



Building collaborations for the DARE UK Research Exemplars funding call

Collaboration cafe

02 October 2025



UK Research
and Innovation



Agenda

- Welcome, housekeeping and overview of session
- Overview of ideal project types
- Q & A on TRevolution capabilities
- Breakout rooms
- Wrap up

Overview of the TRevolution programme

Jim Smith

What is TREvolution?

Our goal is to **accelerate** research via the **adoption** of standards, to **build** Trust and **enabling** Federation.



PROF PHILIP QUINLAN
Project Director



PROF CAROLE GOBLE
Co-Director



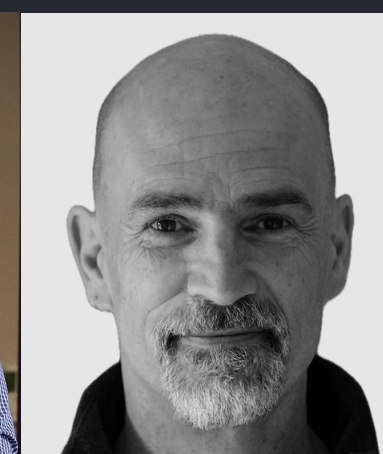
DR STIAN SOILAND-REYES
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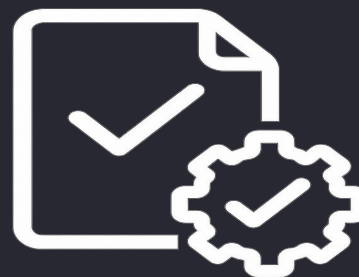


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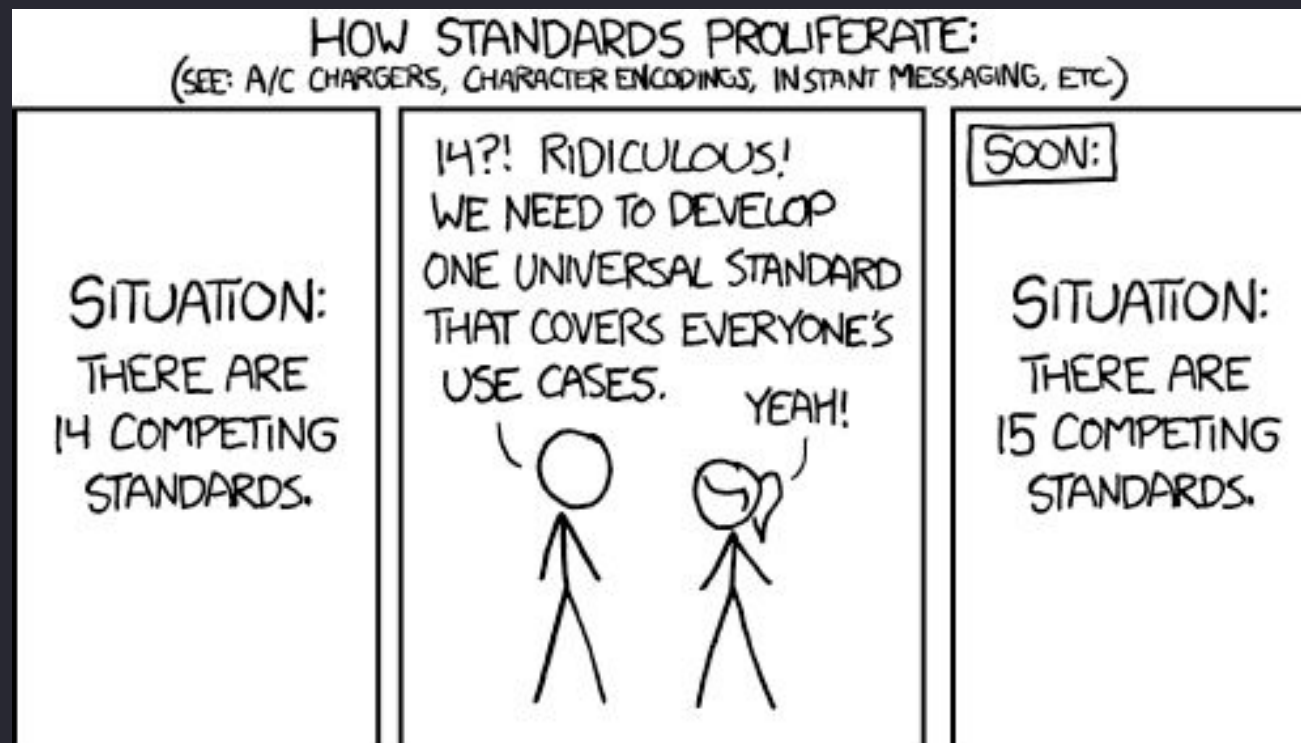


PROF JIM SMITH
Co-Director

Adopting Standards



Adopt standards



<https://xkcd.com/927/>

All the standards we require to accelerate research already exist

We are focused on driving the adoption of existing standards so that we build on existing international efforts.



