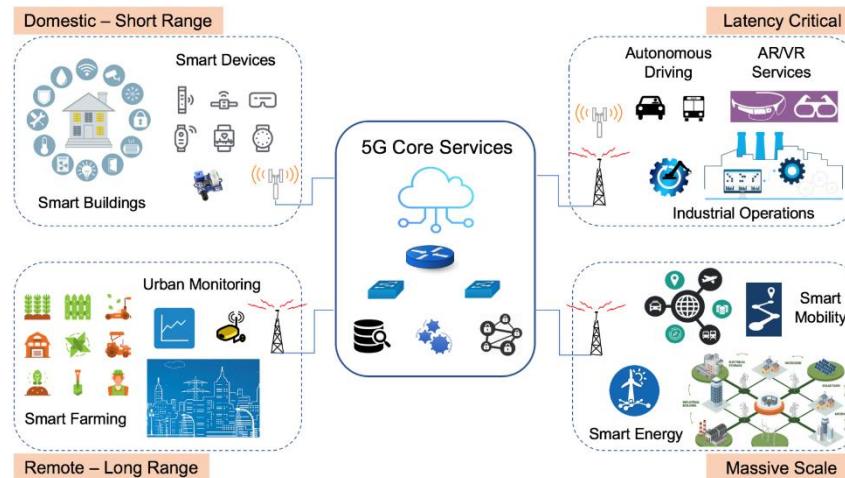


# Interoperability and public ~~sector~~ innovation

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# Rising need for interoperability

- IoT – collecting more and more information
- 5G – connectivity anywhere
- AI – artificial intelligence for data-driven decision-making
- New forms of qualified information sharing



\* Aaron Y. Ding & M. Janssen (2018). Opportunities for Applications Using 5G Networks: Requirements, Challenges, and Outlook. International Conference on Telecommunications and Remote Sensing (ICTRS2018).

# Rising need for interoperability

- Domains (taxes, social security, environment, ..) between interconnected
- Data from various domains are combined
- Countries become interconnected
- Public sector innovations is more and more cross-domain
- Need for interoperability expands outside the traditional domains
- But no not have well-structured public services as a starting point

# Many innovations fails for obvious reasons

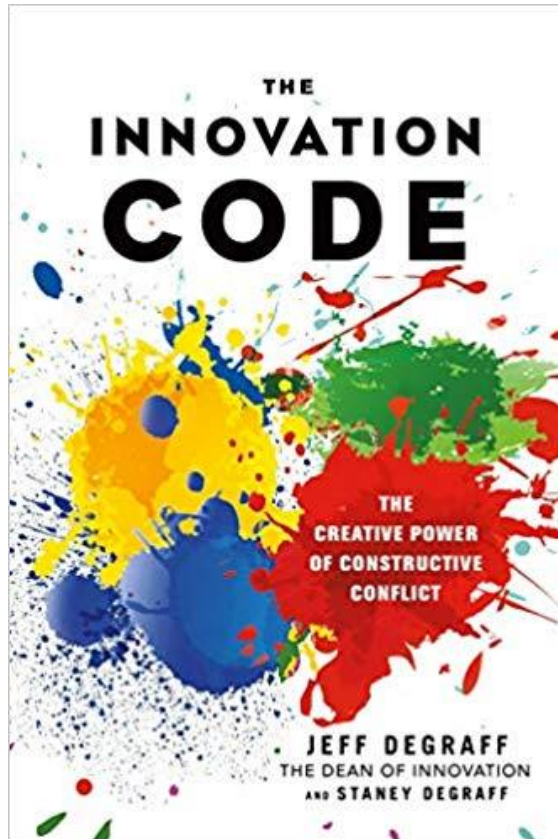
- Changing ambition levels and business case
- Too high complexity
- No user involvement
- Lack of expertise
- Not using proven technology
- Changing in technology and environment
- Incident driven
- Too many parties having a say
- Catch-22 between technology and legislation
- .....

