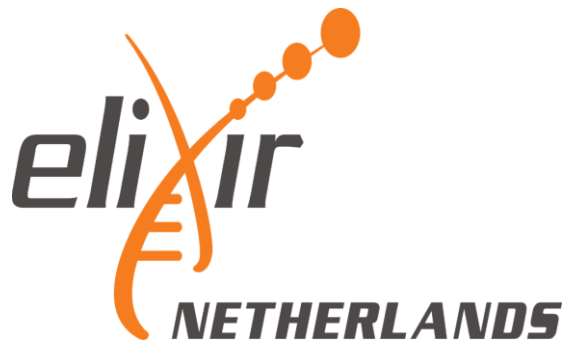




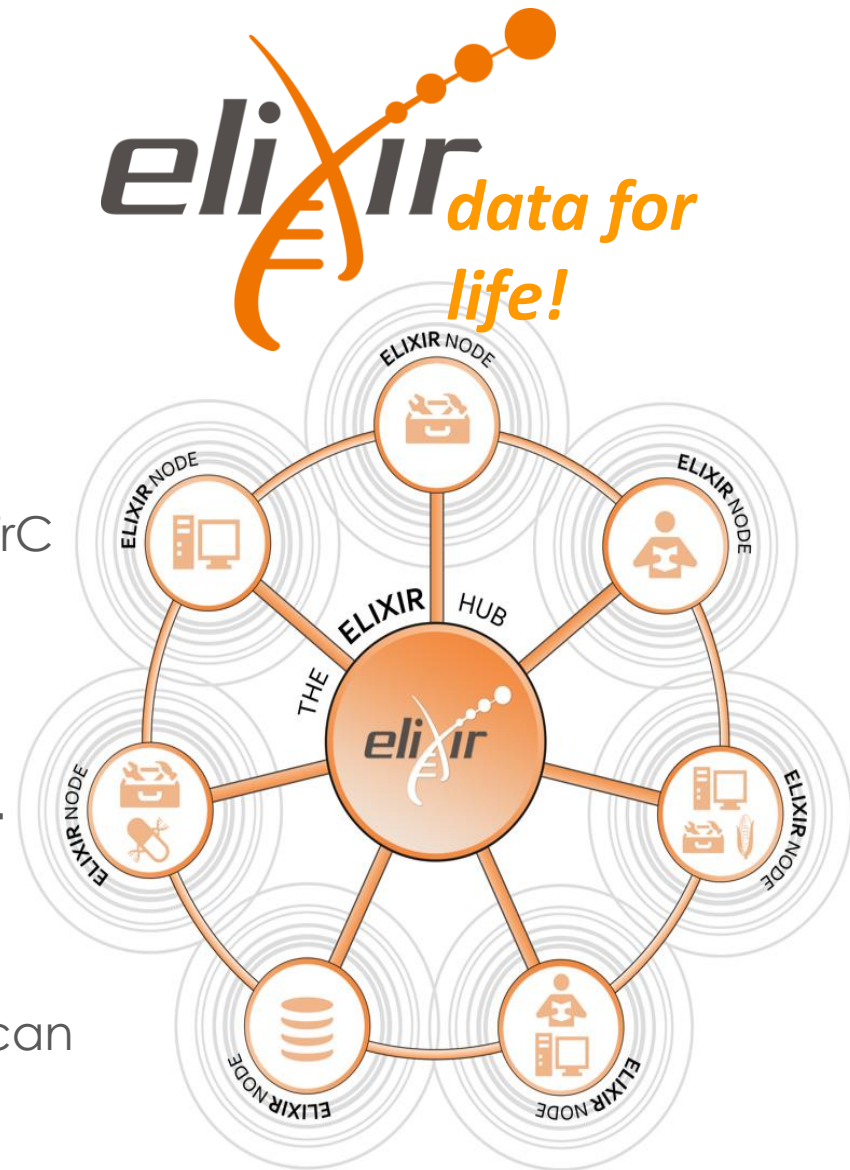
ELIXIR-NL

***DIGITAL RESEARCH
INFRASTRUCTURE FOR LIFE
SCIENCES***



ELIXIR – ESFRI LANDMARK

- **21 Countries + EMBL signed ECA**
 - Countries have 1 node
 - Hub hosted by EMBL-EBI
- **ELIXIR-NL hosted by DTL**
 - Jaap Heringa HoN
 - Rob Hooft TC, Celia van Gelder TrC
 - Bea Pauw (NWO), Ruben Kok in ELIXIR Board
- **Hub-NL collaboration agreement**
 - Node service delivery plan
 - Implementation studies
 - DTL Board: only DTL partners can join
 - **EC H2020 calls, Infradev, IMI,**



ELIXIR PLATFORMS

ELIXIR's activities are divided into five areas called 'Platforms'. These are Data, Tools, Interoperability, Compute and Training. The Platforms are managed by Platform leaders and the work is carried out by groups within the Platforms.