Global Alliance
for Genomics & Health

- Defines standards to assist in federated analytics
- Task Execution Service defines a standard way to send analysis to be run
- Developed in GA4GH but nothing within the standard is specific to genomics and health



SATRE

- Community accepted standard for TREs in the UK within Academia, NHS, Industry and Government.
- An entry-point for further accreditation such as to ISO 27001 and/or Digital Economy Act.
- A straight-forward tool to define equivalence of capability between TREs in a federated network.
- Continued publication of SATRE self-assessments: satre.uktre.org

Findable
Accessible
Interoperable
Reusable

- We have the world experts in FAIR within the programme
- Metadata can be the glue that drives interoperability
- FAIR can accelerate the use of federated data
- FAIR can empower TREs to have control of their data



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HDRUK
Health Data Research UK



ADRUK
Data-driven change



- A production ready TES implementation to test across existing TREs.
- This has been used by SAIL

What are we interested in understanding:

- Can your analyses be run via TES?
- Can TREs adopt our reference implementation to run those analyses?
- Can existing federated platforms become compatible with TES?
 - A list of federated platforms we are working with will be on our website in the coming days.



- V1.0 of Open-source reference implementation of a SATRE-compliant TRE will be released for adoption and deployment
- Kubernetes based
- Cloud agnostic, AWS, Azure and On-prem
- SATRE compliant
- TES support enabled

What are we interested in understanding:

- Testing and deploying K8TRE for a project and providing feedback on the solution
- A study assessing existing TRE(s) for compliance with the K8TRE specification and piloting relevant component integrations to support the research study

Adopting FAIR Metadata

- TRevolution Knowledge Graph visualisation with a dashboard
- Templates, guidelines, and validation tooling for profile adoption
- TReCrate Profile for describing TRE metadata.
- Guidance on applying a FAIRification framework
- Extension of W3C Data Privacy Vocabulary for describing disclosure control processes

Benefits for adopters

- Provides an overview of relevant metadata of appropriate RO-Crates within a TRE to assist stakeholders in understanding TRE ecosystem at a glance
- Offers practical, “just enough” FAIR metadata and guidance tailored to TREs.
- Improves transparency and trust in TRE usage by making metadata more accessible and consistent and supports reproducibility of research.
- Simplifies metadata onboarding for new TRE adopters by providing documentation, templates and tooling.

Building Trust





SATRE

- A mechanism for building trust between TREs to demonstrate equivalence of operational processes
- A mechanism for building trust with the public to evidence TREs are operating in line with best practice guidance
- New components being added to support federation



- PPIE is embedded in our programme
- As the TRE landscape changes we need to ensure we maintain trust with the public
- Engaging to a wide range of communities



RO-Crate

- Tooling for collating all the metadata as a strong audit tool
- Can allow for public checking of analyses performed
- Can allow researchers to have a reproducible record of analyses

Building Trust: Public Involvement and Engagement (PIE)

- Two PIE Coordinators
- Two Public project team members
- 11 members of the Public Advisory Group
 - Received >70 applications
- Collaboration Cafés
 - Engage with community (online)
 - Include very active public involvement
- Working with charities and organisations to reach new audiences
 - City as Lab
 - King's Trust
 - In-person workshop with young people



Building Trust: RO-Crate

- Updated Five Safes RO-Crate profile that can describe TRE usage
- RO-Crate Validation Service to validate Five Safes RO-Crates (0.4)
- Framework and user interface for specialising metadata profiles

Benefits for adopters

- Enables automated validation of generated metadata
- Five Safes-aligned standard for packaging metadata within a TRE will help enable interoperability within and across federated TREs.
- Interoperability with wider FAIR practices (e.g. EOSC-Entrust, Google Dataset Search, Croissant, FDO)
- Customisation for TRE-specific metadata



Accelerating Research



Statistical Disclosure Control

SACRO will have:

