

The NL AI Coalition

Erik Fledderus, SURF
Director and chairman of the board

December 5, 2019

e-IRG workshop, Helsinki



Agenda

- Introduction to the Netherlands (Dutch) AI Coalition
 - Core values
 - General proposition
 - Structure
 - Building blocks
- SURF's contribution

NL AI Coalition launched October 8th 2019



What makes an AI Coalition necessary?

Artificial Intelligence will lead to major new breakthroughs in our society and economy, AI will bring our prosperity and well-being to a higher level and contribute to solving societal challenges.

- ◆ AI reinforces the "winners takes all" phenomenon in a digital and data driven economy.
- ◆ AI asks specific questions about how we realize the technological potential without compromising public values and fundamental rights.
- ◆ AI requires a joint approach and substantial public and private investments.
- ◆ AI demands collaboration and addressing key assets on European level



NL AI Coalition – core values

- ◆ Impact on societal and economical activities
- ◆ Ambitious and action driven by participants
- ◆ No duplication but connecting and strengthening of efforts
- ◆ Innovation in value chains and ecosystems
- ◆ Human centric and responsible AI
- ◆ Shared learning
- ◆ Open, inclusive and representative (quadruple helix and multidisciplinary)

NL AI Coalition – general proposition

Innovation through cooperation:

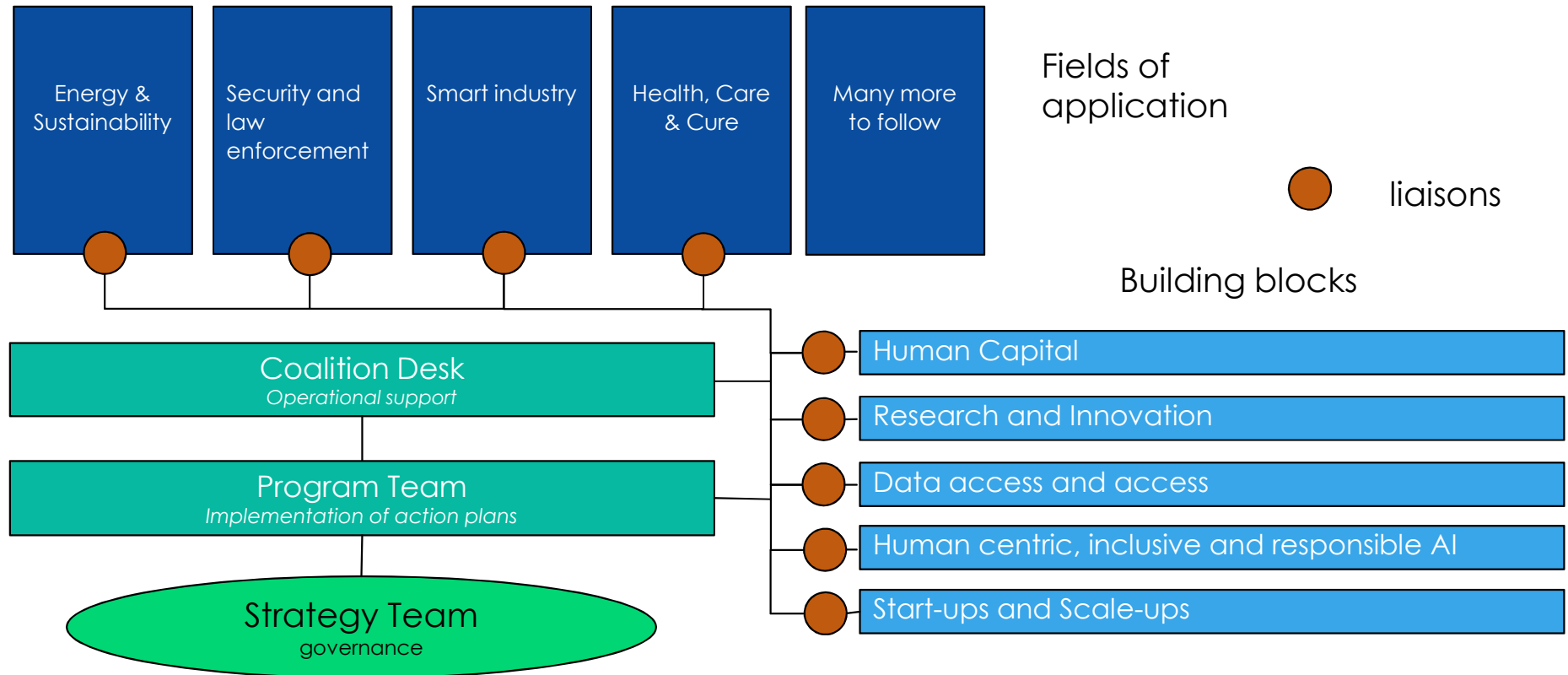
- across value chains, in ecosystems
- between different interest groups
- across multiple fields of expertise

This approach leads to:

- acceleration in implementation
- increased efficiency
- accelerated knowledge and experience building
- strengthening and utilizing (scarce) resources



Netherlands AI Coalition – structure



NL AI Coalition – Building blocks high level overview (1/2)

Human Capital

- Development of specific AI knowledge from different disciplines
- Developing tools to enable working with AI technologies
- Development, attracting and retaining AI talent
- Life long learning of employees including managers