\*Janssen, M. Voort, H. Van der & A.F.E. van Veenstra (2015). Failure of Large Transformation Projects from the Viewpoint of Complex Adaptive Systems: Management Principles for Dealing with Project Dynamics. *Information Systems Frontiers (ISF)*. Vol. 17, no 1, pp. 15-29. [DOI 10.1007/s10796-014-9511-8](https://doi.org/10.1007/s10796-014-9511-8).

# What is needed?

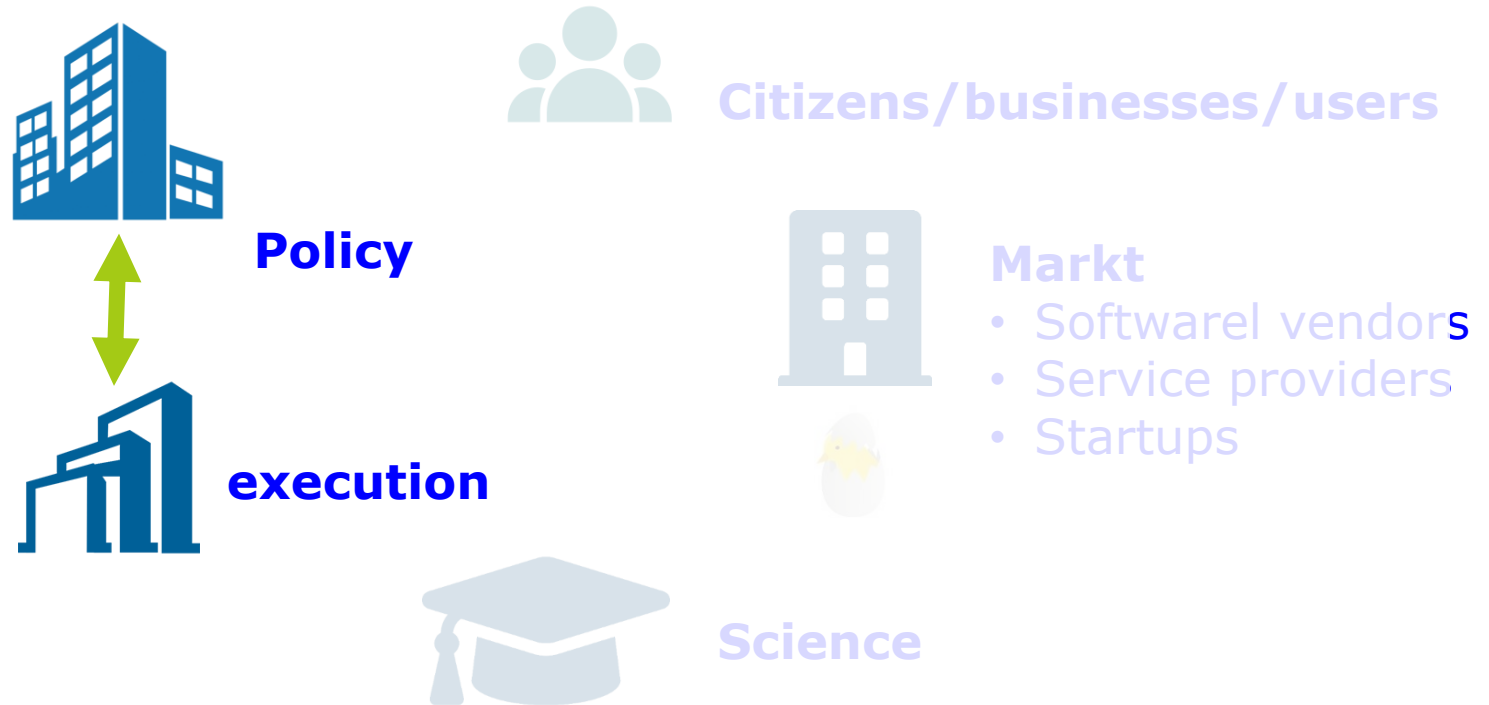
- Many innovations, but there is no focal point (duplication of efforts)
- Innovation beyond the government
- Path dependencies block innovation
- Mobilizing companies and academic expertise
- Being inside and outside the government at the same time: adoption by government but not constraint by the institutional setting
- Result orientation and experimenting
- Interdisciplinary by nature: Capturing and integrating various aspects and elements