- enhanced documentation and useability,
- a 'researcher-facing' app with a graphical interface to manage the 'acro sessions' containing their release requests.
- an 'aggregator' for use in 'distributed analysis' federation projects.
- Full auditability of what checks have been run, why, and against what risk appetites

SACRO-ML

- Provides the capability for TREs to support projects where users are training AI models on sensitive data.
- This is a mix of
 - training,
 - process docs, and
 - tools for running automated 'attacks' to risk-assess trained models.
 - audit trails as standard

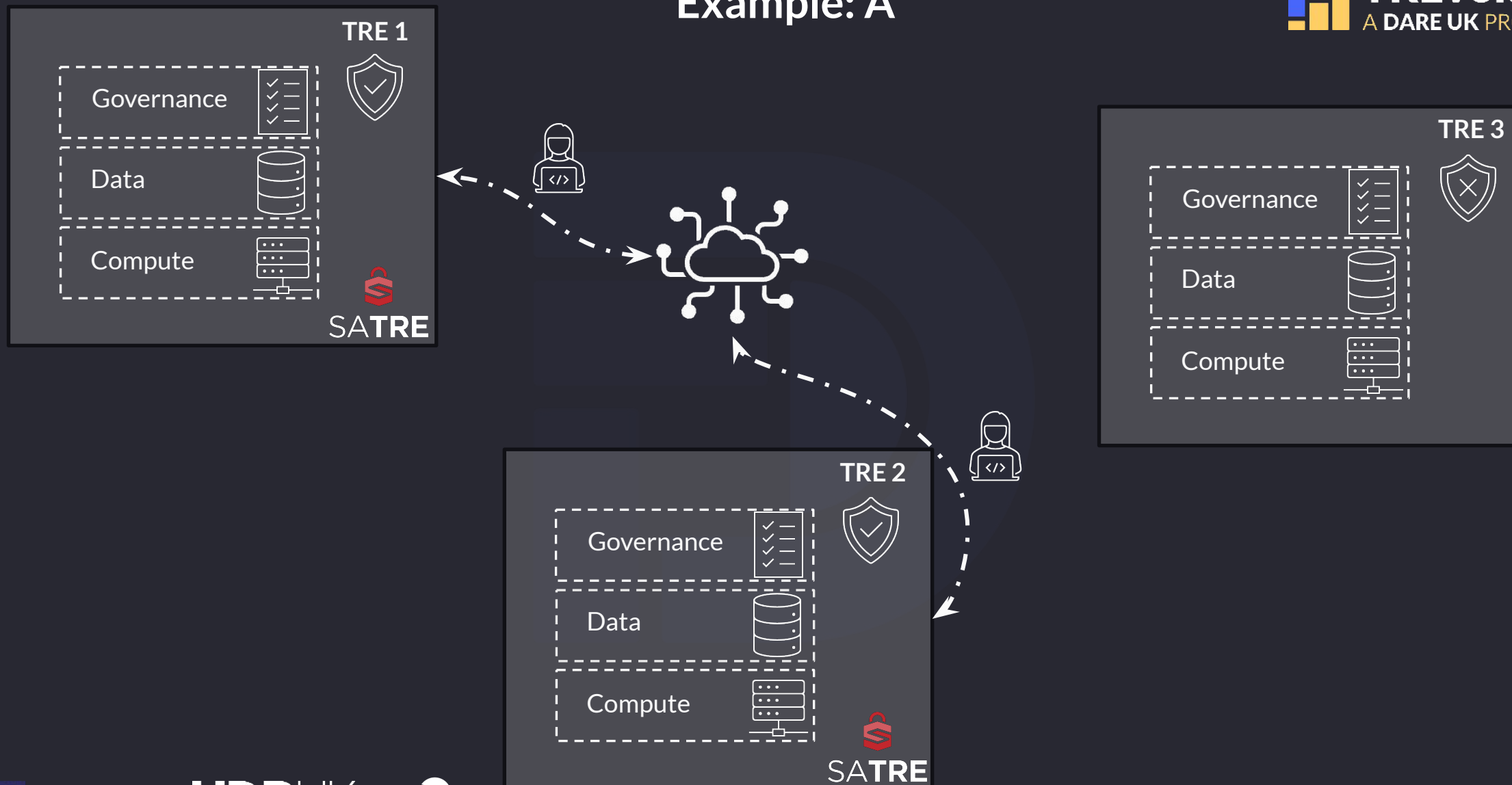
Overview of ideal project types

