ELIXIR AAI PILOT

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European Life Sciences Infrastructure for Biological Information
www.elixir-europe.org

Outline

- CSC, EBI, FIMM, ELIXIR EGA and Nordic Control database
- Goals
  - Pilot 1: Federated authentication
  - Pilot 2: Authorisation - access management
- Demo of the REMS tool

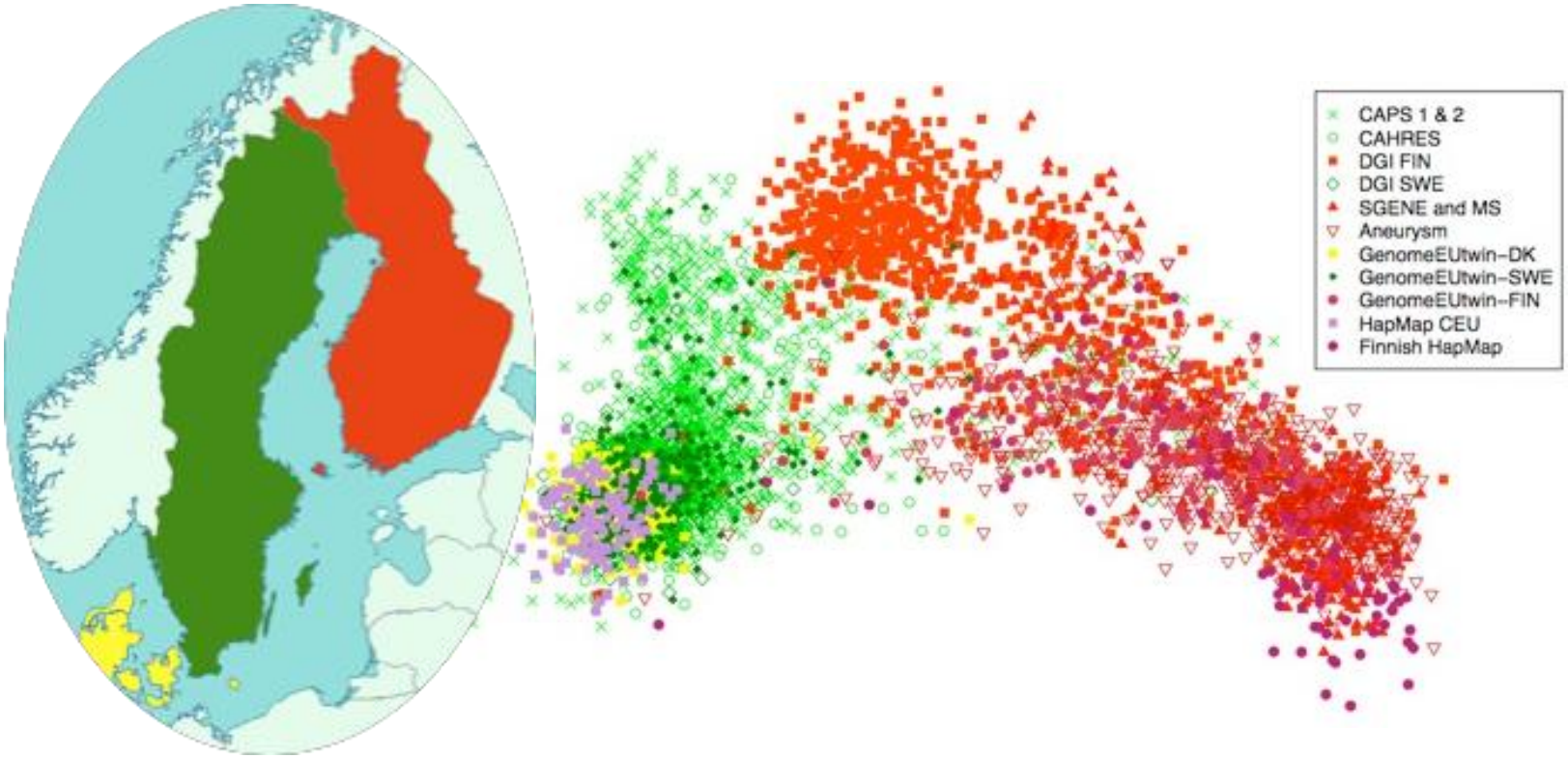
EBI-European Bioinformatics Institute

- Part of European Molecular Biology Laboratory
  - Hosts ELIXIR Hub
  - Funded by European countries, EC, NIH etc
  - Located in Hinxton, Cambridge, UK
- EBI produces databases for bioinformatics, e.g.
  - EMBL-bank (DNA and RNA sequences)
  - Ensembl (genomes)
  - UniProt (protein sequences)
  - PDB (protein structures)
- Supports science by providing maximal access to biological data

