Do IoT

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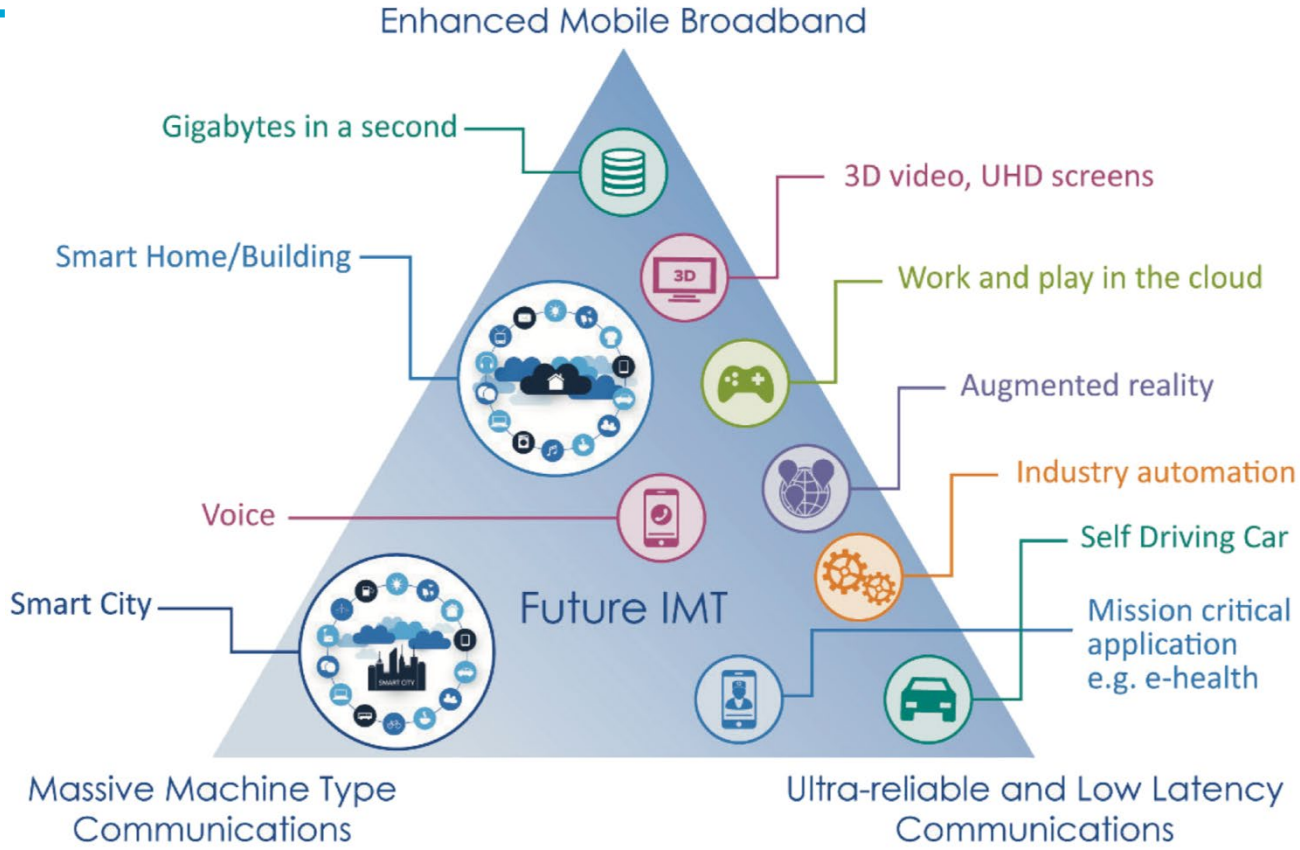
TU Delft

New IoT wave

Internet-of-Things (IoT) is no longer only about small resource-constrained (wireless sensor) devices

5G for IoT



Source: ITU “Setting the Scene for 5G”

Delft on Internet of Things

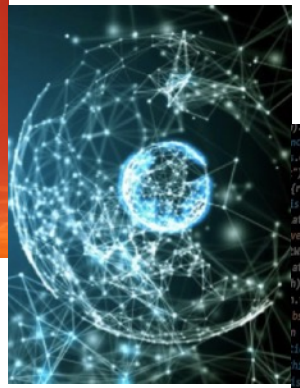
- https://www.tudelft.nl/iot/

- Mission:
  - Become the Dutch IoT hub
  - Combine technology and creativity (within and beyond TU Delft)
  - Putting theory to practice in a field lab

