

# Collaboration Step by Step

A short overview of BBMRI-ERIC's Common Services IT

Diogo Alexandre, Prof. Dr. Frank Ückert



BBMRI

**Biobanking and BioMolecular  
Resources Research Infrastructure**

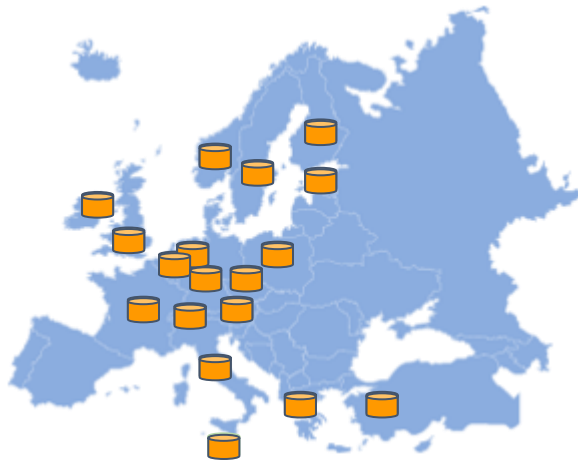


BBMRI-ERIC

**European Research Infrastructure Consortium**


# Goals BBMRI-ERIC

establishing, operating and developing a pan-European distributed research infrastructure of biobanks and biomolecular resources