# Innovation is a clash of ideas, approaches and cultures\*

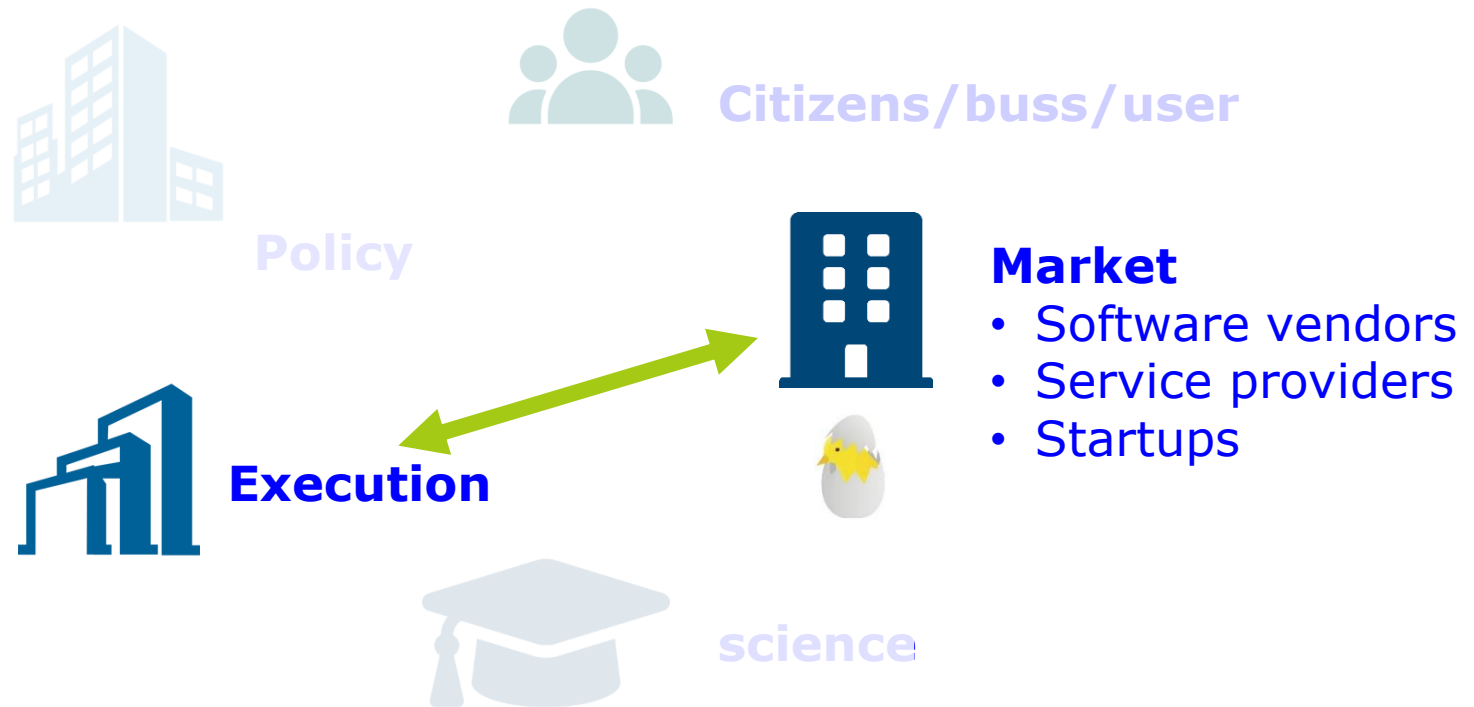


“The only way to create new, hybrid solutions is to clash. Innovation happens when we bring people with contrasting perspectives and complementary areas of expertise together in one room. We innovate best with people who challenge us, not people who agree with us”