Connect IoT

Energize IoT

Program IoT



Secure IoT

Design IoT

Govern IoT

Do IoT focus areas

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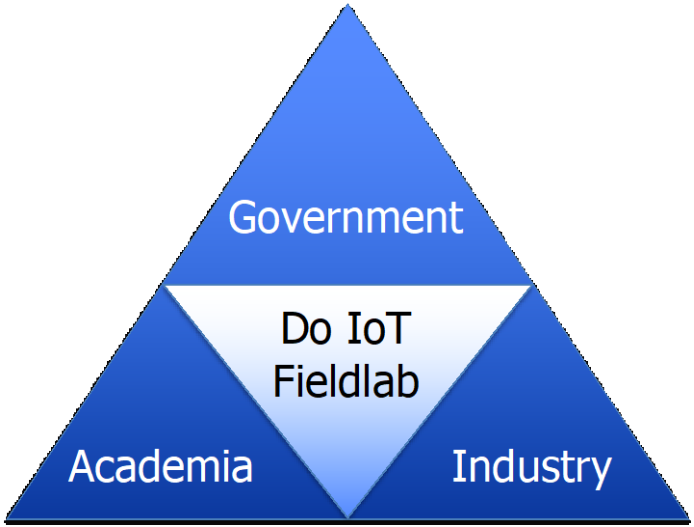
Ambitions regional governments

- Boost:
  - Regional economy
  - Investments
- Stimulate
  - Innovation SMEs & start-ups
  - Collaboration
    Government – Academia – Industry
- Prepare for:
  - 5G communications
  - Internet of Things



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MRDH project 5G Fieldlab ZH

- MRDH = Metropolitan region around and incl. Rotterdam & The Hague

- Goals:
  - Define the 5G infrastructure needed to realize a fieldlab at TU Delft and Valkenburg
  - Define pilot projects with SMEs
  - Write a proposal for EFRO funding

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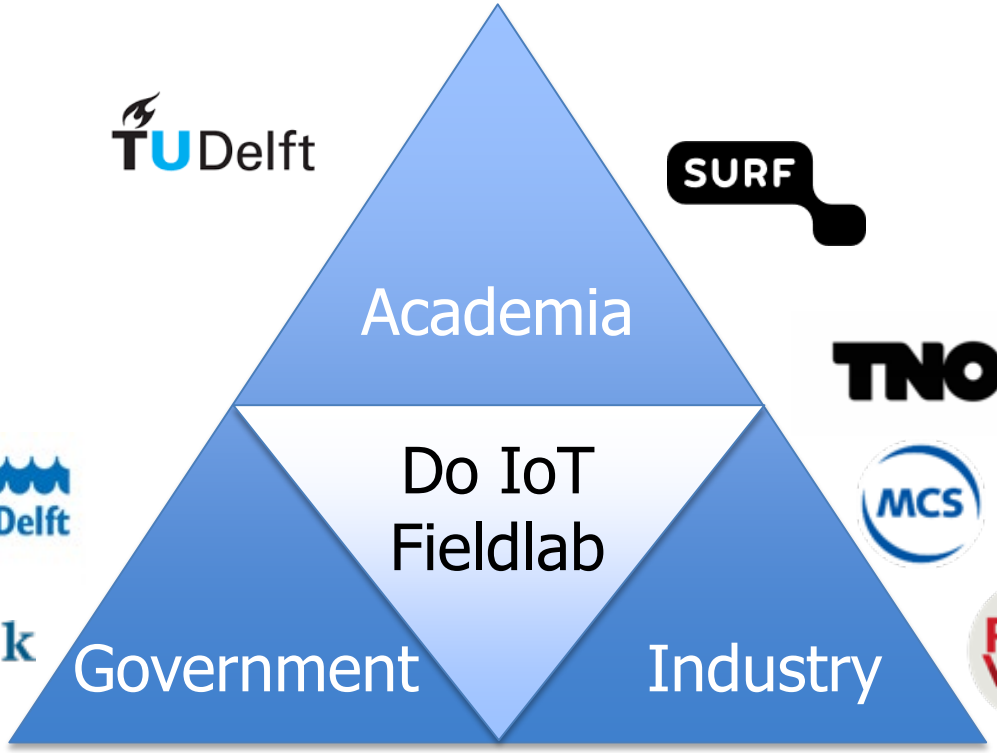
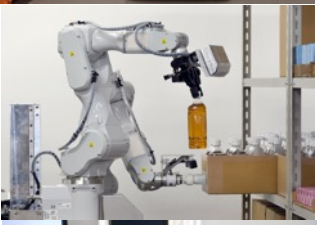
Core team Do IoT Fieldlab