# Partners

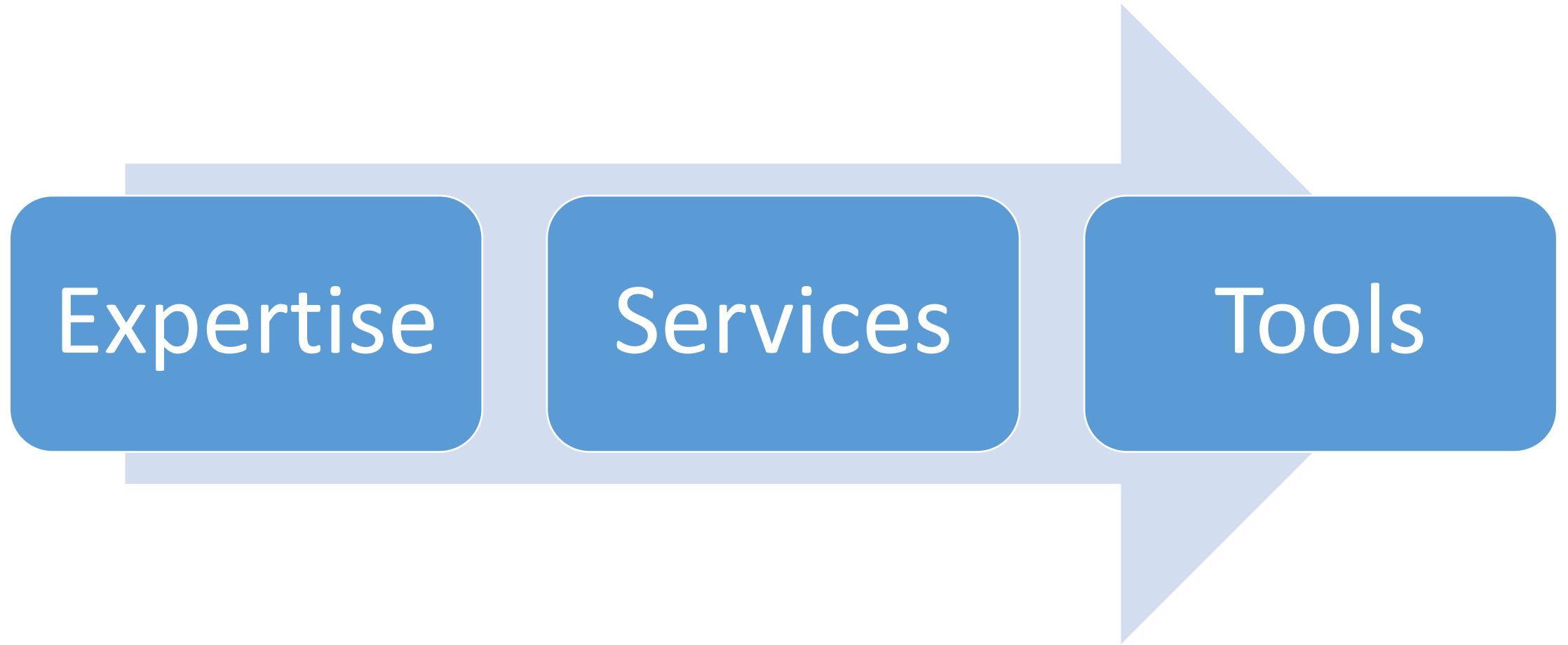


 Full members

 Observers

und die International Agency for Research on Cancer/World Health Organization

# Common Service IT Goals: Deliver...



Tasks and activities of BBMRI-ERIC

# WPO – Project management



- Planning and coordinating tasks



- Timetable management and revision



- Reporting to BBMRI-ERIC and committees

# WP1 – Directory service

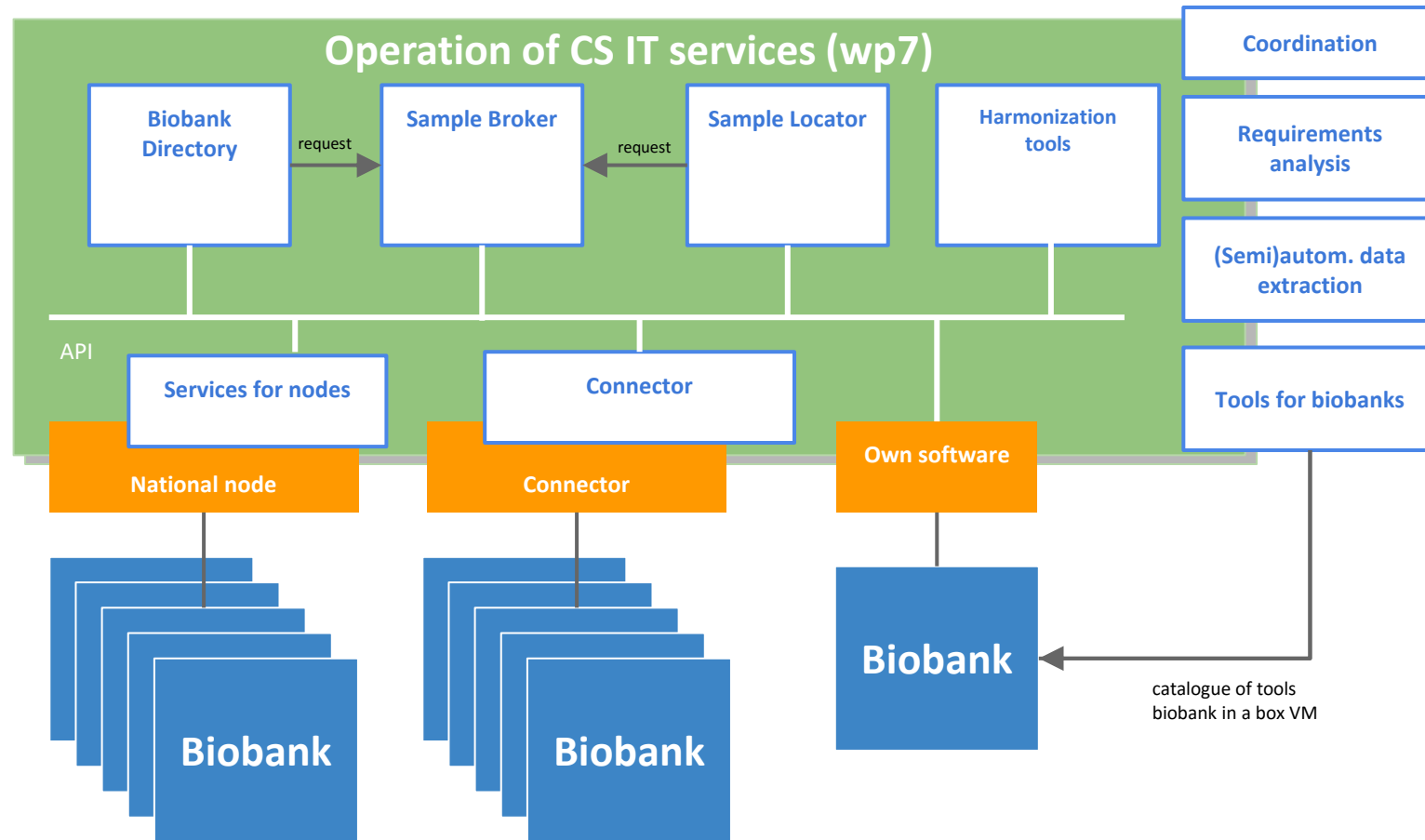


Enable researchers, biobankers, funders and policy makers to **find** biobank samples and **data collections**

Help **national nodes** and **consortia** to **integrate** with the directory network

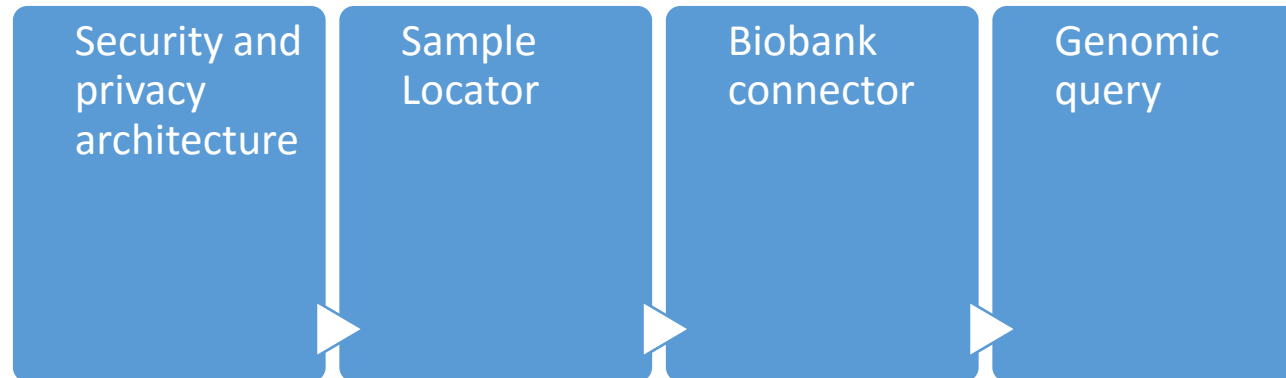
Enable BBMRI-ERIC to easily **manage** and **expand** the directory service