# Tension 1: continuity vs. innovation

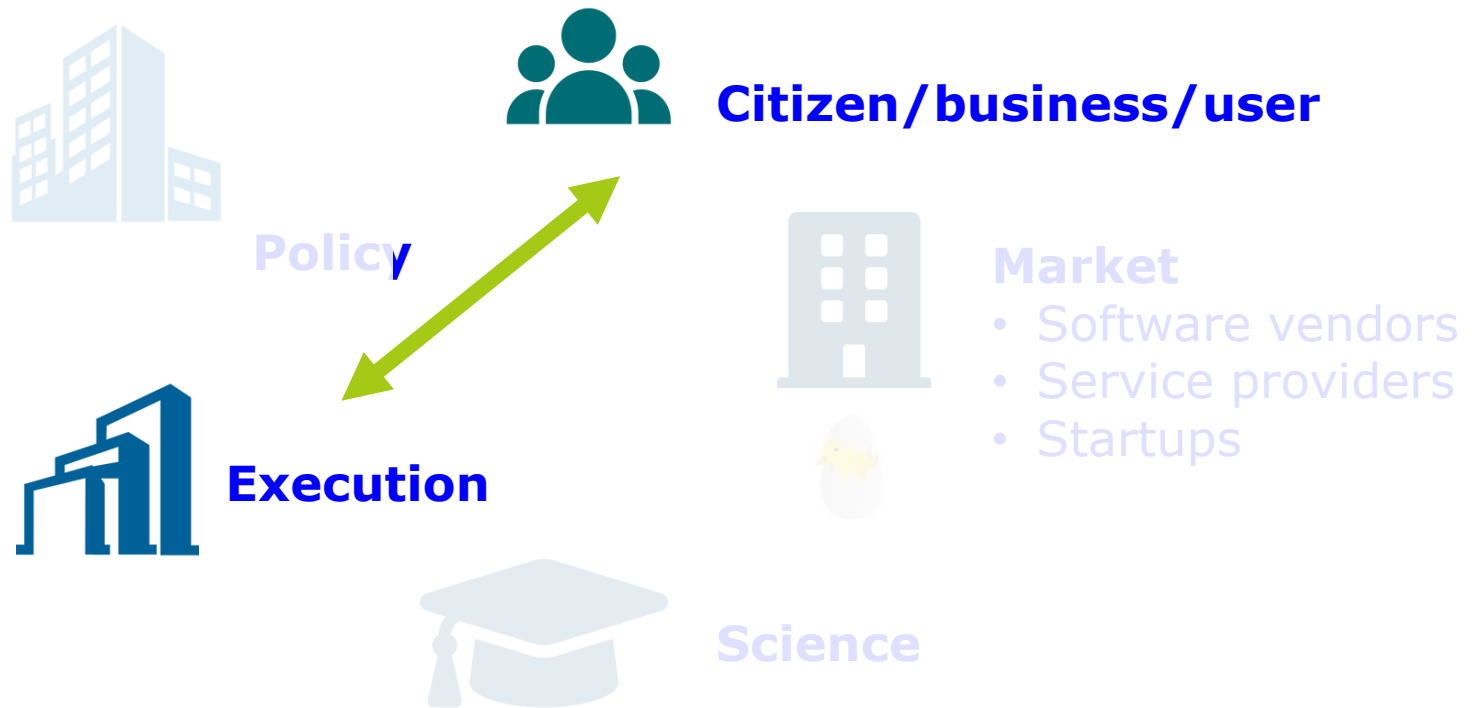


# Tension 2: Government vs. market

