

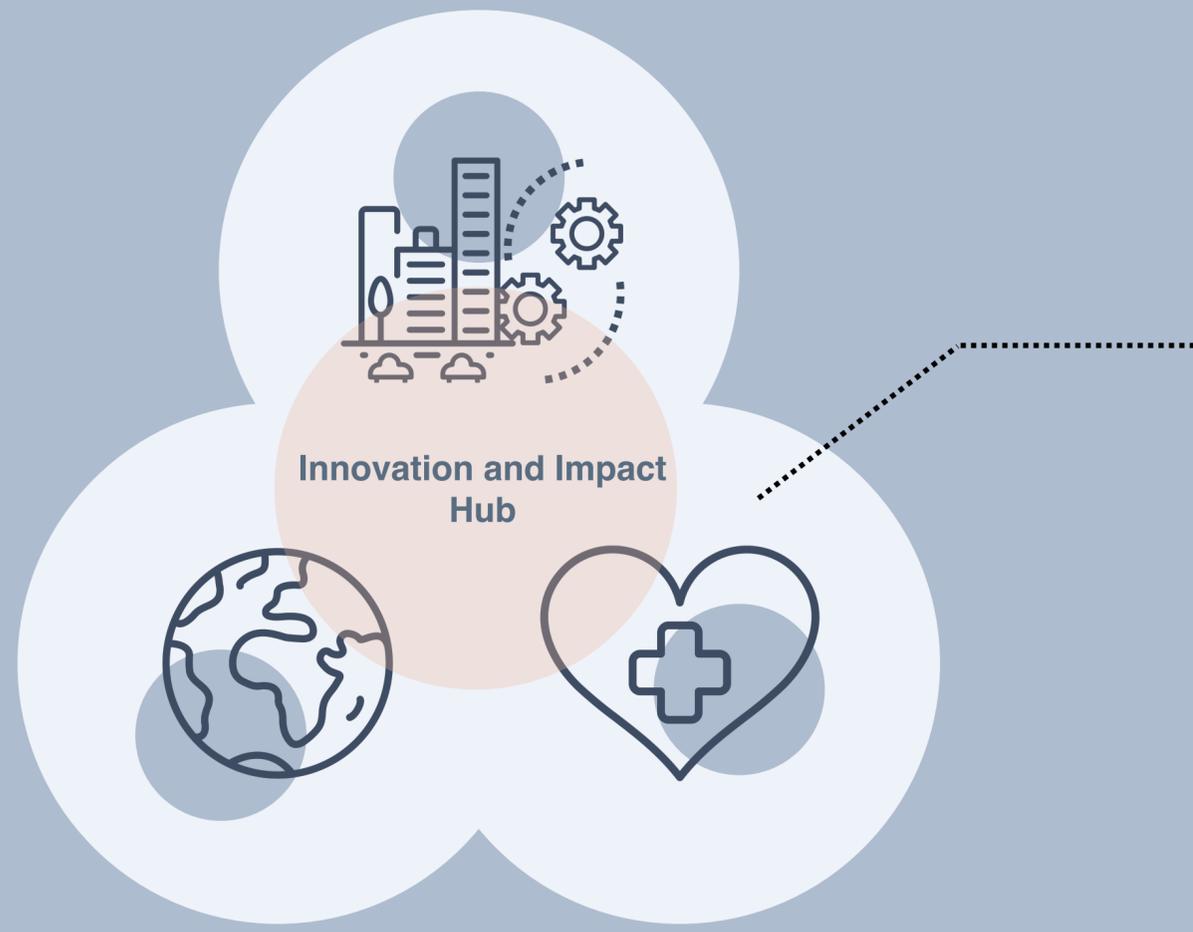
Synergistic Twinning: Bridging Health, Infrastructure, and Environment

Turing research and innovation
cluster in digital twins (TRIC-DT)

28/11/2023

Dr Sophie Arana





Advance the science and implementation of digital twinning and **use these advances** to address important **technological and societal challenges**.