# Common Service IT Overview





# WP2 – Sample Locator





medinfo\_mainz  
Mainzelliste

#### ACTIONS

- Clone
- Compare
- Fork

#### NAVIGATION

- Overview
- Source
- Commits
- Branches
- Pull requests 2
- Issues
- Downloads 3

Language java  
Access level Read

3  
Forks

8  
Watchers

## Mainzelliste

Mainzelliste is a web-based first-level pseudonymization service. It allows for the creation of personal identifiers (PID) from identifying attributes (IDAT), and thanks to the record linkage functionality, this is even possible with poor quality identifying data. The functions are available through a RESTful web interface.

Further information and documentation on Mainzelliste can be found on the [project web page of the University Medical Center Mainz](#).

In order to receive up-to-date information on the project, you can register to be on our [mailing list](#).

The following article describes the underlying concepts of Mainzelliste and the motivation for its development. Please cite it when referring to Mainzelliste in publications:

Lablans M, Borg A, Ückert F. A RESTful interface to pseudonymization services in modern web applications. BMC Medical Informatics and Decision Making 2015, 15:2. <http://www.biomedcentral.com/1472-6947/15/2>.

## Release notes

### 1.4.2

Fixes an encoding error in German language properties file. This version can be skipped by users who do not use the HTML interface or use their own JSP files.

