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World Standards Day 2017
ILNAS-SnT/UL Research Programme

Prof. Dr Pascal Bouvry

ILNAS-UL Research Programme

- **Programme title**
  - "Normalisation technique, Confiance numerique dons le domaine Smart ICT (Big Data, loT, Cloud Computing)"
- **Duration**
  - 4 years research project
  - Co-funded by ILNAS-UL/SnT
  - Start date: 05/2017

- **Participants**
  - 3 PhD students, 1 postdoc, 1 professor dedicated to the project
  - 1 PhD student and 1 postdoc hired, 2 PhD students arriving
  - ILNAS/ANEC/UL personnel also participates
- **Research programme objective**
  - Creating an innovative environment on digital trust for smart-ICT and the related standardization efforts
  - Development of a new master program (Life-Long Learning) in collaboration with industry

The trustful Smart ICT Ecosystem from a Research Perspective

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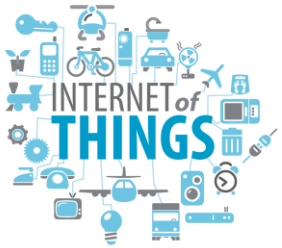

Core research pillars:
IoT, Cloud computing, Big data and Analytics

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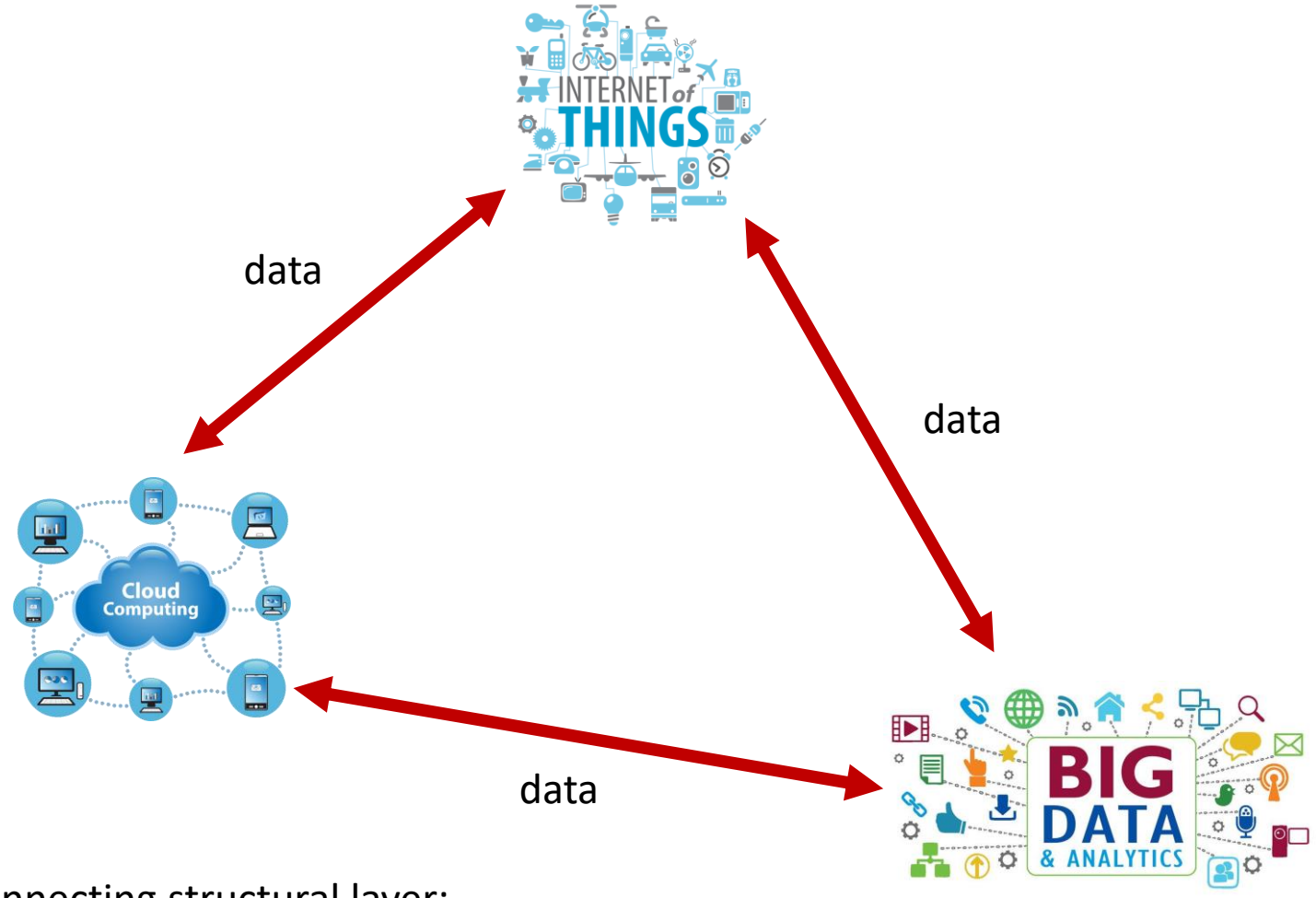