Produce **open and reproducible computational tools** for DT design, development, and deployment that facilitate scaling of DTs and provide these tools as a freely available resource.

Build a **multidisciplinary community of practice** in digital twinning that **democratises access to DT technology**.

Multidisciplinary Research



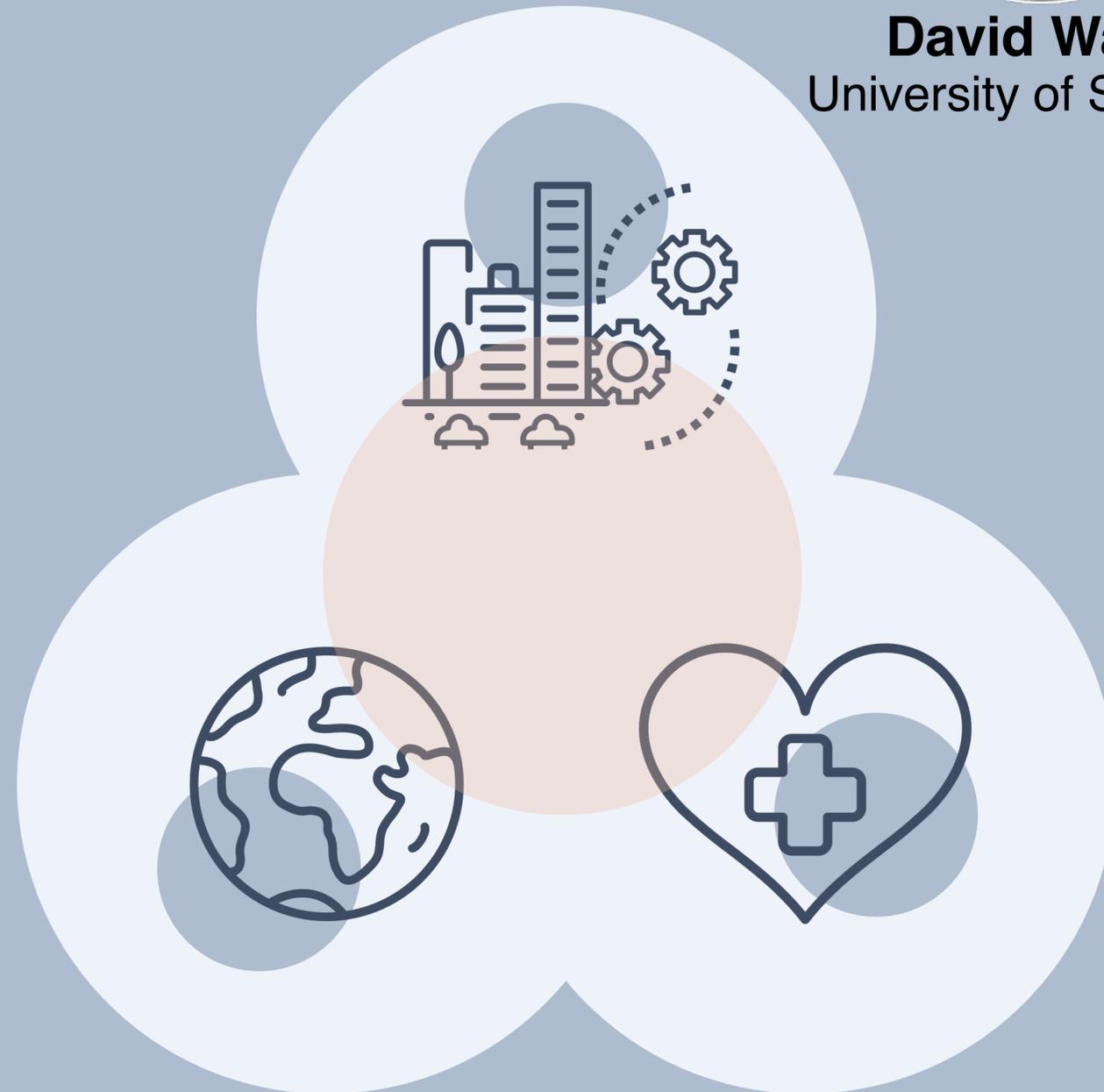
Infrastructure



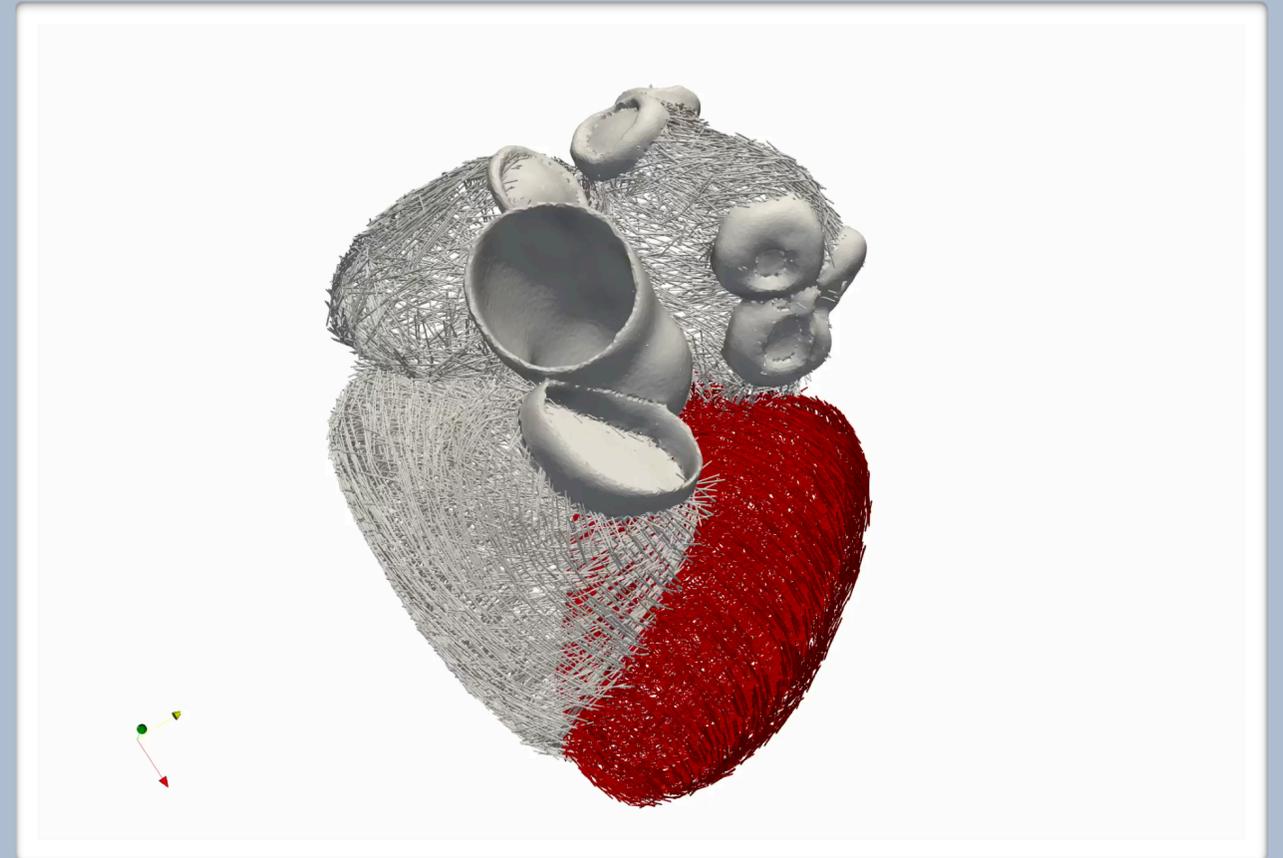
David Wagg