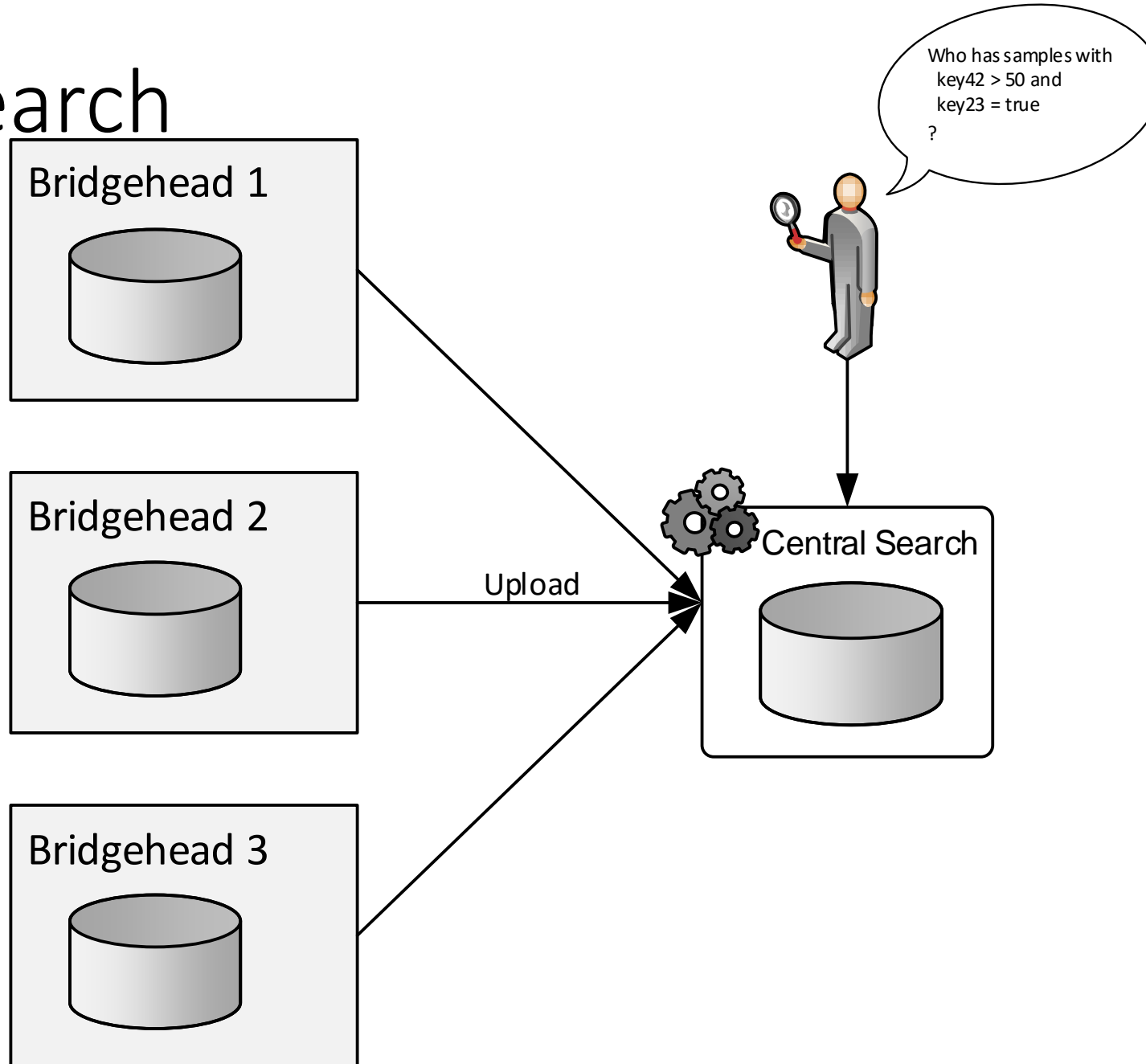
Sign up for free

#### Recent activity

- 1 commit**  
Pushed to medinfo\_mainz/mainzelliste  
| [cfc019c](#) Misplaced text removed from REA...  
Andreas Borg · 2015-07-29
- ESID PatientList now up to date with n...**  
Pull request #23 updated in medinfo\_mainz/mainzelliste  
Benjamin Gathmann · 2015-07-13
- 1 commit**  
Pushed to medinfo\_mainz/mainzelliste  
| [30d687a](#) Release notes v1.4.2, updated ve...  
Andreas Borg · 2015-05-19
- 1 commit**  
Pushed to medinfo\_mainz/mainzelliste  
| [0e70df4](#) Fixes encoding error in German la...  
Andreas Borg · 2015-05-19
- 18 commits**  
Pushed to medinfo\_mainz/mainzelliste  
| [a099083](#) Release 1.4.1



# Central Search



## Partnerstandorte



Berlin

Charité Comprehensive Cancer Center



Dresden

Universitätsklinikum Carl Gustav Carus  
an der Technischen Universität Dresden  
Helmholtz-Zentrum Dresden-Rossendorf  
Max-Planck-Institut für Molekulare  
Zellbiologie und Genetik



Essen/Düsseldorf

Westdeutsches Tumorzentrum am  
Universitätsklinikum Essen  
Heinrich-Heine-Universität  
Düsseldorf



Frankfurt/Mainz

Universitätsklinikum Frankfurt am Main  
Johann-W.-Goethe-Universität Frankfurt  
Georg-Speyer-Haus  
Krankenhaus Nordwest Frankfurt  
Universitätsmedizin der  
Johannes Gutenberg-Universität Mainz



Freiburg

Tumorzentrum Ludwig Heilmeyer –  
Comprehensive Cancer Center Freiburg  
Albert-Ludwigs-Universität Freiburg  
Universitätsklinikum Freiburg  
Max-Planck-Institut für Immunbiologie  
und Epigenetik



Heidelberg

Deutsches Krebsforschungszentrum  
(Kernzentrum)  
Universitätsklinikum Heidelberg  
Ruprecht-Karls-Universität Heidelberg  
Nationales Centrum für  
Tumorerkrankungen Heidelberg