European Genome-phenome Archive (EGA)

- One of the EBI services
- Stores data where informed consent requires controlled access (AuthN&AuthZ)
- 8/2012: 323 datasets, 370TB, 200.000 samples
  - Growth rate is very fast at the moment
- Access to datasets granted by a **Data Access Committee (DAC)**
  - DACs nominated by the original data owners
  - 8/2012, 68 DACs around Europe and beyond
  - EGA acts as a secure broker
- www.ebi.ac.uk/ega

Nordic Control Database (NCDB)



- Collected and deposited to EGA by the Nordic Center of Excellence in Disease Genetics
- 6000 samples from DK, EE, FI and SE
- http://nordicdb.org/

ELIXIR EGA AAI pilot

- Common ELIXIR pilot action between EBI, CSC and FIMM (Finnish Institute for Molecular Medicine)
- Coordinated by ELIXIR FI, CSC
- 4/2012-4/2013

Project goals

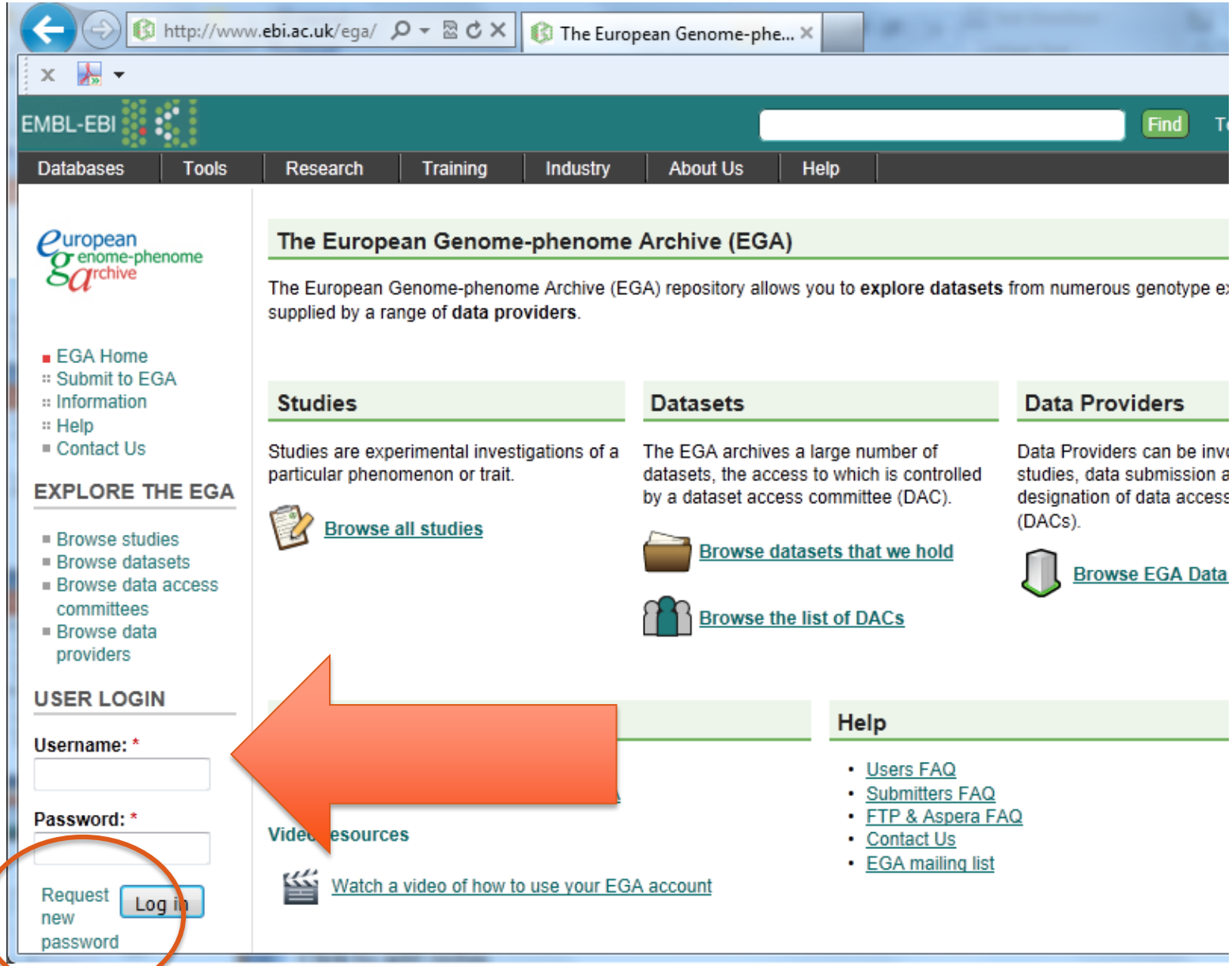
Pilot 1: federated authenticaton

- Allow EGA data users to use their federated identity for requesting services from the EGA
- Remove user's temptation to share their uid/pwd
- Ensure access ceases when the user departs from the Home Organisation

Pilot 2: authorisation management tool for NCDB

- A workflow tool for applicants and DACs
- Reporting on access rights
- Reporting on scientific publications made based on the datasets