University of Sheffield



Keith Worden
University of Sheffield

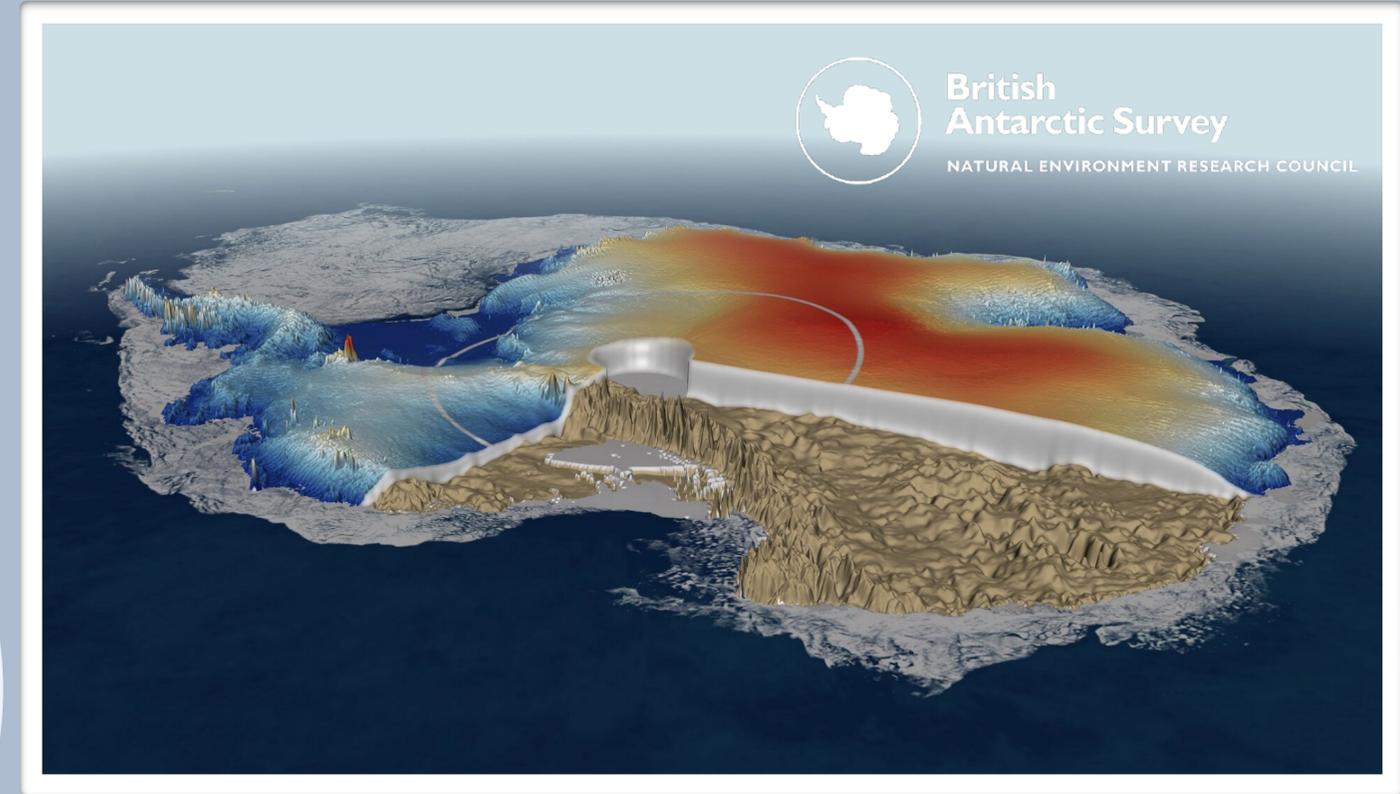


Health



Steven Niederer
Imperial College
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Natural Environment



