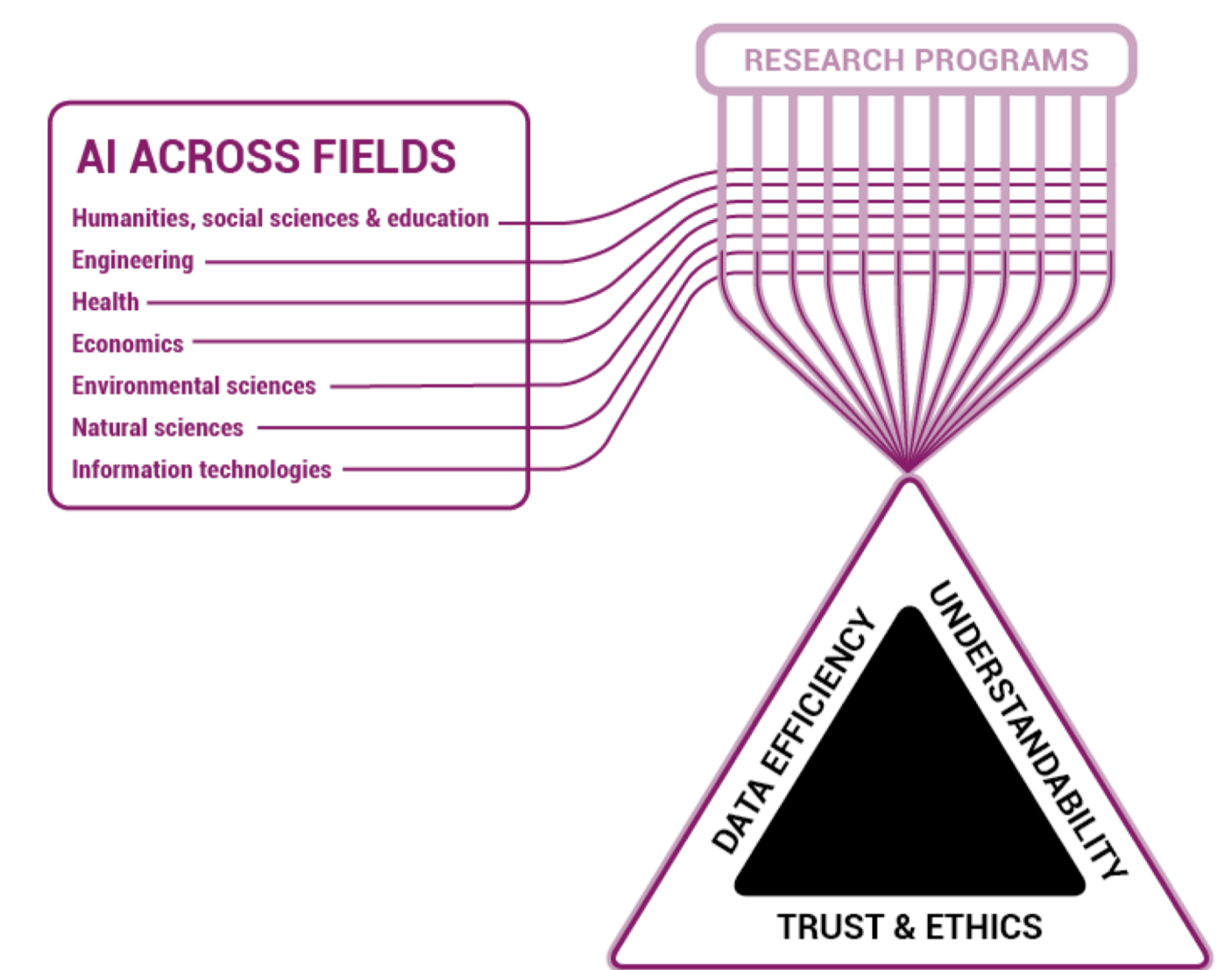


Intelligent urban environment (Highlight D)

FCAI Highlight Program D focuses on how to combine (i) measurements from natural environment, (ii) simulations, and (iii) modelling in order to, e.g., make decisions in interaction with the user (e.g., "what-if engines") and to model and understand observed and/or simulated processes.



Status of Highlight D (Oct 2019)

We are in the process of mapping potential outcomes that could result in deliverables on 2020. Any FCAI activity that falls into the scope of the Highlight can be considered as a reportable contribution!

Potential deliverables 2022

The main outcome of Highlight D are AI methods that can be applied to measurements / intelligent modelling of natural environment. The actual deliverables (promised by the end of 2022) include software libraries that implement the above described methods and the AI methods implemented in various experimental online platforms (such as related to air quality measurements).

- Specific software libraries, demonstrator on interactive pipeline probably in some industry context. (AIRD project, incl. K. Puolamäki, A. Klami et al.)
- Megasense demonstrator platform for prediction of air quality (Megasense programme, S. Tarkoma)
- Additionally: easy modeling tools for Megasense (dependent on above)
- Understanding human behaviour and Influence of Environment (in progress, E. Vildjiounaite, VTT)
- Local spectral monitoring of the environment (in progress, A. Klami, UH)

Relations to Research Programs

Highlight D is most related to the following FCAI research programs

- Agile probabilistic AI (R1)
- Simulator-based inference (R2)
- Interactive AI (R5)

Related projects

- Interactive AI for R&D (Future Makers 2018) – (S. Kaski, K. Puolamäki, A. Oulasvirta, J. Corander, A. Klami, A. Vehtari, J. Lehtinen, Aalto & UH)
- MegaSense research program (S. Tarkoma et al., UH)
- More projects will be added later



Coordinating professor

Kai Puolamäki

Associate professor in computer science and atmospheric sciences

University of Helsinki

kai.puolamaki@helsinki.fi