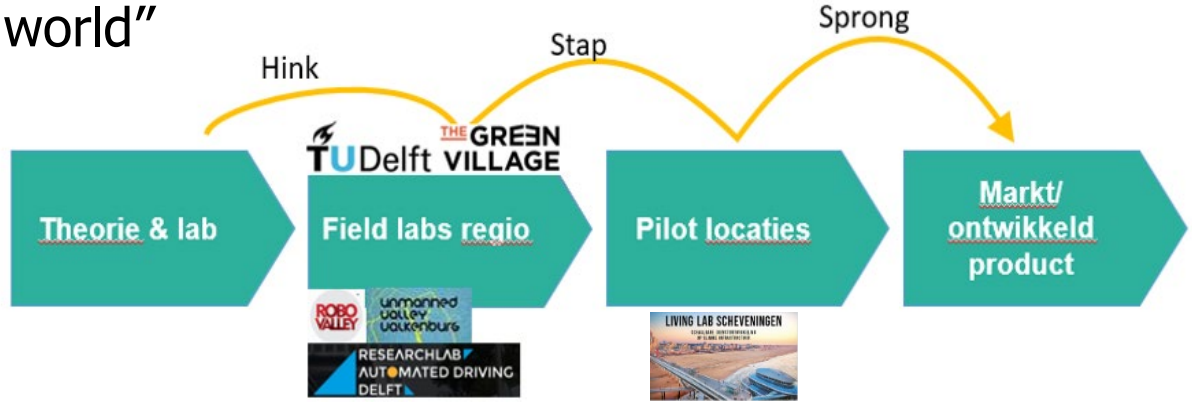



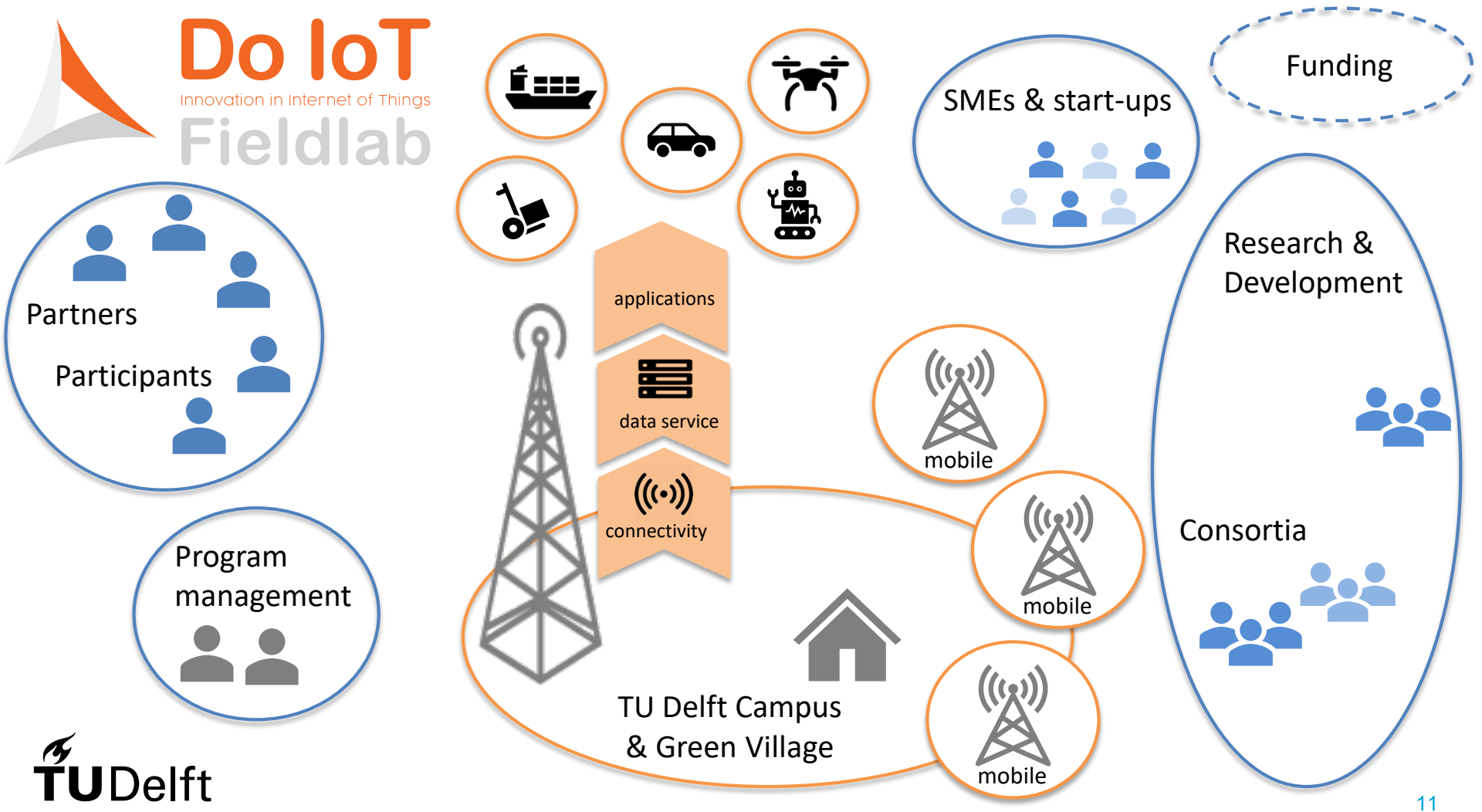

EFRO proposal

- WP1: Install and manage 5G infrastructure
- WP2: Execute pilot project (use cases)
  - 2.1. IoT in Automated Mobility (RAS en RADD)
  - 2.2. IoT in Safety / Agro (drones, UVV)
  - 2.3. IoT in Smart Industry (Robovalley)
  - 2.4. IoT in Smart Logistics (TNO)
  - 2.5. IoT in Healthcare (SURF, LUMC & National e-health Living Lab)
  - 2.6. IoT in Smart Cities (Green Village & Living Lab Scheveningen)
- WP3: Expand involvement SMEs
- WP4: PR (events, publicity, reports, …)
- WP5: Project management

“Hink-stap-sprong”

- Research on 5G (and beyond) & IoT technology made accessible
- Teaming-up with existing fieldlabs who need 5G communications (like The Green Village, RoboValley, Living Lab Scheveningen, RADD, and RAS)
- Safe environment to test before deploying in “the real world”




Do IoT
Innovation in Internet of Things
Fieldlab
Partners
Participants
Program management
applications
data service
connectivity
TU Delft Campus & Green Village
mobile
mobile
mobile
SMEs & start-ups
Funding
Research & Development
Consortia
TU Delft

Characteristics Do IoT Fieldlab

- State-of-the-art communications infrastructure:
  - “Production environment” with advanced wireless communications technology (5G Release 16)
  - “Research environment” to develop and test new communications technology (6G and beyond)
- Driven by questions from industry:
  - IoT focusing on the entire value chain
- TU Delft campus as core site with geographic flexibility through decentral deployments

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Programmable infrastrucure

- Mobility, safety, logistics, smart manufacturing, health, smart city…
  - Different use cases have different requirements (w.r.t. bandwith, latency, reliability, …). Hence, a programmable infrastructure is needed to provide tailor-made service on a per application basis

Operator neutral. Why?

- MNO = Mobile Network Operator
- Some topics may be relevant for multiple MNO's:
  - Service providers who would like to connect to multiple MNO's, e.g. for resiliency
  - Interconnect & roaming issues between MNO's
- Industry might not want to commit to one specific MNO / service provider

Involved companies

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AIRLIFT SYSTEMS

InnoTractor

Spring

Involved consortia

TU Delft

Involved government organisations

Katwijk

Gemeente Delft

Gemeente Rotterdam

Den Haag

provincie Zuid Holland

MRDH
METROPOOLREGIO
ROTTERDAM DEN HAAG

HOLLAND
RIJNLAND

Agentschap Telecom
Ministerie van Economische Zaken en Klimaat

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More information

https://www.tudelft.nl/iot