Kirstine Dale
Met Office



Scott Hosking
British Antarctic Survey

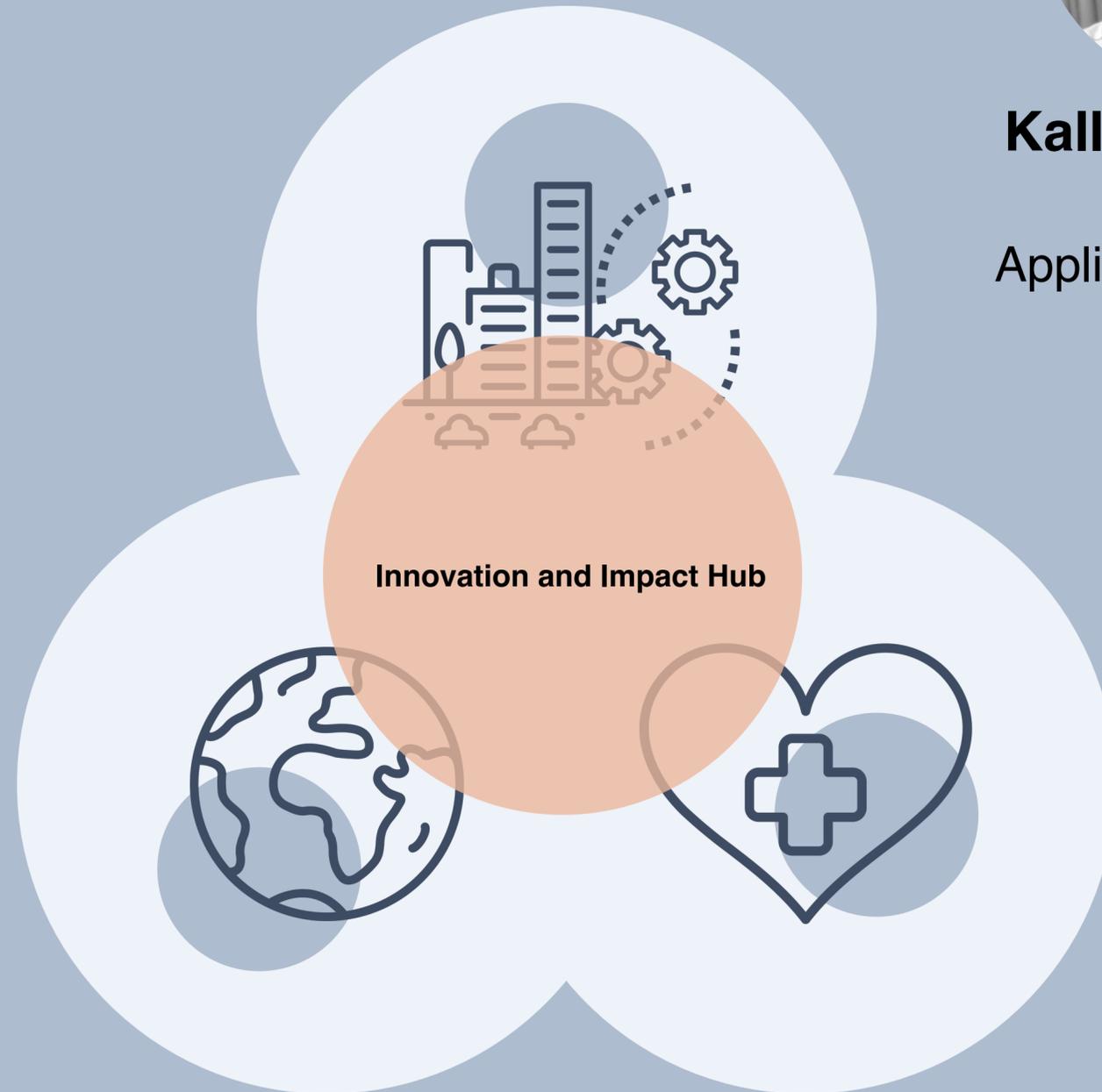


Innovation & Impact Hub



