

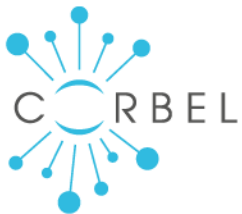
CRBEL shared services for life-science

# Common Authentication and Authorisation Service for Life Science Research

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## CORBEL PROJECT (9/2015-8/2019)

Since 2015, thirteen ESFRI Research Infrastructures from the field of BioMedical Science (BMS RI) joined their scientific capabilities and services to transform the understanding of biological mechanisms and accelerate its translation into medical care.



- *biobanking & biomolecular resources*



- *translational research*



- *clinical trials*



- *curated databases*



- *marine model organisms*



- *plant phenotyping*



- *highly pathogenic microorganisms*



- *screening & medicinal chemistry*



- *biological/medical imaging*



- *functional genomics*



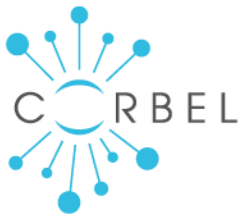
- *structural biology*



- *systems biology*



- *microorganisms*



## **Non-sensitive data**

- Moderate needs for authentication and authorisation

- E.g. EMBRC (marine), EMPHASIS (plant), Infrafrontier (mouse), ELIXIR...

## **Sensitive (human) data**

- AuthN Assurance
  - What it means?
- Authorisation
  - Data access applications

- BBMRI, ECRIN, EATRIS, ELIXIR, EuroBioImaging, ...

## **Instrument access**

- Scheduling access to physical facilities

- Instruct, EuroBioImaging, EATRIS...



# HOW MANY RESEARCH INFRASTRUCTURE AAI'S NEEDED? ANY COOPERATION POSSIBLE?

Social Sc. & Hum. (5)	Life Sciences (13)		Environmental Sciences (9)		Energy (7)	Material and Analytical Facilities (6)	Physics and Astronomy (10)		e-Infra-structures (1)
SHARE	BBMRI	ELIXIR	ICOS	EURO-ARGO	ECCSEL	EUROFEL	ELI	TIARA	PRACE
European Social Survey	ECRIN	INFRA-FRONTIER	LIFEWATCH	IAGOS	Windscanner	EMFL	SPIRAL2	CTA	
CESSDA	Instruct	EATRIS	EMSO	EPOS	EU-SOLARIS	European XFEL	E-ELT	SKA	
CLARIN	EU-OPEN-SCREEN	EMBRC	SIOS	EISCAT_3D	JHR	ESRF Upgrade	KM3NeT	FAIR	
DARIAH	EuroBio-Imaging	ERINHA-BSL4 Lab		COPAL	IFMIF	NEUTRON ESS	SLHC-PP	ILC-HIGRADE	
	ISBE	MIRRI			HiPER	ILL20/20 Upgrade			
	ANAEE				MYRRHA				

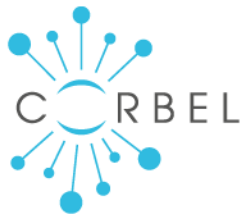
Figure: Academy of Finland

Life Science Authentication and Authorisation Infrastructure (AAI)



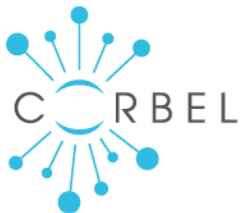
## USE SCENARIOS OF A LIFE SCIENCE AAI

- **Producing** research data (instruments, e.g. microscopes, genome sequencers)
  - **Storing** research data (data archives)
  - **Transferring** research data (to a computing environment, e.g. gridFTP)
  - **Computing** environments (e.g. clouds, computing clusters)
  - Collaborative **tools** (wikis, intranets, mailing lists)
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# HISTORY OF THE LIFE SCIENCE AAI

- June 2016: CORBEL WP5 workshop on AAI
  - 2017: developing requirements specification
  - 2018: pilot with e-infrastructures in AARC2 project
  - 3/2019-: production deployment in EOSC-Life project
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# REQUIREMENTS OF THE LIFE SCIENCE AAI

- See our paper on the requirements on the LS AAI
  - <https://tnc18.geant.org/getfile/4229>
- There is really nothing specific to Life Sciences!
  - The requirements could apply to any other research infrastructures
- Potential for
  - Wider cross-research infrastructure collaboration
  - E-infrastructures to provide focused services

## COMMON AUTHENTICATION AND AUTHORISATION SERVICE FOR LIFE SCIENCE RESEARCH

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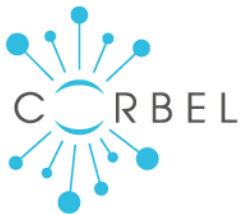
### Keywords