Data Platform

Aims to identify key data resources across Europe and support the linkages between data and literature



Tools Platform

Helps researchers find the best software tools to analyse their data.



Compute Platform

Develops services to make it easier to store, share and analyse large datasets.



Interoperability Platform

Develops and encourages the adoption of standards to describe life science data.



Training Platform

Helps scientists and developers find the training they need, and also provides that training.

ELIXIR PLATFORMS

ELIXIR-NL remit so far:

- Interoperability
- Compute
- Training



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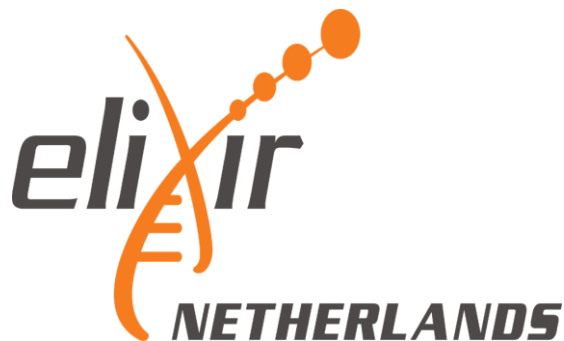
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NATIONAL ROADMAP

ELIXIR-NL DIGITAL RESEARCH INFRASTRUCTURE FOR LIFE SCIENCES



Roadmap Cluster: ELIXIR-NL

Cluster partners: DRE, euroCAT, ELIXIR-NL,
SURF (NLeSC)

DRE

Radboudumc

Arnoud van der
Maas
Ariaan Siezen



euroCAT

Andre Dekker
Philippe Lambin



Jaap Heringa
Chris Evelo
Rob Hooft



Axel Berg
Irene Nooren

DIGITAL RESEARCH ENVIRONMENT (DRE)

- System-agnostic medical research environment
 - Developed at Radboud MC (by private party RSRCH BV/Aridhia)
- Allowing safe and secure collaboration
 - Each user (group) gets own 'paddy'
- App store for data and tools



DISTRIBUTED LEARNING - PERSONAL HEALTH TRAIN APPROACH



FIR



euroCAT

DISTRIBUTED LEARNING - PERSONAL HEALTH TRAIN APPROACH

Distributed data
(scalability issues)
Privacy-restricted data
- Learning algorithms visit data
sources, learning iteratively