Pilot 1: Current authentication

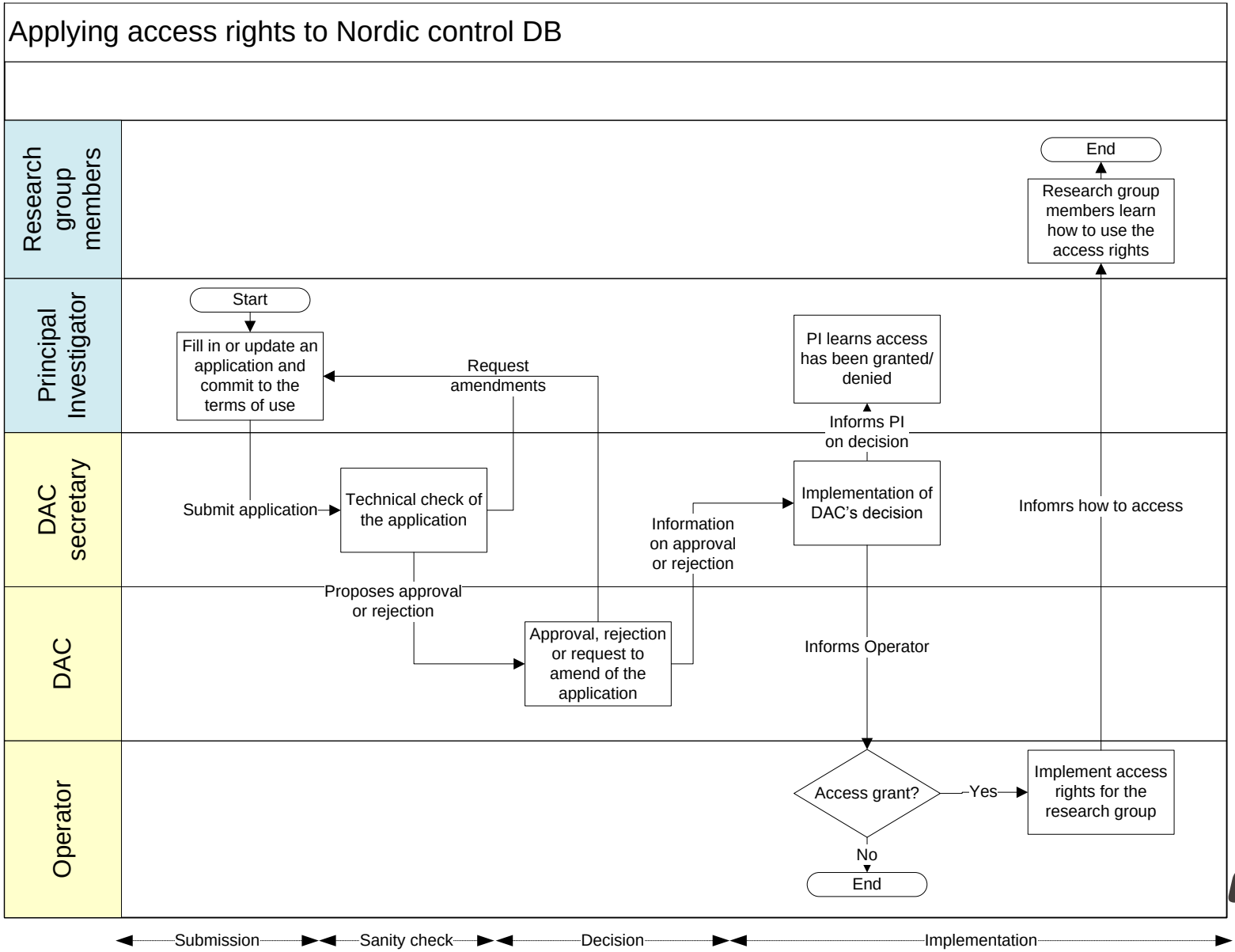


Pilot 1: outcome