München

Ludwig-Maximilians-Universität München  
Technische Universität München



Tübingen

Eberhard Karls Universität Tübingen  
Universitätsklinikum Tübingen

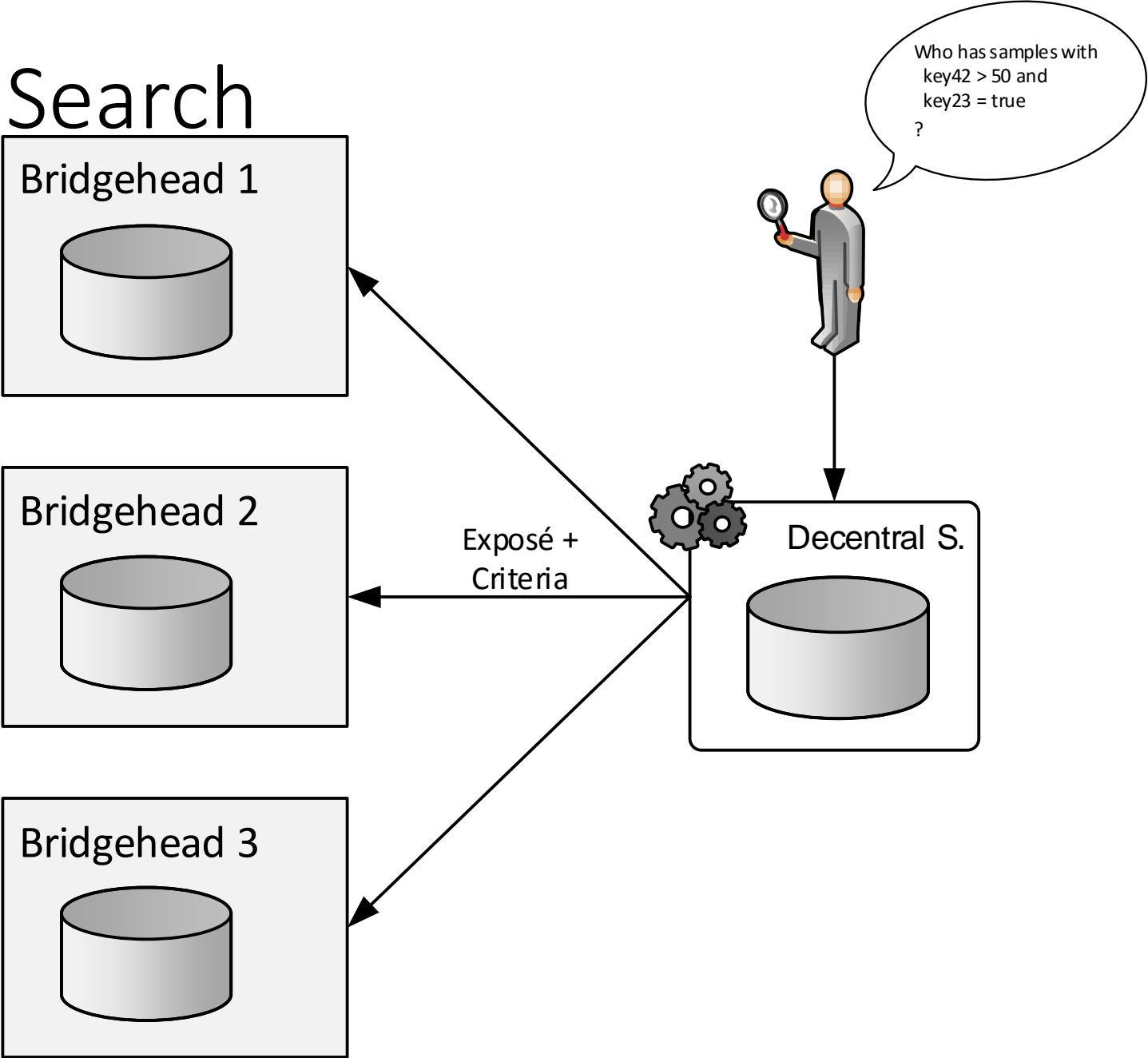
Deutsches Konsortium für Translationale Krebsforschung

# The Need for Decentral Search

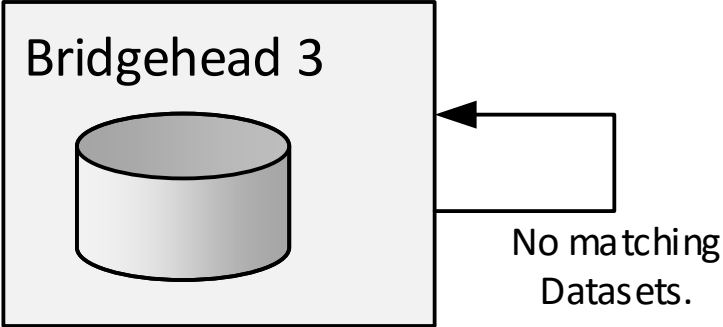
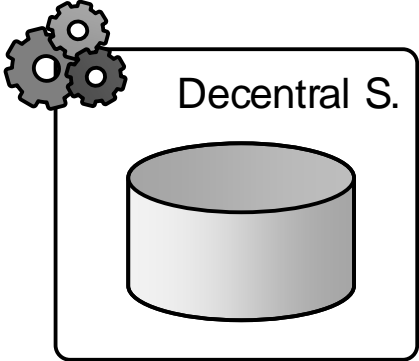
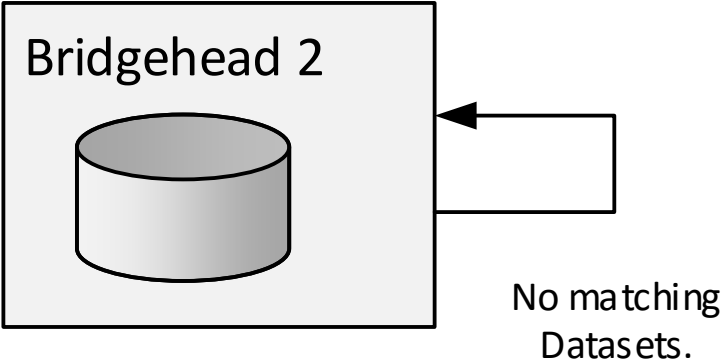
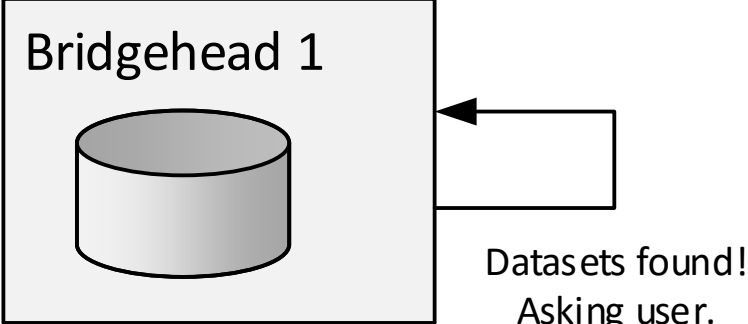
- Problem 1: Data Protection
- Problem 2: Data Sovereignty