FAIR DATA ECOSYSTEM



Create

Publish

Find

Annotate

FAIRIFIER

FAIR
DATA POINT

FAIR
DATA

ORKA
Open RDF
Knowledge Annotator

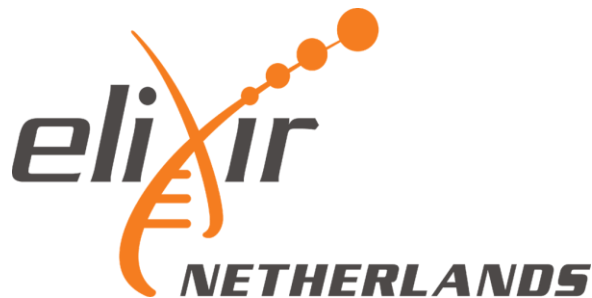


DTL

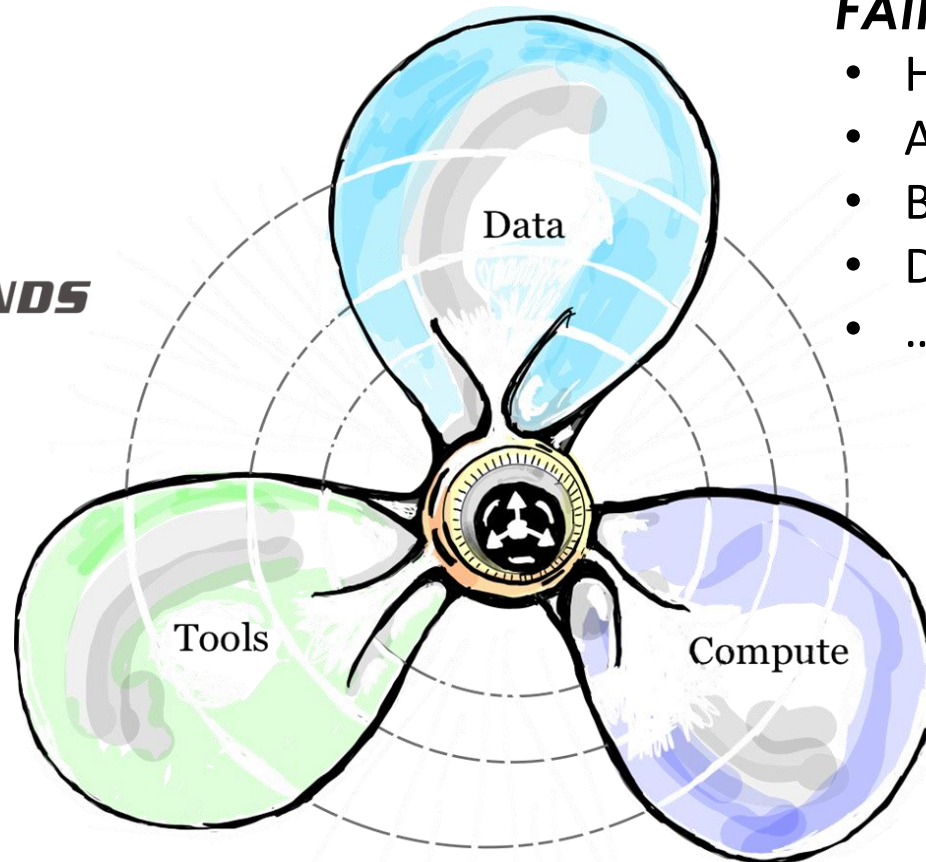
Data FAIRport

FAIR INFRASTRUCTURE

DATA, TOOLS, WORKFLOWS, MODELS AND
COMPUTE



