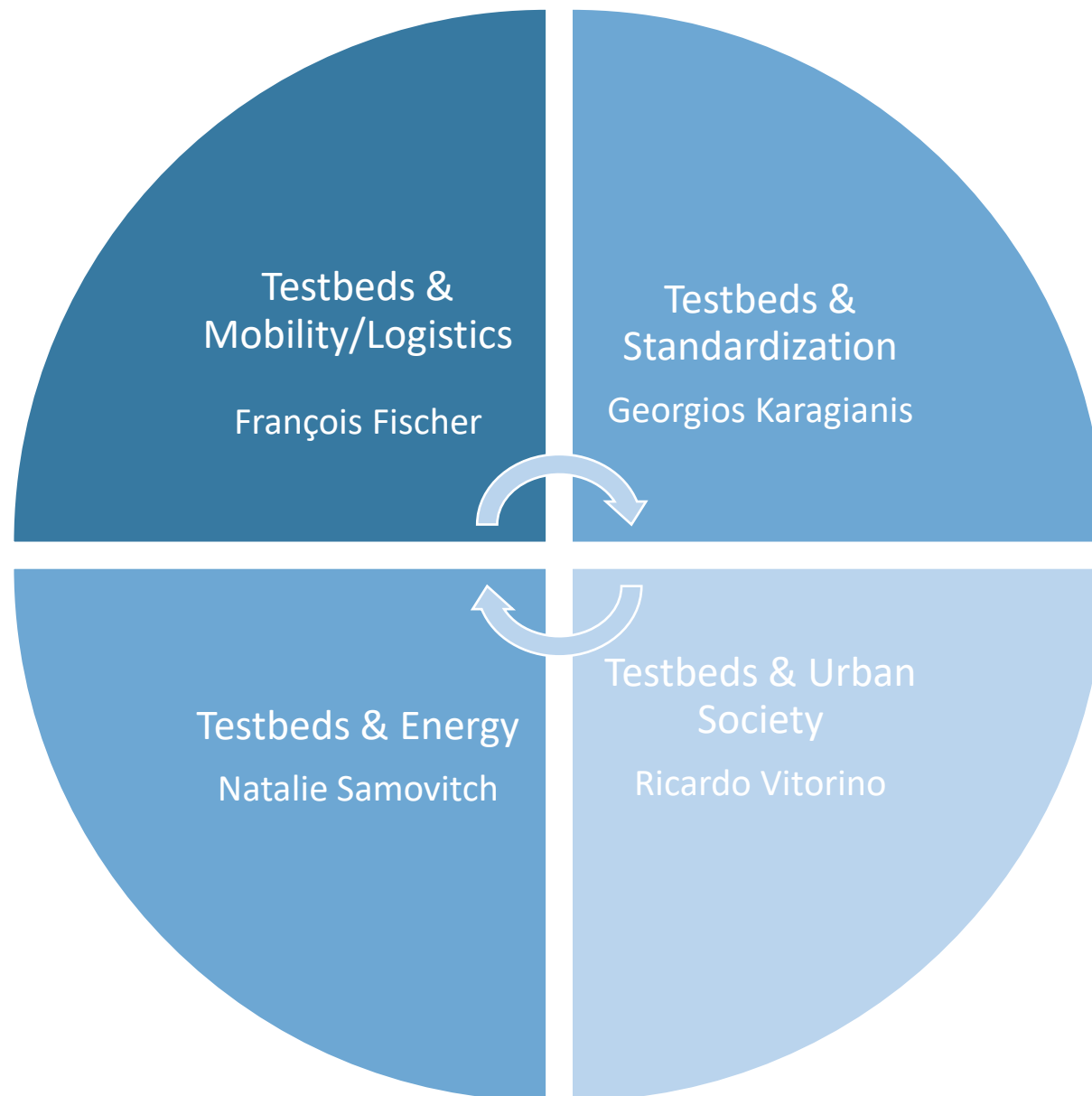
Based on concepts drawn from existing testbed activities such as the EU Living Labs initiative, the IEEE Future Networks Testbeds Working Group, the EU Fed4Fire initiative and the Industrial Internet Consortium (IIC).
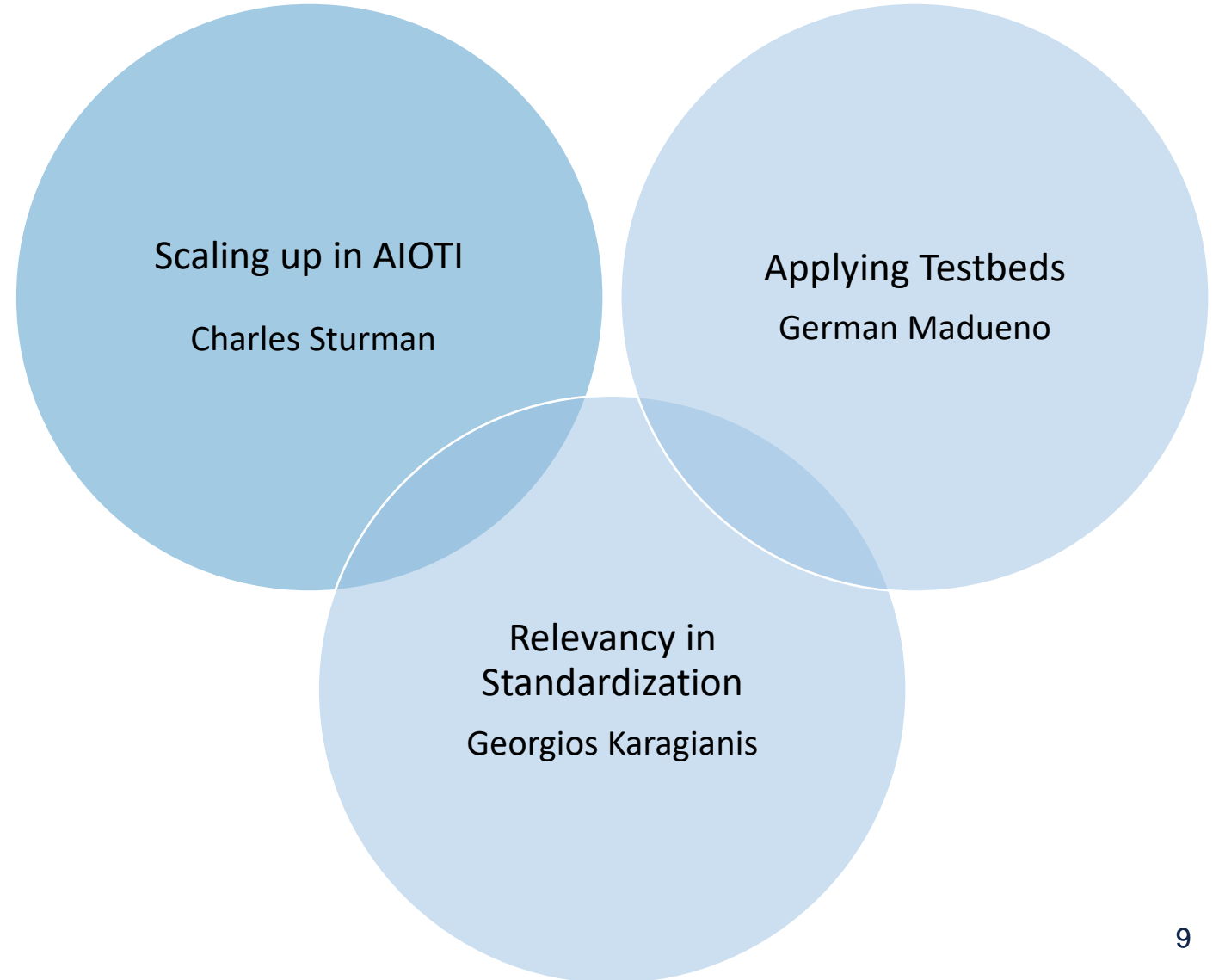
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AIOTI Testbeds – Where are We?

IoT Week 2022 / June 2022

- IG Testbeds as catalyzer for use-cases, emerging technologies, faster contributions towards standardization
- All AIOTI WGs members rely on testbeds for R&D and to test product viability
- Application of testbeds is relevant for the analysis of business models across AIOTI (intra and cross-domain)
- IG Testbeds can be a facilitator in the access to the end-user – common issue across all AIOTI WGs.
- Relevant identified areas of application for IG testbeds: digital twins, green deal, AI engineering, IoT swarm, IoT Edge integration across several sectors.

Testbeds & Mobility/Logistics

François Fischer

Testbeds & Standardization

Georgios Karagianis

Testbeds & Energy

Natalie Samovitch

Testbeds & Urban Society

Ricardo Vitorino

AIOTI

AIOTI Testbeds - Role and Applicability

- **Today**: Perspective on next steps, role in AIOTI and applicability aspects

Scaling up in AIOTI

Charles Sturman

Applying Testbeds

German Madueno

Relevancy in Standardization

Georgios Karagianis

Thank you for listening

Any questions?

You can find us at @AIOTI_EU or email sg@aioti.eu

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