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Trustworthy Systems



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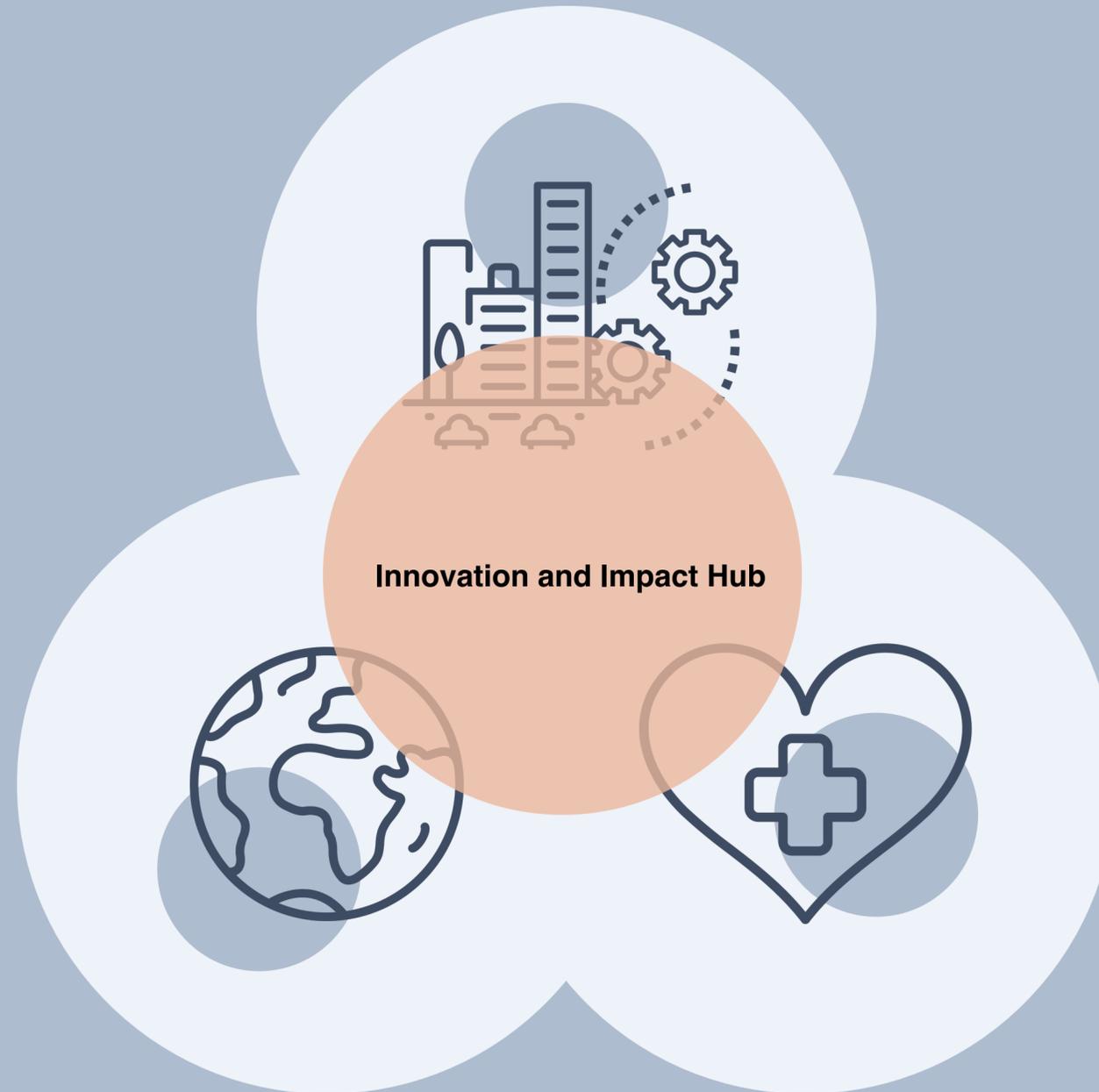
Aoife Hughes