**FAIR-
compliant
tooling**
(workflows,
models)

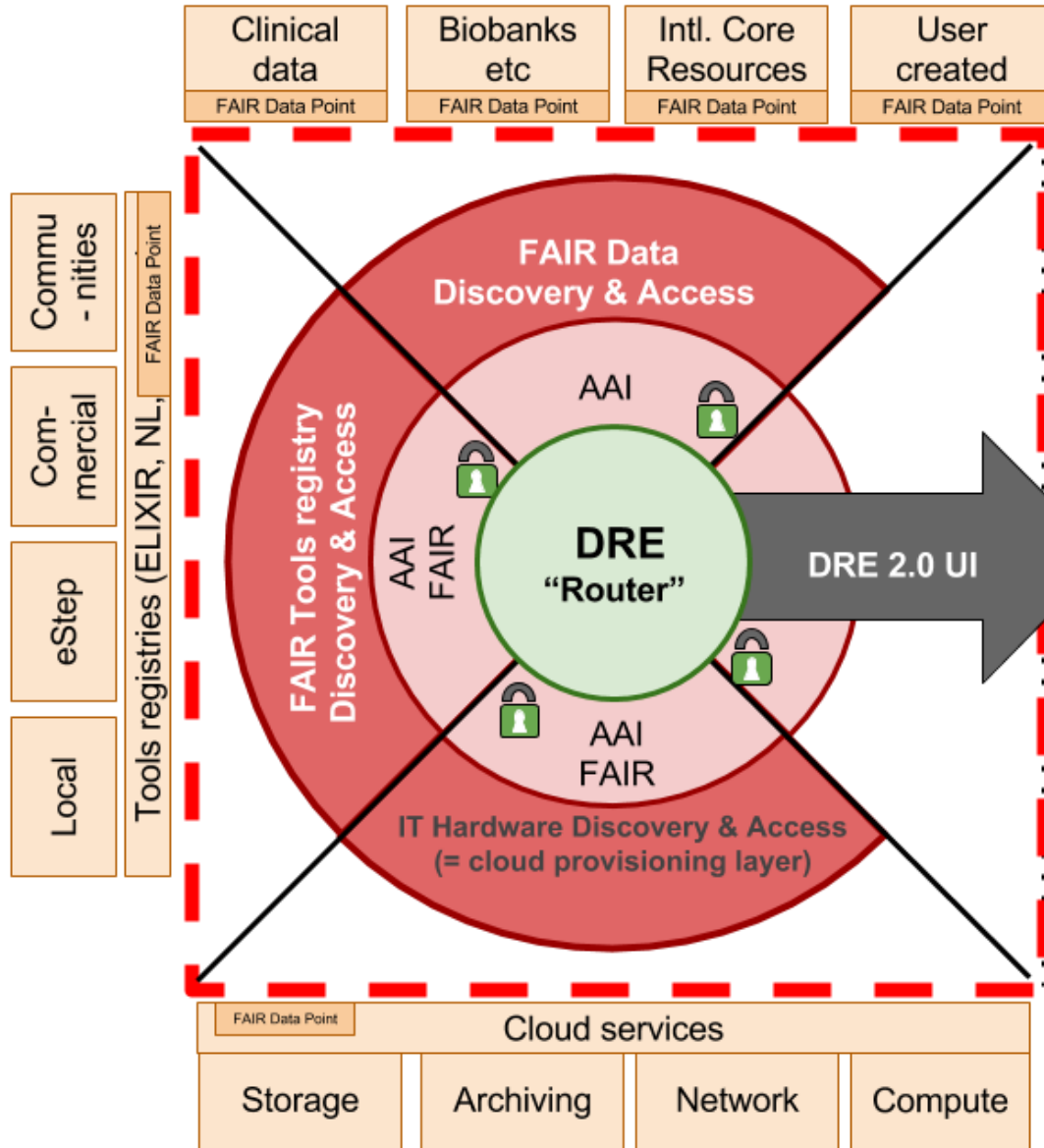


FAIR data

- Health
- Agrofood
- Biotech
- Data science
-

**FAIR-
compliant
HPC/Cloud**

Life sciences data resources

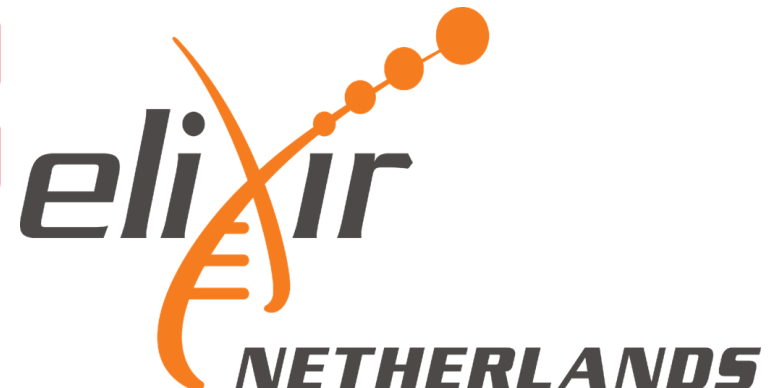
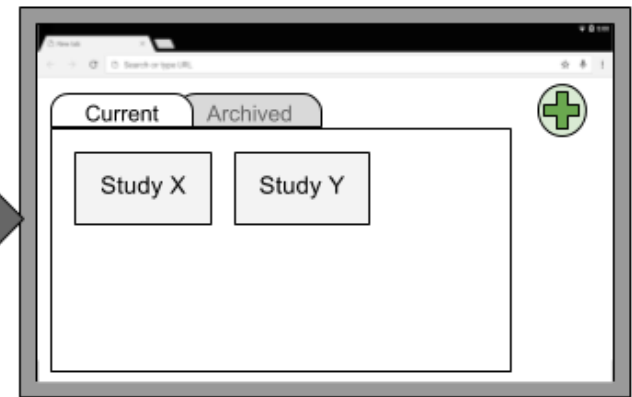