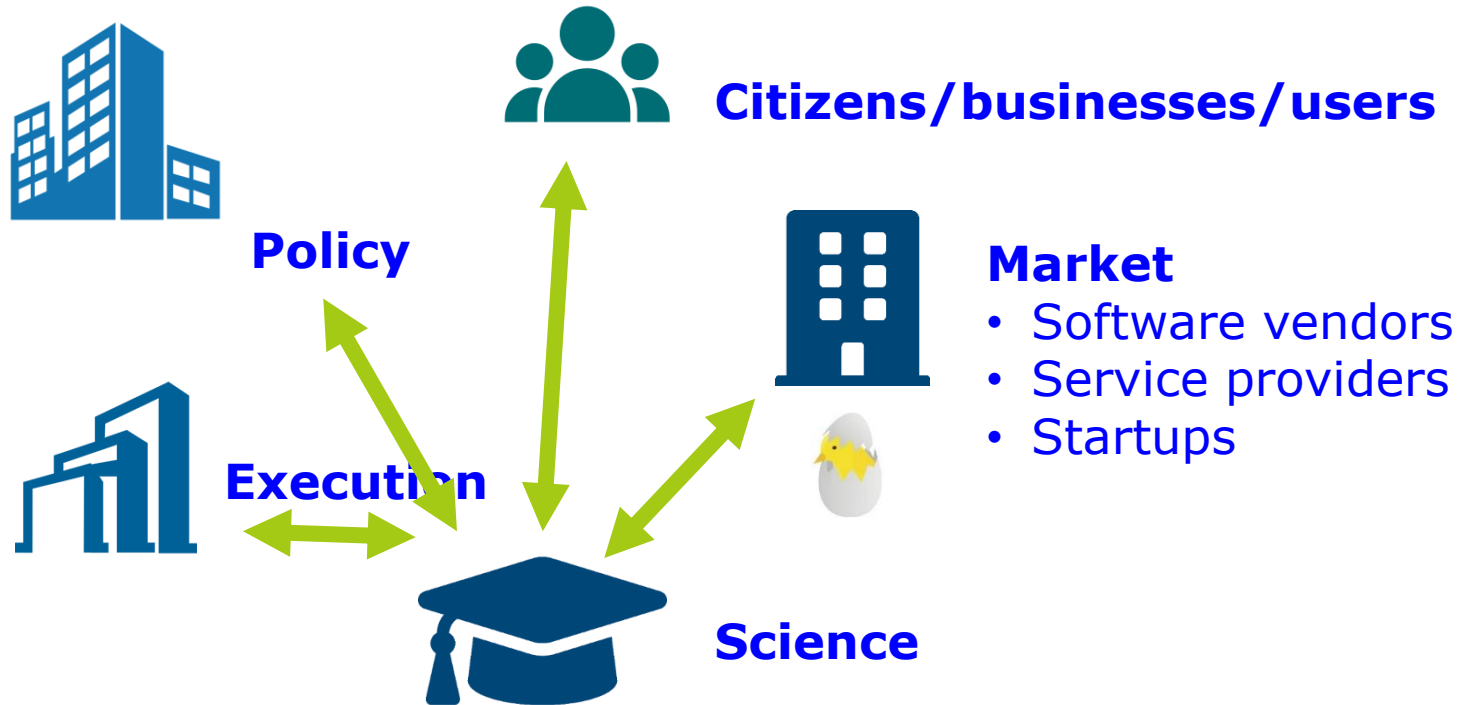




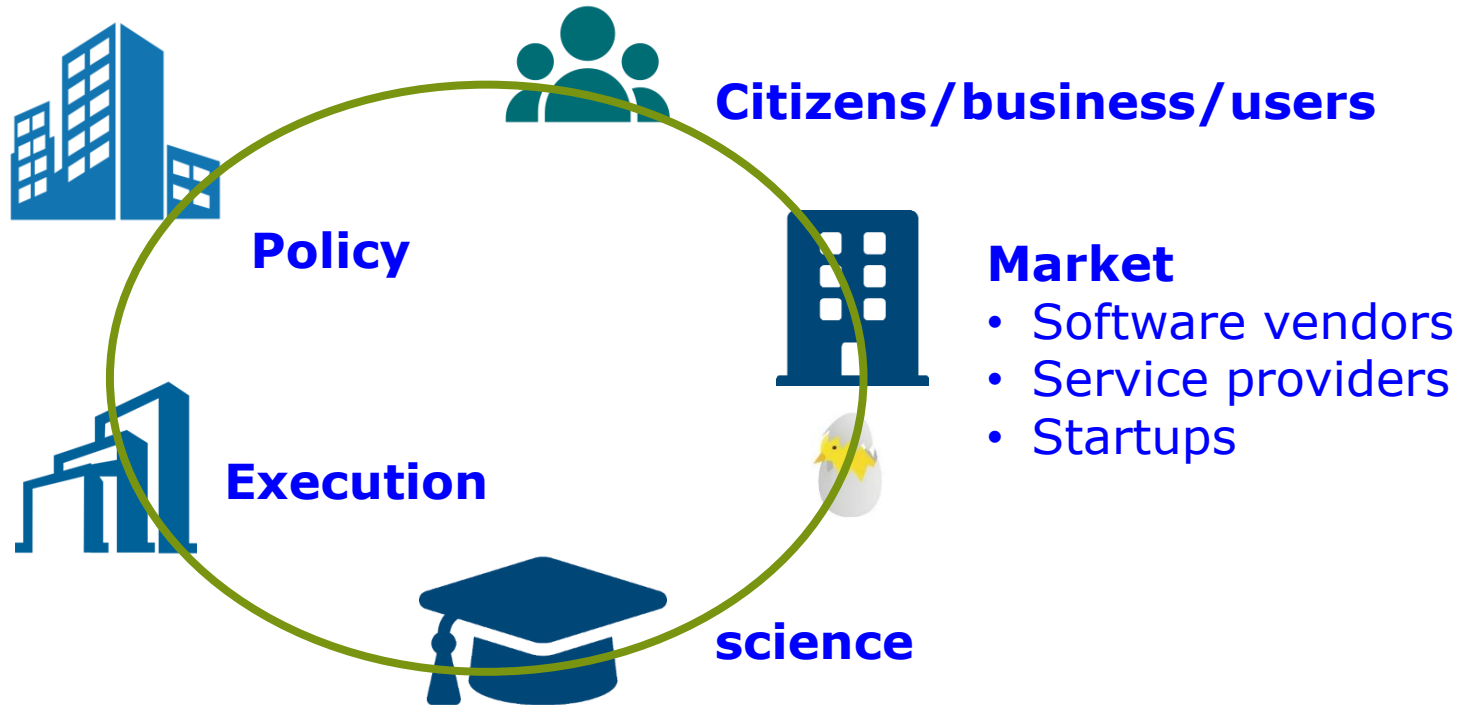
# Tension 3: Domain