Connecting structural layer:
Data

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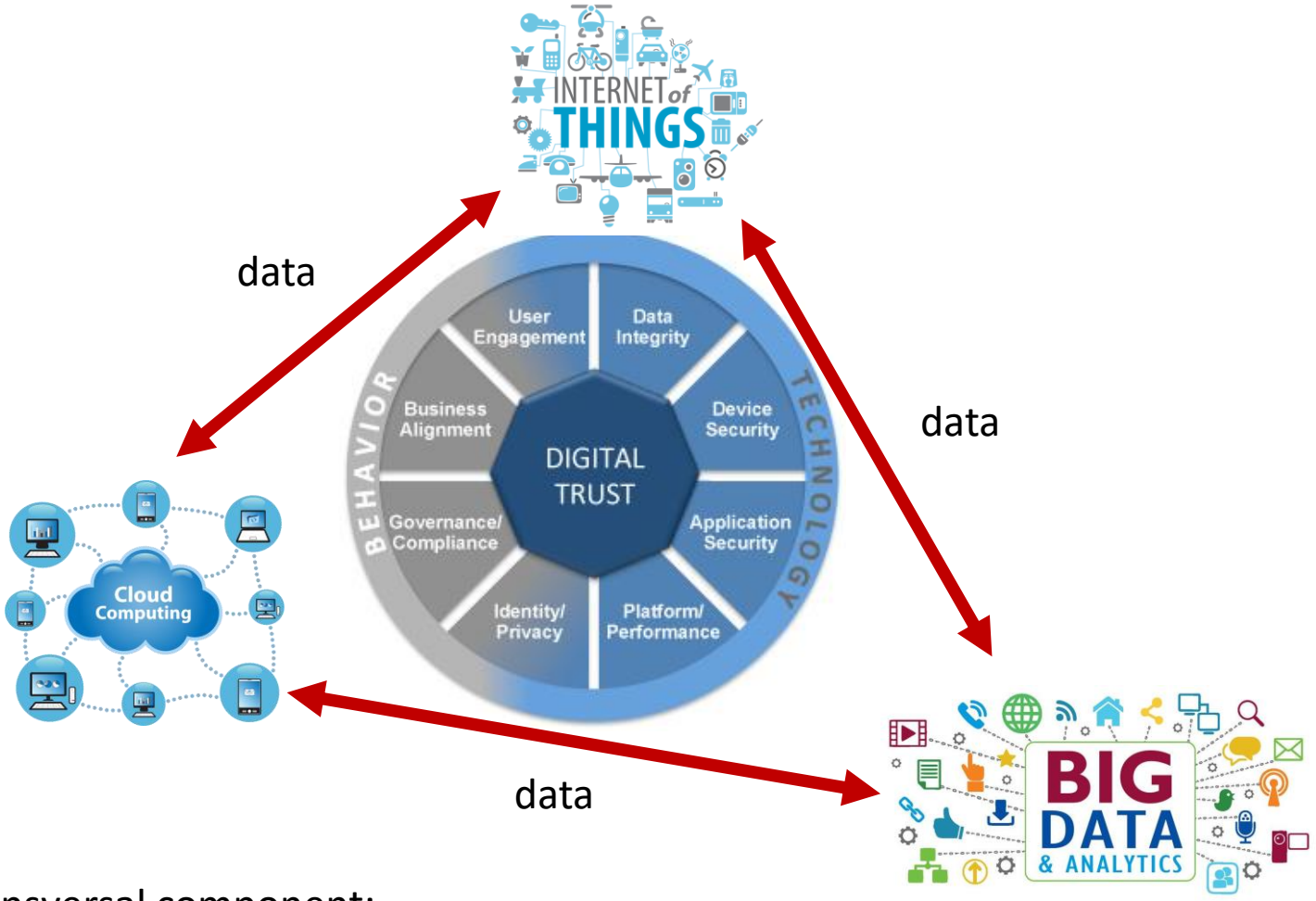