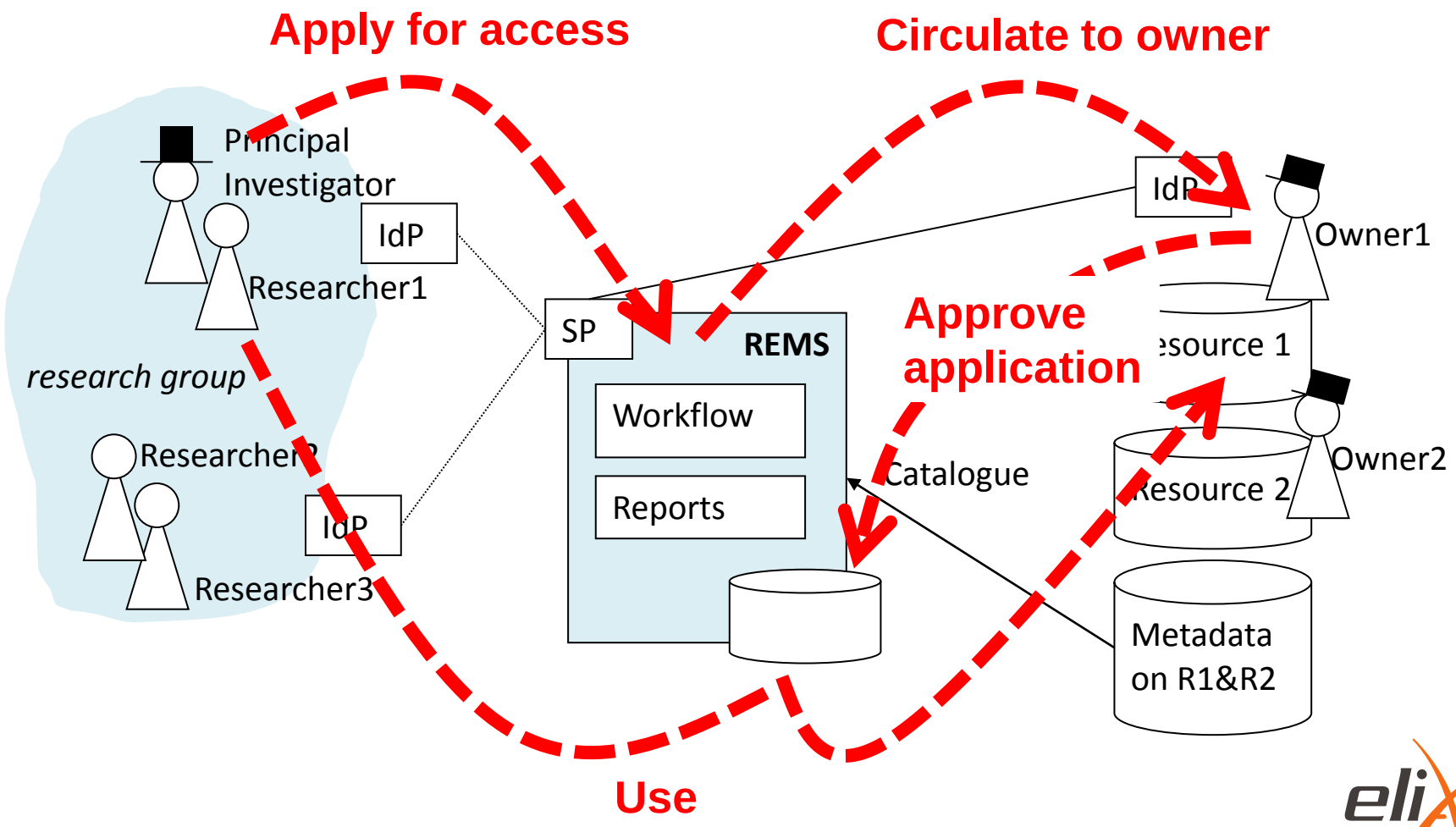
- Integrated EGA web portal to SAML2 SP
  - Haka login available in EBI wwwdev