Search method	Central Search	Decentral Search
<b>Informed consent</b>	required	optional
<b>Data collection</b>	2015 and later	(even) before 2015
<b>Width of data record</b>	MDS-K/MDS-B	ADT + "ALL" (MDR)
<b>Data upload</b>	yes	no

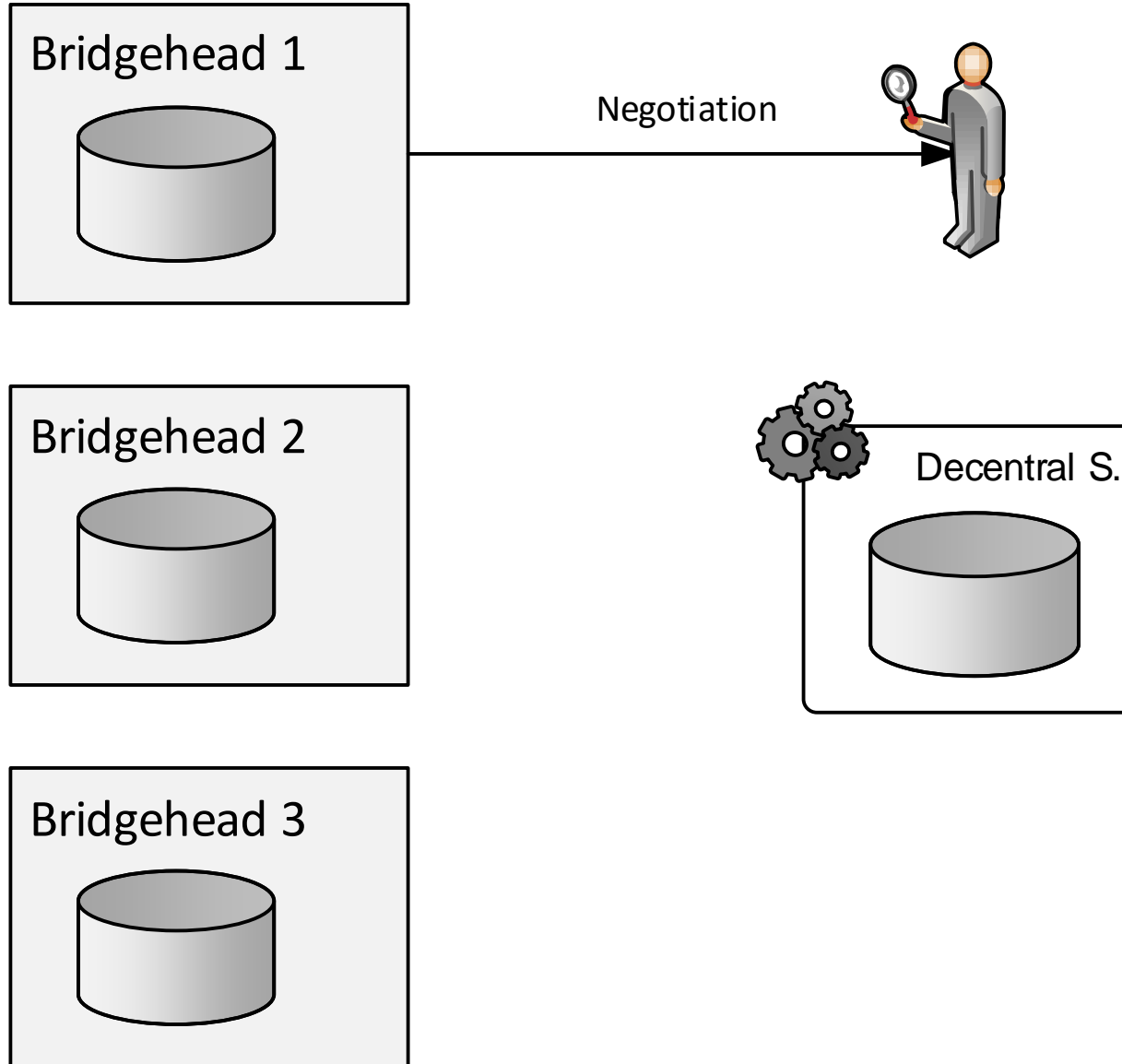
# Decentral Search



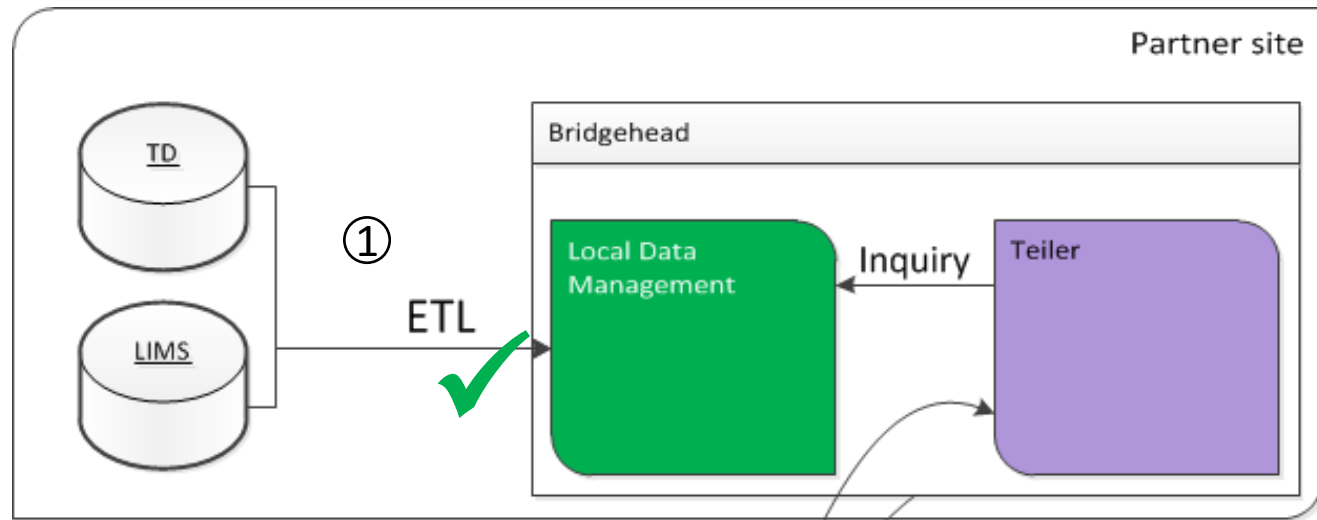
# Decentral Search



# Decentral Search

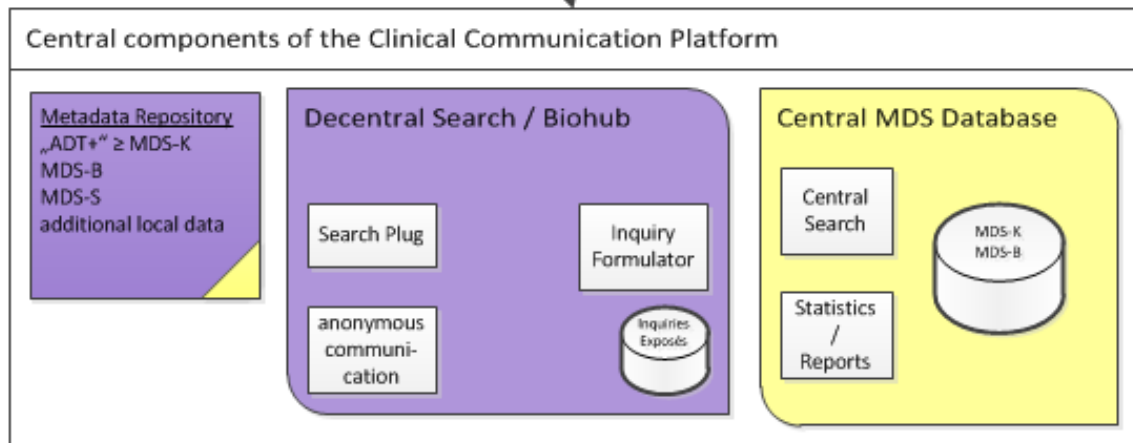
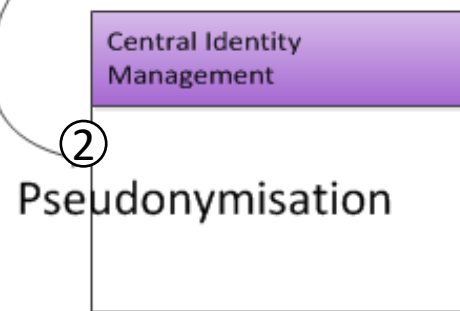




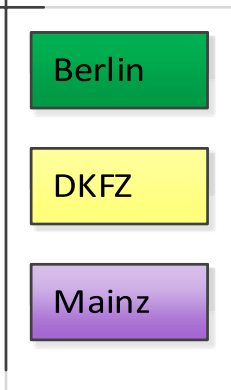


③ Upload (central search) ↓  
 ✓ Inquiry (decentral search) ↑

④



Verantwortlichkeit



medinfo\_mainz / samply.e... x +

https://bitbucket.org/medinfo\_mainz/samply.edc.osse/wiki/Home

Bitbucket Dashboard Teams Repositories Snippets Create

Find a repository... JGU

medinfo\_mainz samply.edc.osse

**ACTIONS**

- Clone
- Create branch
- Create pull request
- Compare
- Fork

**NAVIGATION**

- Overview
- Source
- Commits
- Branches
- Pull requests
- Wiki
- Downloads
- Settings

Wiki

samply.edc.osse / Home

Clone wiki Create page

View History Edit

## OSSE for Software Developers - Getting Started

In the following, we give you a short overview of how to navigate the various OSSE subprojects. Please be sure to visit each subproject for detailed instructions.