Research Data
Scientist



Martin Stoffel

Research Data
Scientist





Assurance Platform

Open Tools and Practices

Research Application and Translation

Conferences and Workshops

Policy and Standards Observatory

Stakeholder Engagement

Formal Stakeholder Engagement Process

Community Management and Practice

Data Study Groups

Communication (incl. Visuals, Videos, Explainers)



ToC & Impact

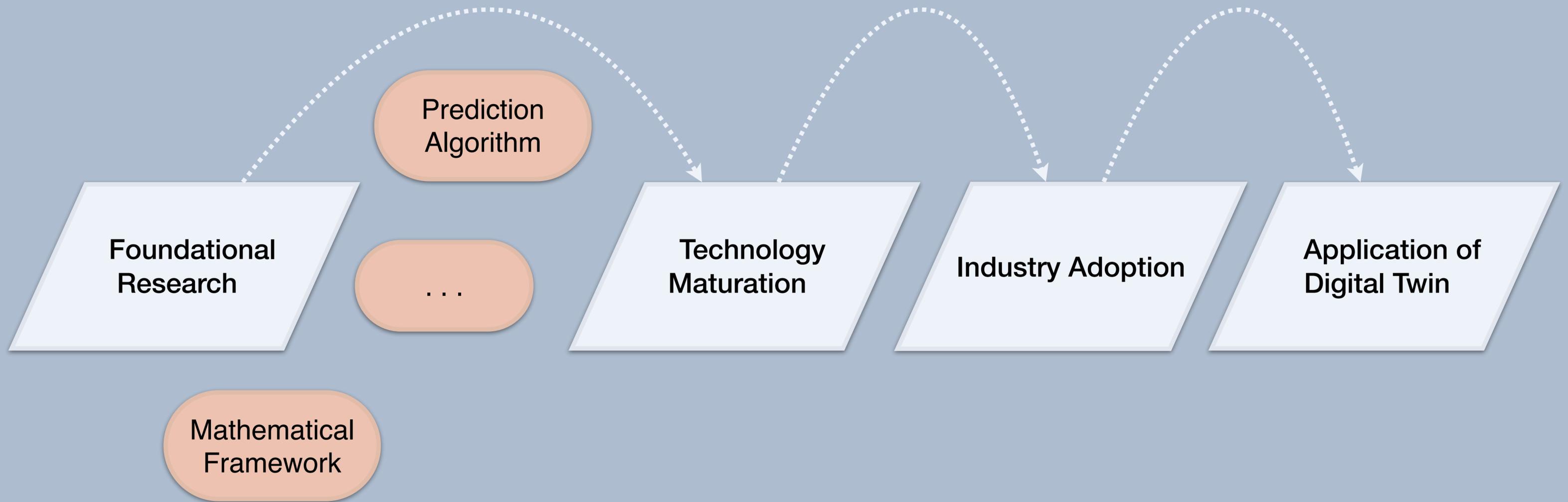
Skills, Training, and Capabilities

Responsible Research and Innovation

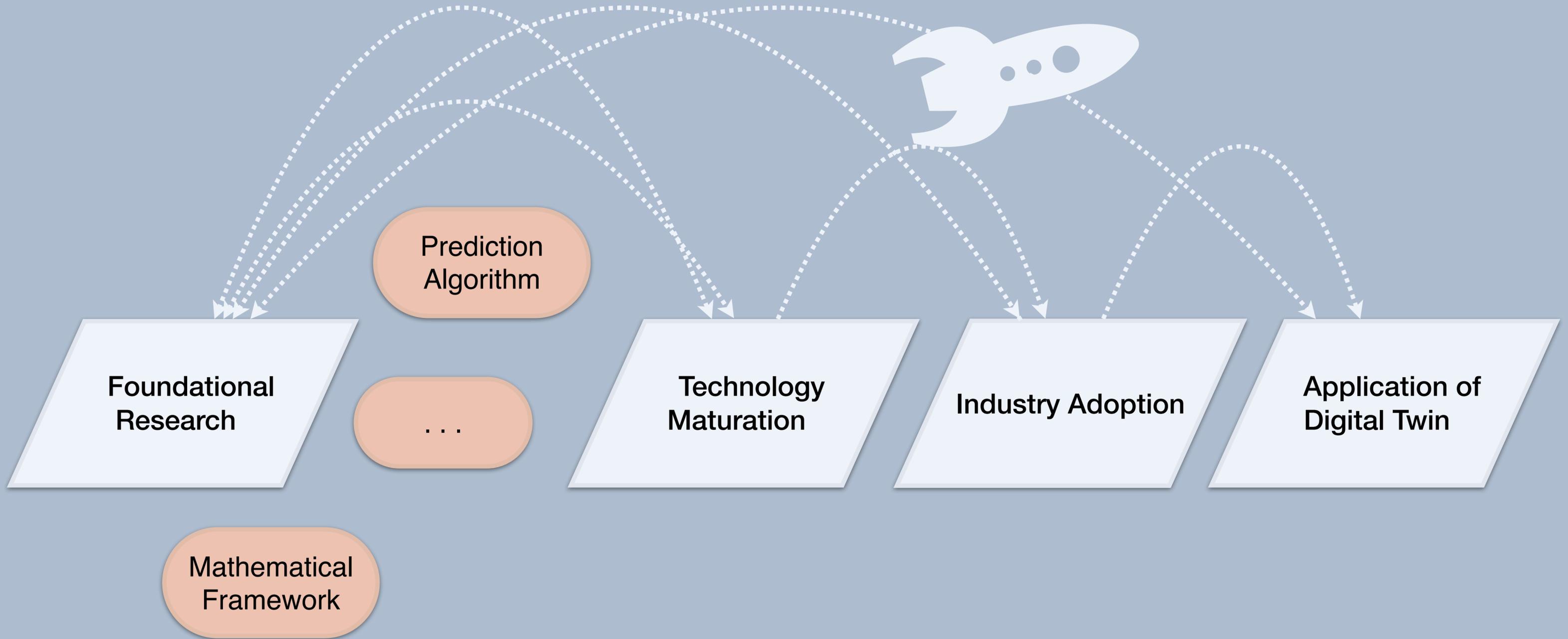
Networked Documentation

Case Studies

Pathway to impact: Interdisciplinary & Collaborative



Pathway to impact: Interdisciplinary & Collaborative



GitHub Repository

Assurance Platform



An open-source tool for building assurance cases



User guidance and best practices



Community resources and support

Trustworthy and Ethical Assurance Platform

all contributors 7

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About this Repository

This repository contains the code and documentation for the Trustworthy and Ethical Assurance (TEA) platform—an application for building trustworthy and ethical assurance cases, developed by researchers at the [Alan Turing Institute](#) and [University of York](#).

To view the documentation site, please go to <https://alan-turing-institute.github.io/AssurancePlatform>.

Quickstart install instructions

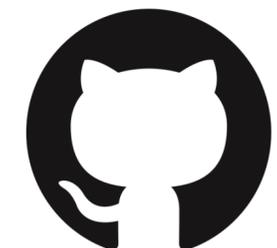
To get started quickly with installing this platform visit <https://alan-turing-institute.github.io/AssurancePlatform/platform-details/installation/>

What is Trustworthy and Ethical Assurance?

Trustworthy and ethical assurance is a methodology and procedure for developing a structured argument, which provides reviewable (and contestable) assurance that a set of claims about a normative goal of a data-driven technology are warranted given the available evidence.

The following elements are central to this methodology and procedure:

- **The SAFE-D Principles:** a set of five operationalisable principles—Sustainability, Accountability, Fairness, Explainability, Data Stewardship—that have been carefully designed and refined to address real-world challenges associated with the design, development, and deployment of data-driven technologies.
- **Assurance Cases:** the documented argument that communicates the basis for how and why a goal has been achieved.



Get Involved!



**The
Alan Turing
Institute**

TRIC-DT Innovation and Impact Hub

<https://github.com/alan-turing-institute/tric-dt>