Transversal component:
Digital Trust and Security

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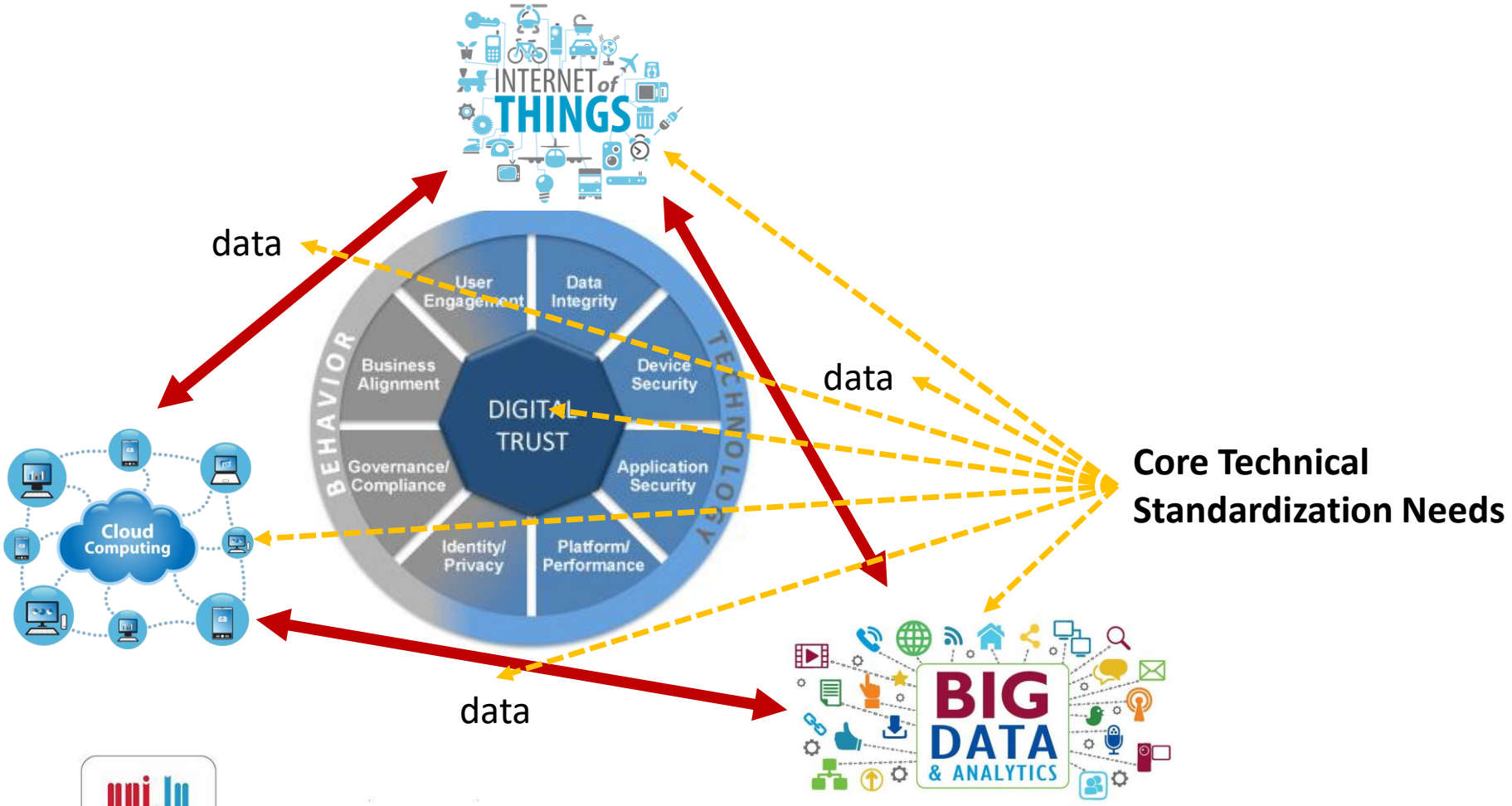