Authentication, authorisation, AAI, research infrastructures, life sciences

### Abstract

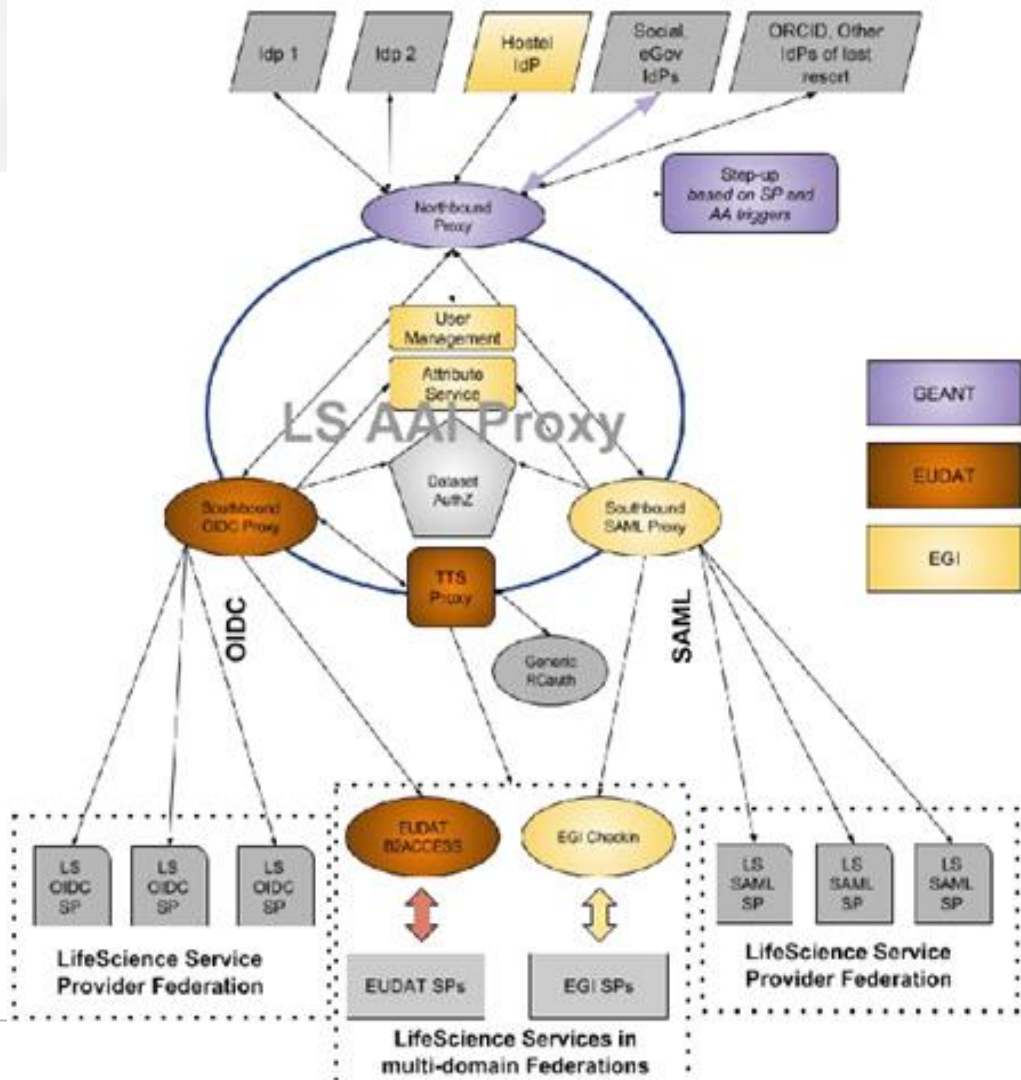
Research communities and scientific service providers are often required to authenticate researchers and manage their access rights to sensitive data, detection instruments or online computation resources. The research infrastructures in the life science sector have collated a joint set of requirements for a Life Science Authentication and Authorisation Infrastructure (AAI) which is currently in a pilot state. For the first time, several research infrastructures have come together to define requirements on a common AAI and work with the e-Infrastructures to provide a prototype based on these requirements. The Life Science AAI has the potential to become a widely used service that provides both users and research infrastructures with easier, streamlined and compatible authentication functionality. It can also serve as an exemplar for science AAI development in general. This paper presents the requirements of the Life Science AAI and the rationale behind it. An overview of the non-technical challenges in the upcoming deployment phase is also presented.

### 1. Introduction



## Pilot with e-infrastructures 2018

- In the context of AARC2 project
- E-infrastructures operating the pilot environment (EGI, EUDAT, GEANT)

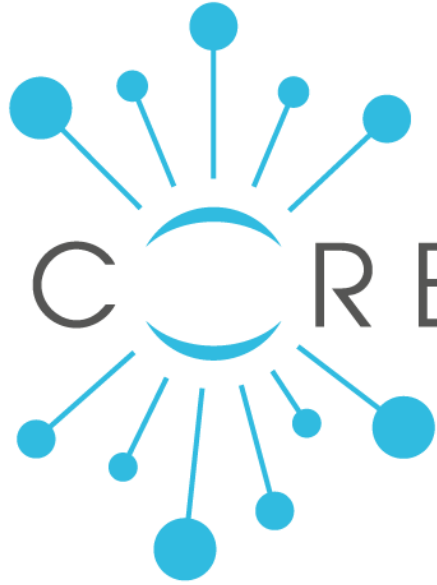






# NON-TECHNICAL CONSIDERATIONS

- Policies
    - For end users (AUP)
    - For relying services (qualification, obligations)
  - Service management and sustainability
    - Funding model after the deployment phase
    - Bodies and procedures for decision making
  - Operations (e-infrastructures)
    - Service levels
  - Data protection model
    - Data controller/processor
    - Release to 3rd countries
    - Organisational and technical measures
    - etc
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**CORBEL** shared services for life-science

## Questions?

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