- EMBL joined Haka FI federation and registered EGA as an SP to Haka
  - No further joining necessary to benefit from interfederations such as Kalmar Union or eduGAIN
  - Technically possible to limit exposure by excluding countries

Pilot 2: NCDB application workflow



Resource Entitlement Management System



REMS usage demo

Technical Proof
of Concept

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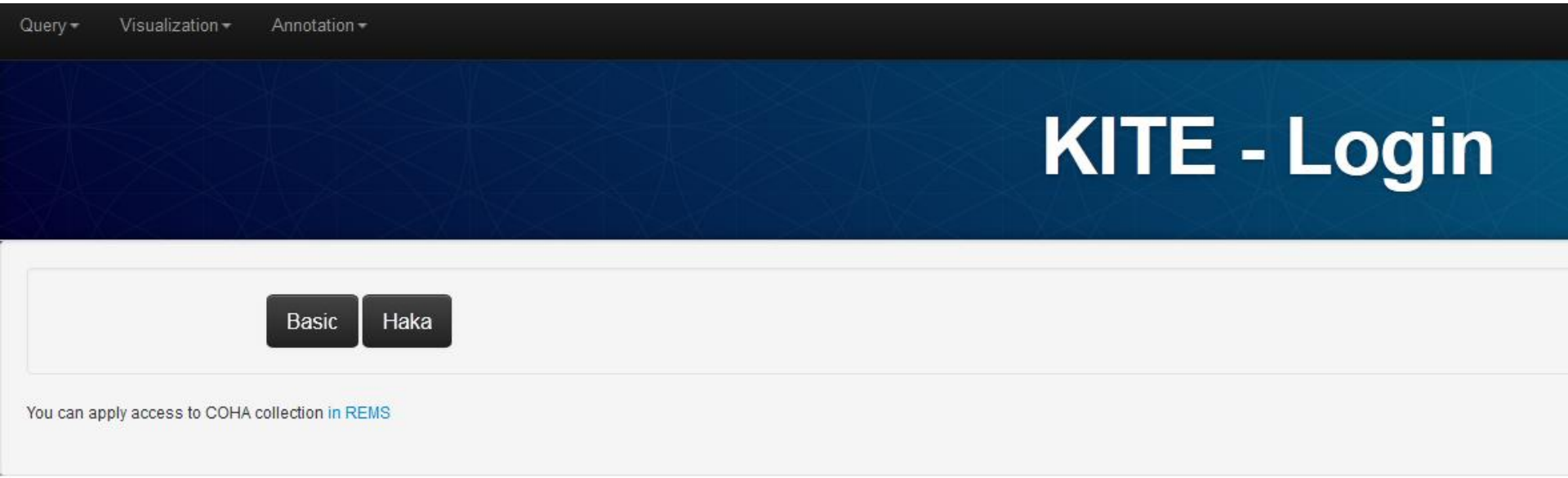
Gaining access to biobank metadata

KITE BBMRI data discovery portal
Apply data access with REMS leveraging federated authentication



http://youtu.be/2pkIRjksH2g

REMS intends to be a generic tool

- Applying access to a resources
  - Identified by an identifier
- Workflows
- Discipline independent
- Several members in one application
- License terms for resources
- Federated authentication
- Reporting
- Proposal: offered as a service from ELIXIR FI
  - Release using an OS license

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