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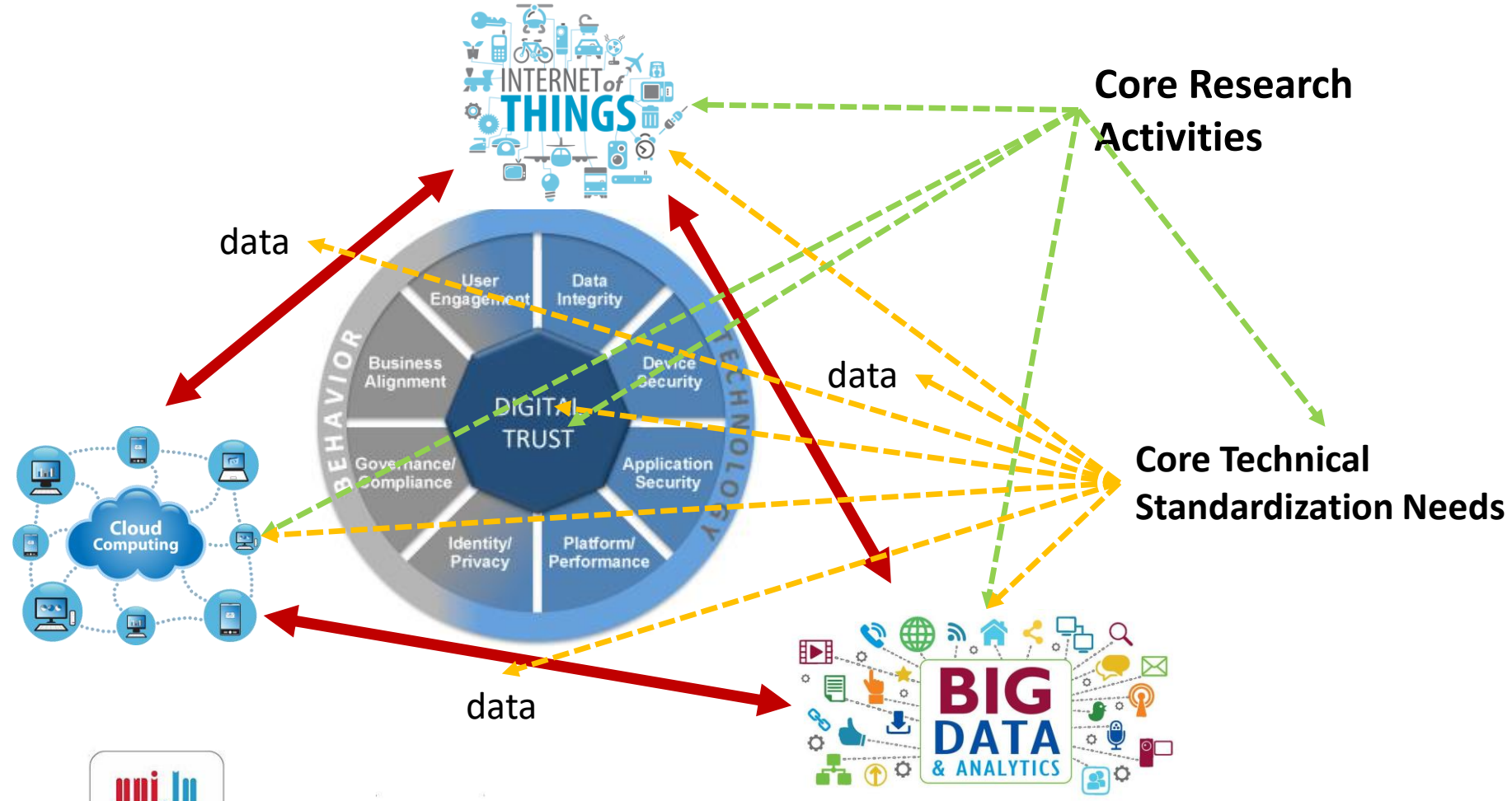