oriented vs. integral needs



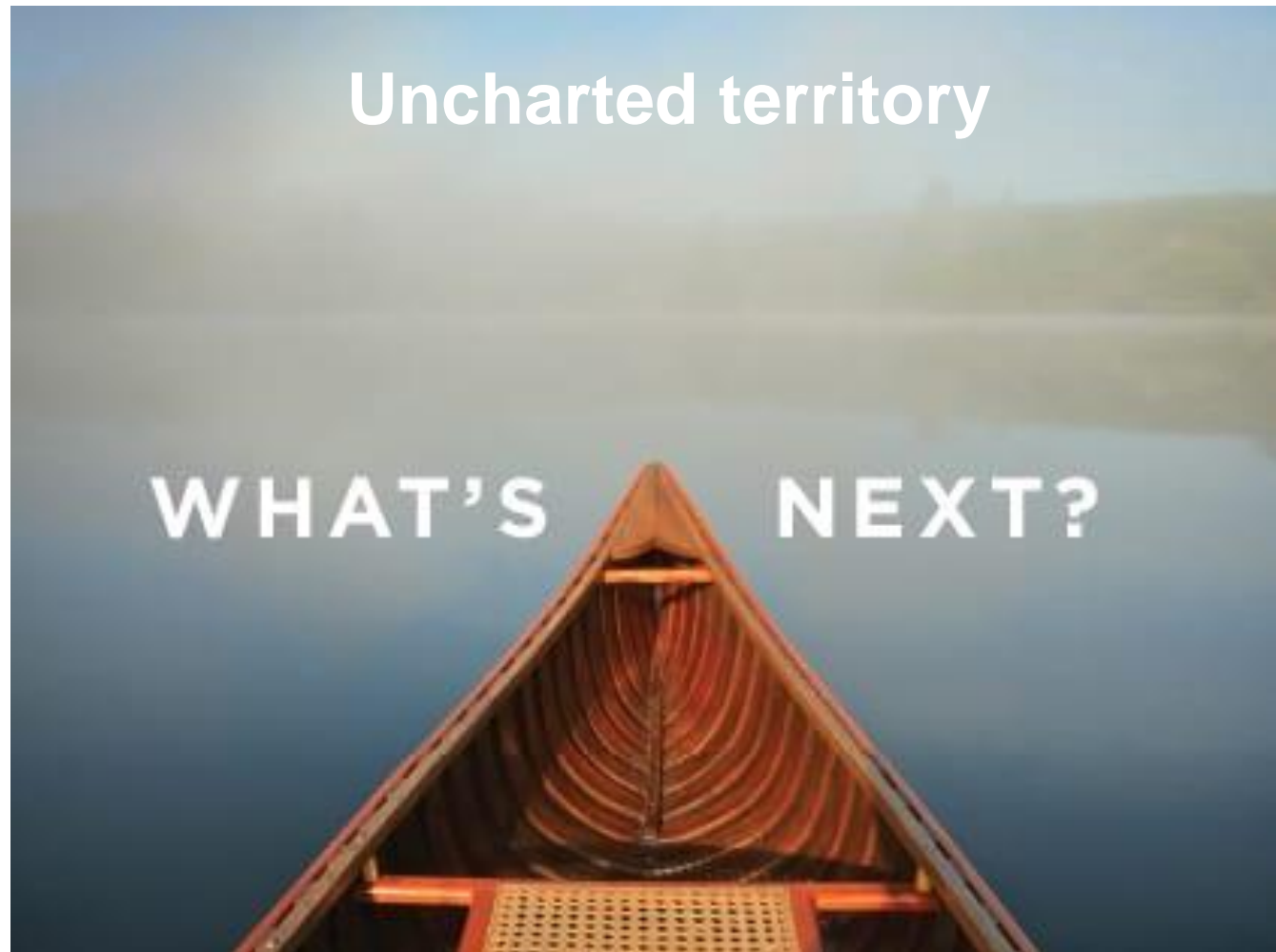
# Tension 4: Structural use of knowledge