Radboud DRE

Digital Research
Environment 1.0



User View / Experience



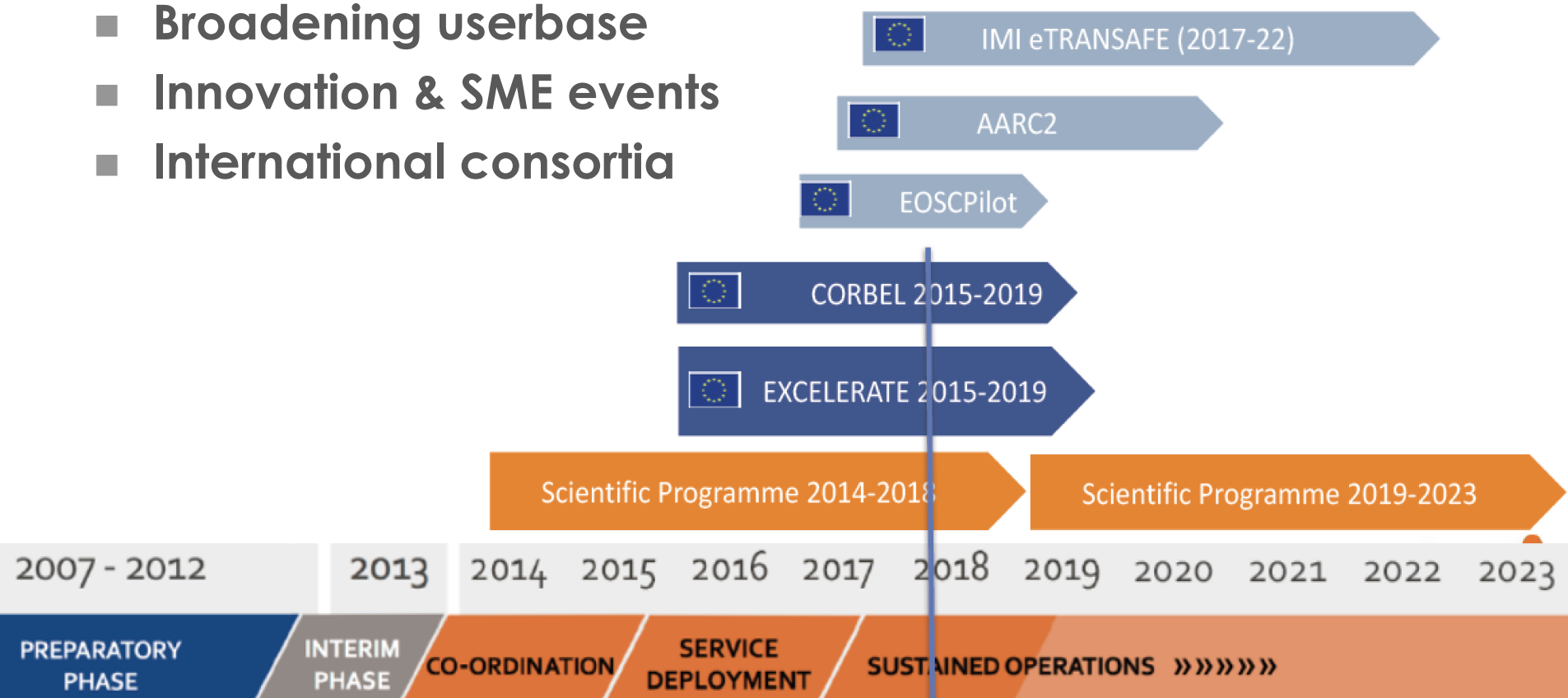
FAIR INFRASTRUCTURE

DATA, TOOLS, WORKFLOWS, MODELS AND COMPUTE

- Community digital research infrastructure underlying all LS research (and beyond)
- Easy access for **users** and **contributors**
- Integrating FAIR data, analytics and compute
- Public-private
- Decompose existing infrastructures (e.g. DRE) and then re-amalgamate best-of-breed modules
- 'app store-type' environment geared for privacy-aware collaboration
- ELSI support (privacy-sensitive data)
- Assisting in data management planning (+ software)
- Cross-ESFRI, cross-Roadmap cluster collaboration

ELIXIR: PREPARING 2ND 5-YEAR PLAN

- FAIR data management
- Core resources
 - Christine Durinx
- Broadening userbase
- Innovation & SME events
- International consortia



EXTENDING ELIXIR-NL REMIT

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ELIXIR Human Data

Resources and projects in human genomics and translational data

EXTENDING ELIXIR-NL REMIT

Potential NL core data
resources?

Potential NL core tools /
pipelines?



De
of st
data.

resources
linkages

projects in human
the training they need, and also
provides that training.