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Smart ICT Targets

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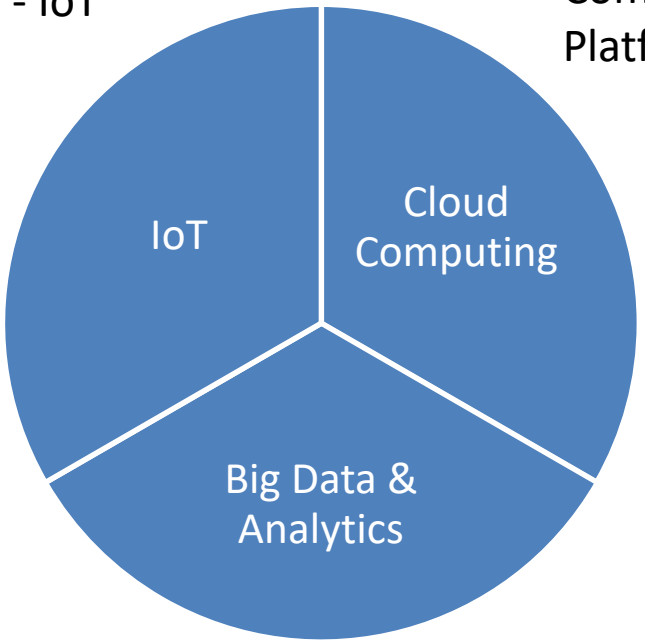
ISO/TC 20/SC 16 – UAVs
ISO/IEC JTC 1/WG 10 - IoT

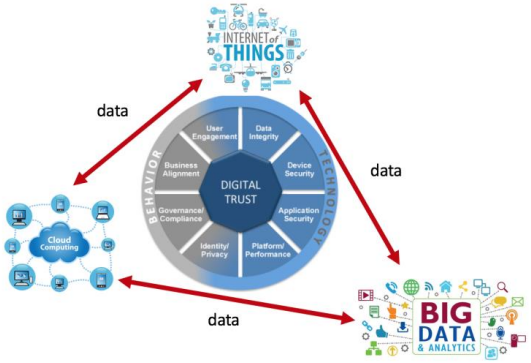
- Optimized mobility models
- UAVs autonomy, path planning models, and other contraints
- UAV swarms multi-fleet of multi-rotors and fixed wings
- Trusted and secure communication protocols



ISO/IEC JTC 1/SC 38 – Cloud Computing and Distributed Platforms

- Coordinated Cloud Services implying service definition and interoperability
- Dynamic pricing models: provider, broker and user viewpoints
- Cloud Service Level Agreements and Pricing

- Biomedical data standardization (CDISC)
- Efficient and privacy-compliant data integration at an international level



ISO/TC 276 - Biotechnology
ISO/IEC JTC 1/WG 9 - Big data

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The trustful Smart ICT Ecosystem from a Research Perspective:

Team & Expertise – Use case driven approach

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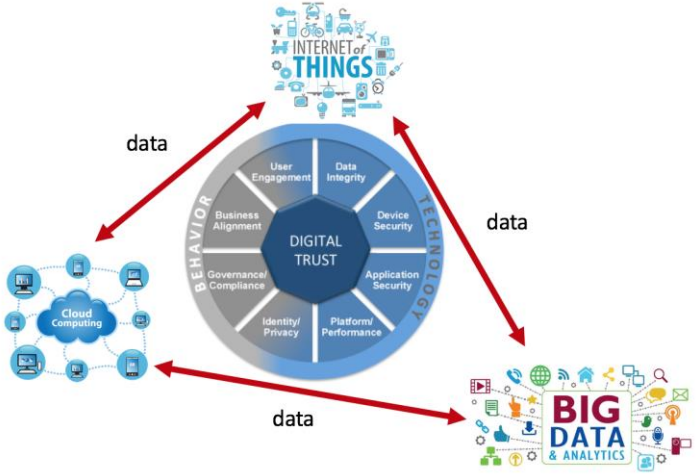
1 PhD Student
Nader Samir
- Industrial experience in UAVs