Chris Cole

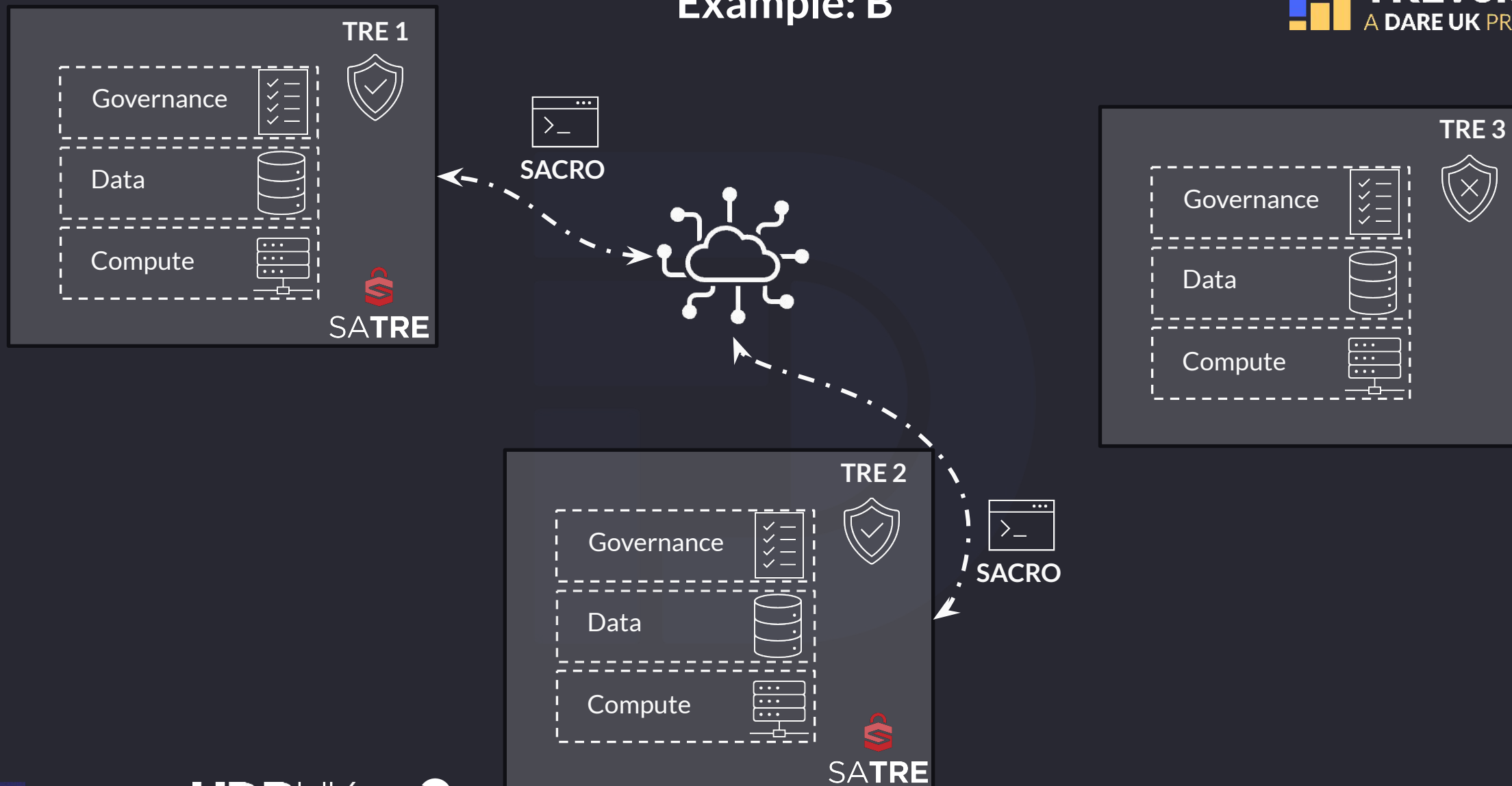
Research teams are invited to partner with TREs to test and evaluate one or more of the following capabilities introduced through the TRevolution programme:

- **Data federation:** enabling a researcher to be able to log in to one TRE and work transparently with approved data held in other remote TREs
- **Analytics federation:** enabling a researcher to be able to log in to one TRE and send computational jobs to run in other remote TREs against approved data
- **Semi-automation of output disclosure checks:** including from complex artificial intelligence (AI) such as machine learning (ML) models