Research & Innovation

- Identify and resolve barriers to AI research
- Link between AI science and application
- Digital transformation of science itself (data driven)
- Application of AI for smart chains and ecosystems

Dutch AI Coalition - Building blocks high level overview (2/2)

Data sharing

- Training on responsible data sharing
- Analysis of data sharing problems based on actual AI cases
- Implementation of data sharing solutions
- Connecting with other data sharing initiatives

Start ups & Scale ups

- Access to risk capital
- Focus on value increase
- Access to datasets
- Access to research & innovation ecosystems

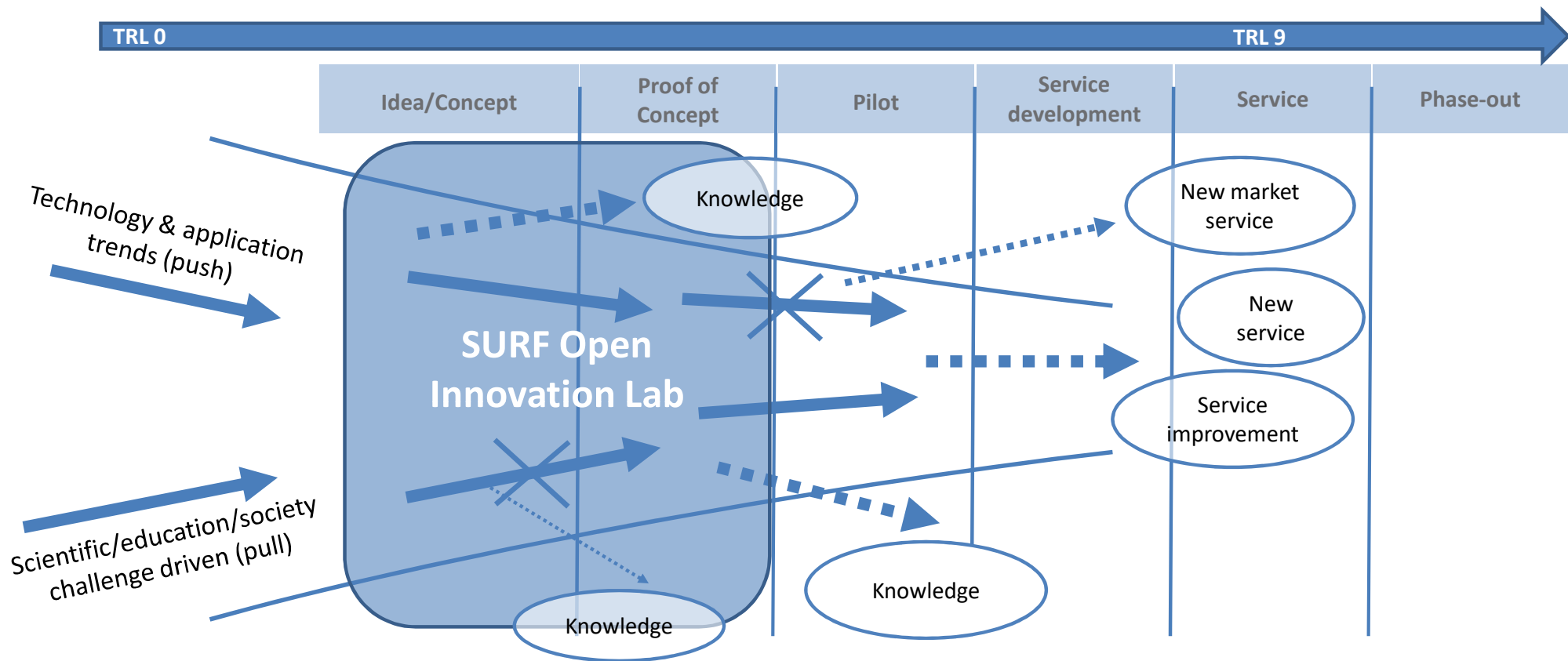
Human centric, inclusive and responsible AI

- Identify bottlenecks for social acceptance of AI
- Formulating practical, innovative and widely supported solutions for these bottlenecks.
- Application testing in practical use cases and using field labs.
- Cooperation (national and international) in various application areas for adoption and up scaling

SURF's Open Innovation Lab

- From 2018-2020 SURF and ministry of Economic Affairs invested in SURF's Open Innovation Lab:
 - Key technologies (quantum computing & networking, unified computing architecture, energy-smart computing, machine learning & AI, ...)
 - Outreach (public-private partnerships): data hubs





SURF's Open Innovation Lab

Machine Learning & AI

- Goals:
 - develop and support new and advanced use cases of simulations that are substantially improved by applying deep learning algorithms
 - evaluate potential & build joint expertise and knowledge
- Motivation / impact:
 - parallelism and Moore's law reach their limits
 - leap-from performance & scaling of traditional numerical HPC applications, breaking limits of Moore's law
- Approach: 4 use cases in different scientific domains
 - Climate modeling – with Wageningen University
 - High-energy physics – with Nikhef / Radboud University
 - Life Sciences – with Utrecht University
 - Astrophysics – with Leiden University
- Interesting spin-off: close interaction with Intel Parallel Computing Center



Questions?

More information:
www.nlaic.com

NLAI Coalitie