1 Postdoc
Matthias Brust



1 PhD Student
Chao Liu
- Cloud Computing

1 PhD Student
Saharnaz Dilmaghani
- Standardization experience
- Big data publications

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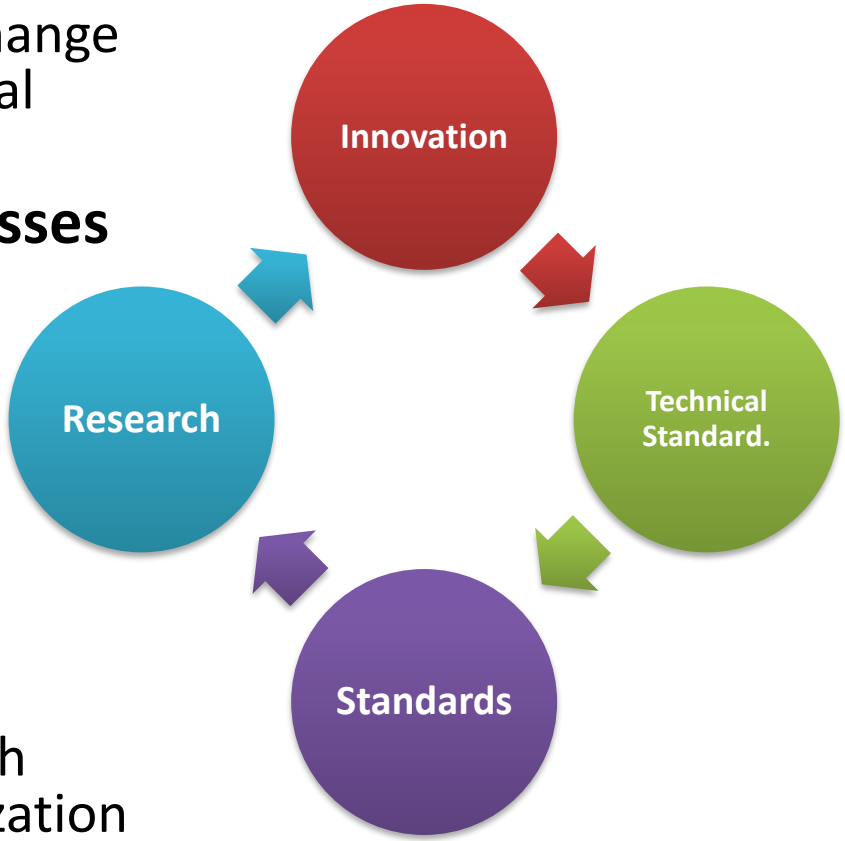
Technical Standardization Research

- **Objective**
  - Optimizing the interface and exchange between researchers and technical standardization
- Analyzing **standardization processes**
  - Diffusion, influence, impact
- Aimed **outcomes**
  - Opportunities for researchers (spreading their innovation)
  - Identifying needs for technical standardization (for existing innovations/product/processes)
  - Shorten the gap between research outcome and technical standardization



Key Points

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- Conducting high-end research on the Internet of Things, Cloud Computing and Big Data
- Strong collaboration between University of Luxembourg and ILNAS
- Feeding a new master degree in digital trust for smart-ICT
- Collaboration between research/education and standardization in Smart ICT is key towards an interconnected, sustainable and resource efficient economy for Luxembourg

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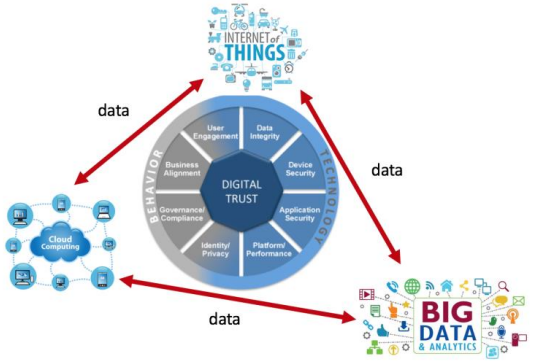

Thank you for listening!

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