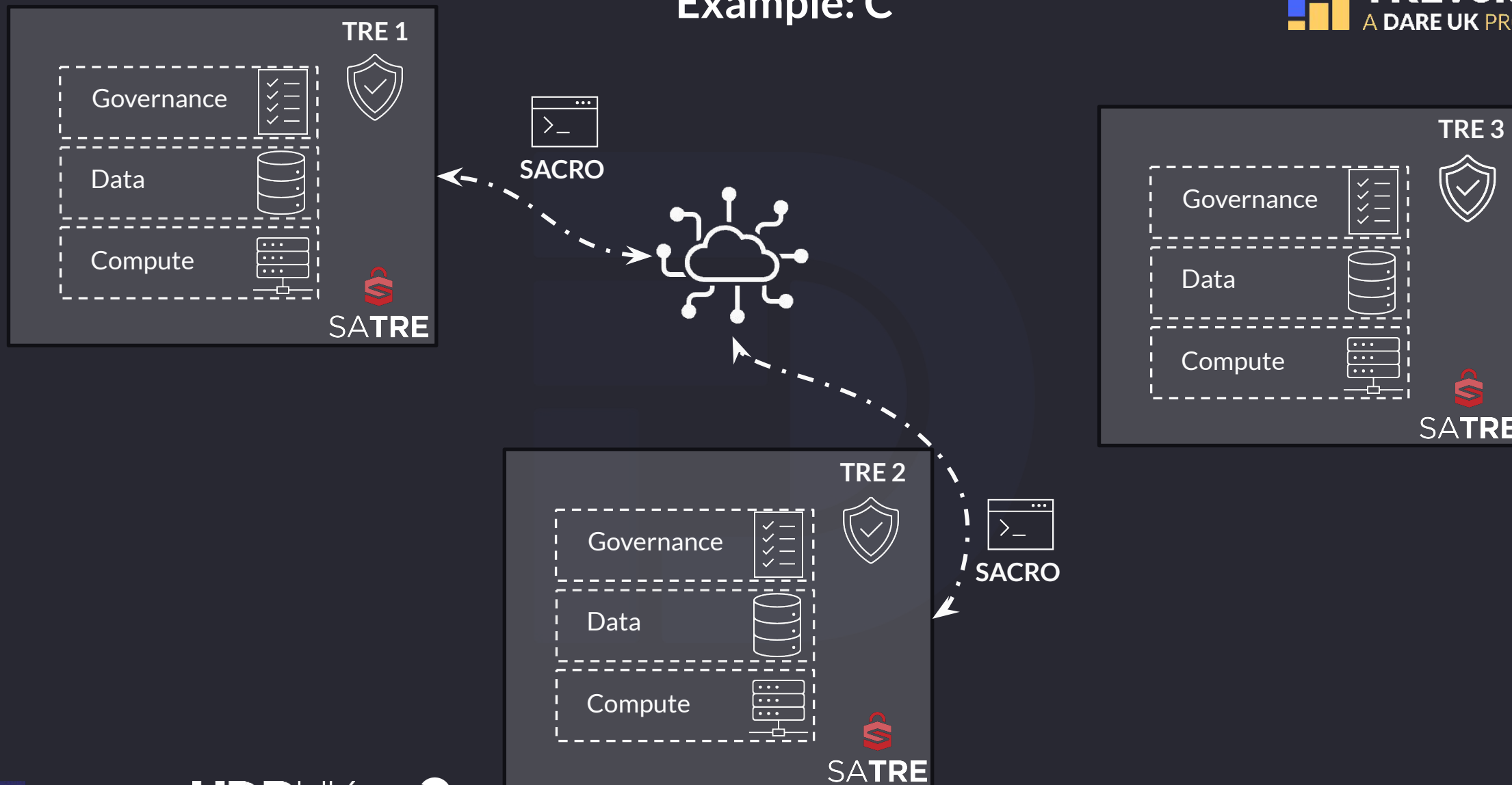
Example: A



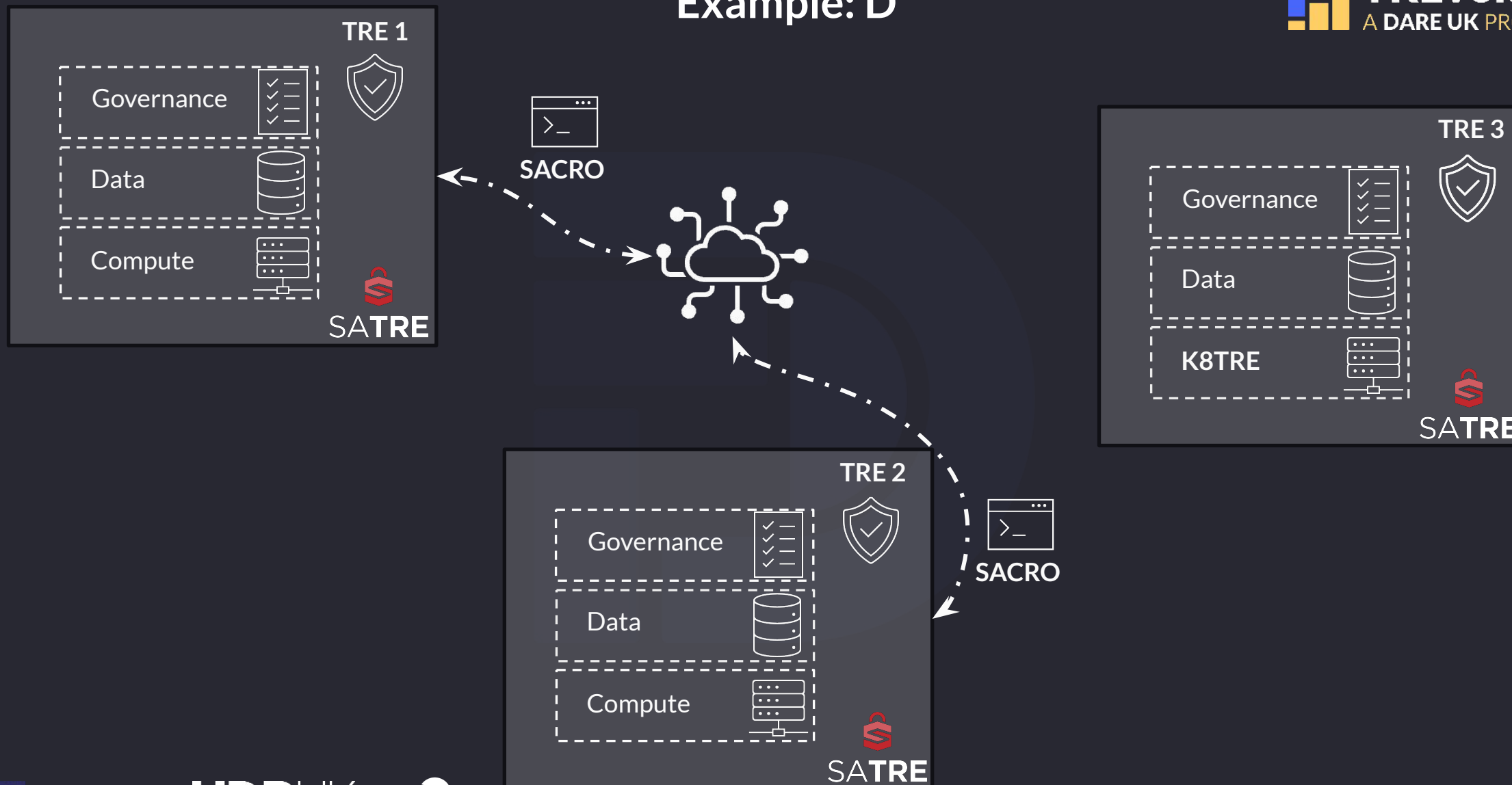
Example: B



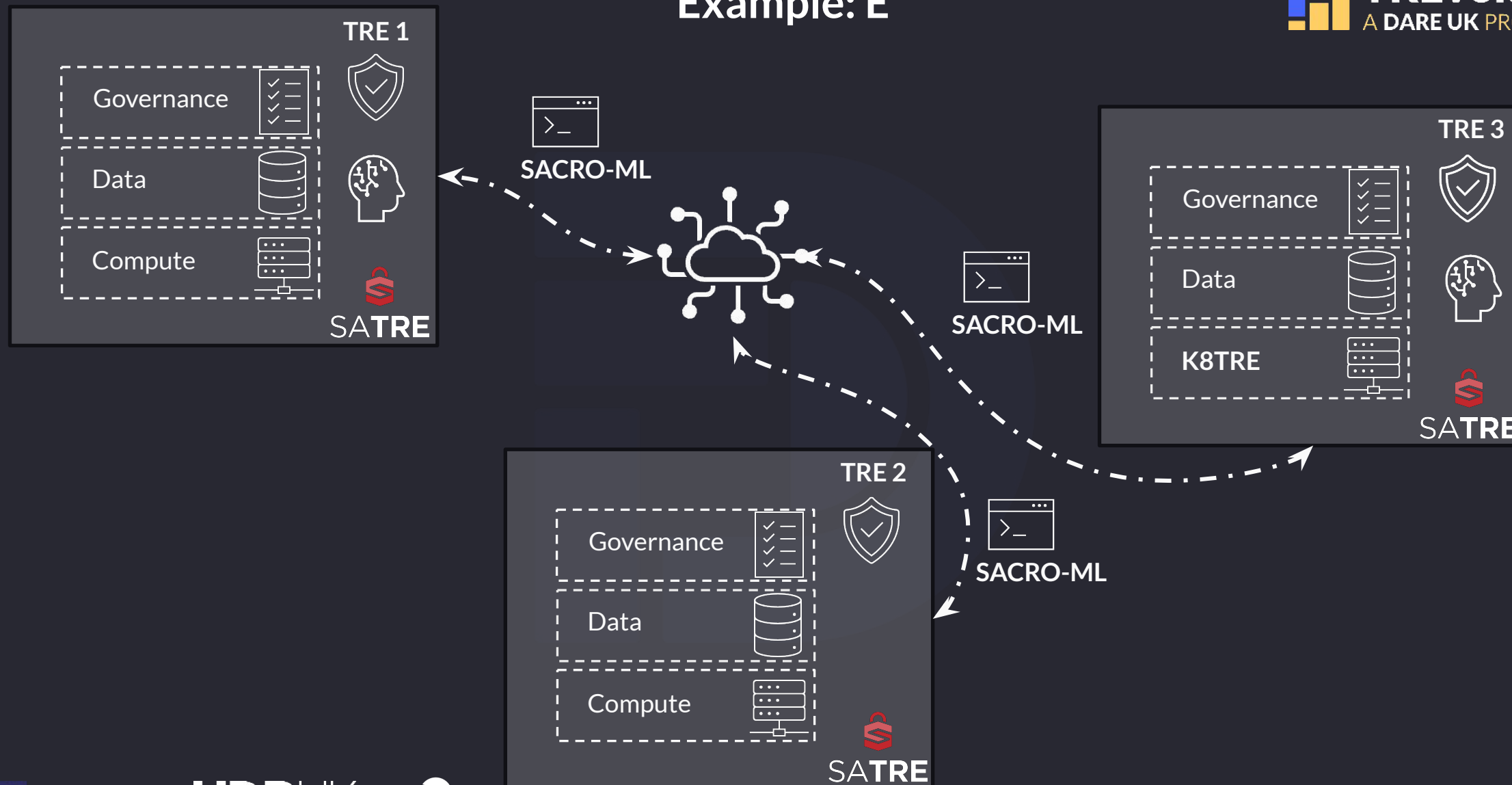
Example: C



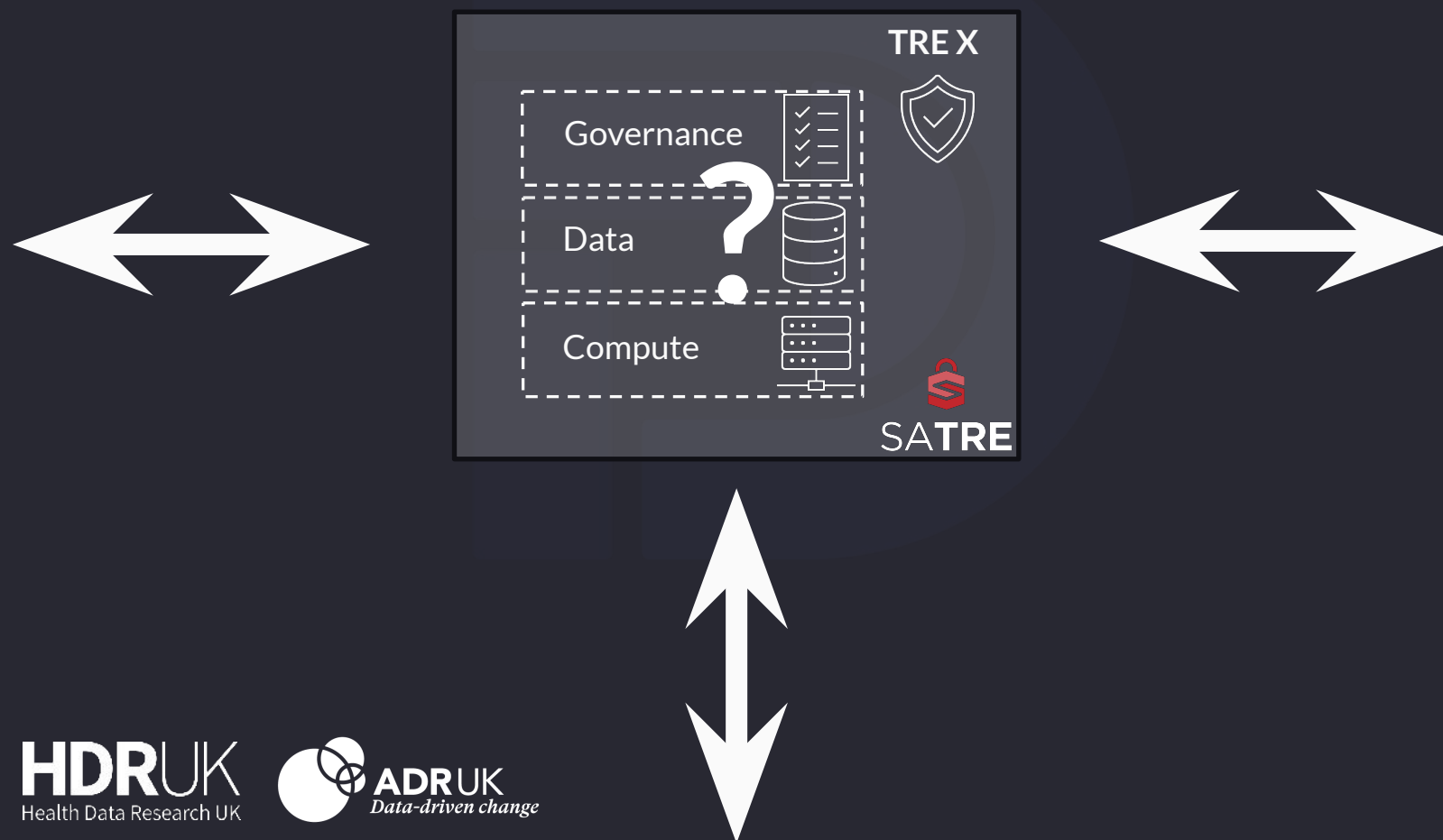
Example: D



Example: E



Example: Z



Questions and answers

TRevolution team

Breakout rooms

- PIE room
- TRevolution capabilities room
- Potential partnerships exploration room
- General call related questions room

Wrap up

What is next?

- Visit the [TREvolution website](#)
- Attend the **Drop-In Session on Thursday 23 October at 11am** to ask any last minute questions on your application
- Submit your application by **Wednesday, 5 November 2025 at 16:00.**