# Moving from a fragmented to a coherent landscape



# Approaching public sector innovation .....



# DeDigiCampus.nl



- Running towards the digital society
- Quadruple Helix
- Sandbox with building blocks for open experimenting
- Focal point for expertise

# Citizen Research Groups



Social challenges

Proven and experimental technologies

Challenges

Give meaning to 'public values'

Solution components

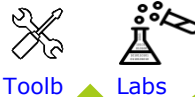
## Government agencies:

- Policy making departments
- Service delivery departments



Formulate challenges, provide experimentation space on government systems

## Innovation hub



Toolbox

Labs

Provide expertise, tools, building blocks



Software providers (corporate & startups)

Valorisation: theory and methods

Legal & ethical frameworks

Theory, data, tools & research methods



## Knowledge institutes

# Design sprint: getting results within a short time

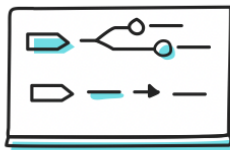


# Design sprints: from idea to working prototype

- Within 5 days
- Quadruple partners
- Different experts involved
- Involvement of SMEs with innovative solutions
- Getting feedback from users during the sprint

## Phases of a Design Sprint

1. Understand



2. Collect Ideas & Sketch

3. Decide



4. Prototype

5. Validate





# Examples from the 1<sup>st</sup> half year

- Data game: confronting public servants which he problems faced by citizens
- Working prototype for detecing people who might get debts
- Improving communication in social security
- Open data banking APIs
- SSI for identity management and information wallet
- ...

# Some lessons

- With the rise of IOT and AI the need for interoperability increases to other domains
- Explainable AI requires semantic interoperability
- Need for collaboration (so public sector innovation)
- DeDigiCampus.nl as a quadruple helix innovation model
- Sandbox with building blocks for experimenting
- Retaining knowledge
- Roles of partners is not static and change over time and per area



**Questions?**

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[DeDigiCampus.nl](http://DeDigiCampus.nl)

# Digicampus Partnerships

- **Founding Partners:**  
Logius, ICTU, NL Digital, TU Delft
- **Key-Partners:**  
organizations who actively contribute (resources, building blocksetc.).
- **Track-Partners:**  
organizations who are interested in a certain challenges. They are involved in experiments and.
- **Supporting- Partners:**  
partners who benefits form the knowledge and outcomes