Any additional questions?



Any questions related to the call

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Health Data Research UK



ADRUK
Data-driven change

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Our three challenges

Possible

Technology development is rapidly changing what is possible.

Industry and research organisations drive the art of the possible

Not everything that is possible is acceptable and/or useful

Acceptable

Opinions from the public are vital to include in the design of technology solutions.

Policy and governance usually follows public opinion.

Not everything that is acceptable is possible and/or useful

Useful

Researchers seek to undertake leading research programmes.

They adopt tools that are usable and help them in their research.

Not everything that is useful is acceptable and/or possible

The headline

adopting **Standards** building **Trust** enabling **Federation**

Our project exists to **make federation easier** by enabling many platforms to work together

We support open standards, reduced friction in deployment, and help developers and communities connect their tools to a broader ecosystem. By doing this, we aim to make federation not just possible, but practical

Federation isn't one platform. It's many, working together.
Federation isn't a single platform. It's an ecosystem.
Federation is collaboration, not control.

We help make that possible.
We help it grow.
We make it easier to join in.

The parts that build TREvolution

Compliant tools / frameworks that can be deployed across the landscape

Useful

Software to provide the mechanism to move analytics around

Possible

DIRECTOR: Providing the technical capability to connect TREs and tools

RO-Crate:
Providing a
meta-data
store for the
end-to-end
process

Acceptable

SATRE : Providing a
common set of
standards to define a
TRE

Acceptable

SACRO : Providing a
common and accelerated
disclosure control process

Acceptable

Five Safes : Providing
the decision-making
framework

Acceptable