### 1 About OSSE

The OSSE registry framework is a toolbox that supports the setup of disease-related registries in the area of rare diseases. The framework consists of several **local components** that each registry compound runs by itself and **central components** that are operated for several (ideally all) OSSE-type registries.

The diagram illustrates the OSSE architecture, divided into two levels by a dashed line:

- Superior level (e.g. national or European):**
  - CaDSR (NCI) (green box) connects to the MDR adapter (grey box) via a blue arrow.
  - OSSE central authentication (grey box) is positioned above the MDR adapter.
  - Search broker (grey box) is positioned to the left of the MDR adapter.
  - Form repository (grey box) is positioned below the MDR adapter.
  - European registry of registries (green box) and German registry of registries (green box) are positioned to the right of the MDR adapter.
- Research network level:**
  - ID management „Mainzliste“ (grey box) is positioned to the left of the OSSE data management component.
  - OSSE data management (grey cylinder) is the central component, with a Share client (grey box) on top.
  - Three computer icons with human figures below them represent users interacting with the OSSE data management component via bidirectional arrows.

**Extract**  
**Transform**  
**Load**

Source System

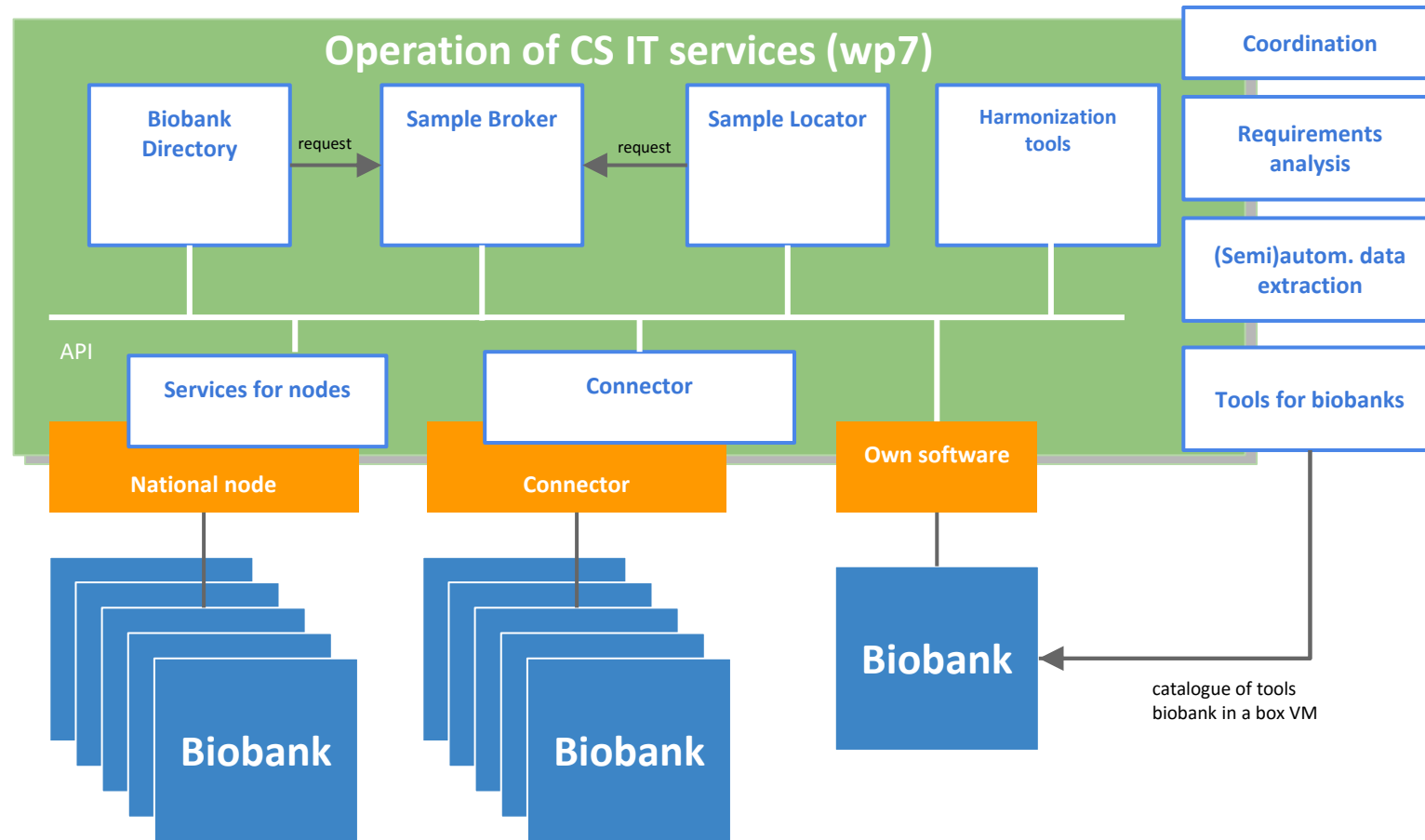
Bridgehead

**Extract**  
**Transform**  
**Load**

Source System

Connector

# Common Service IT Overview



# WP3 – (Semi-) Automated colon cancer data gathering

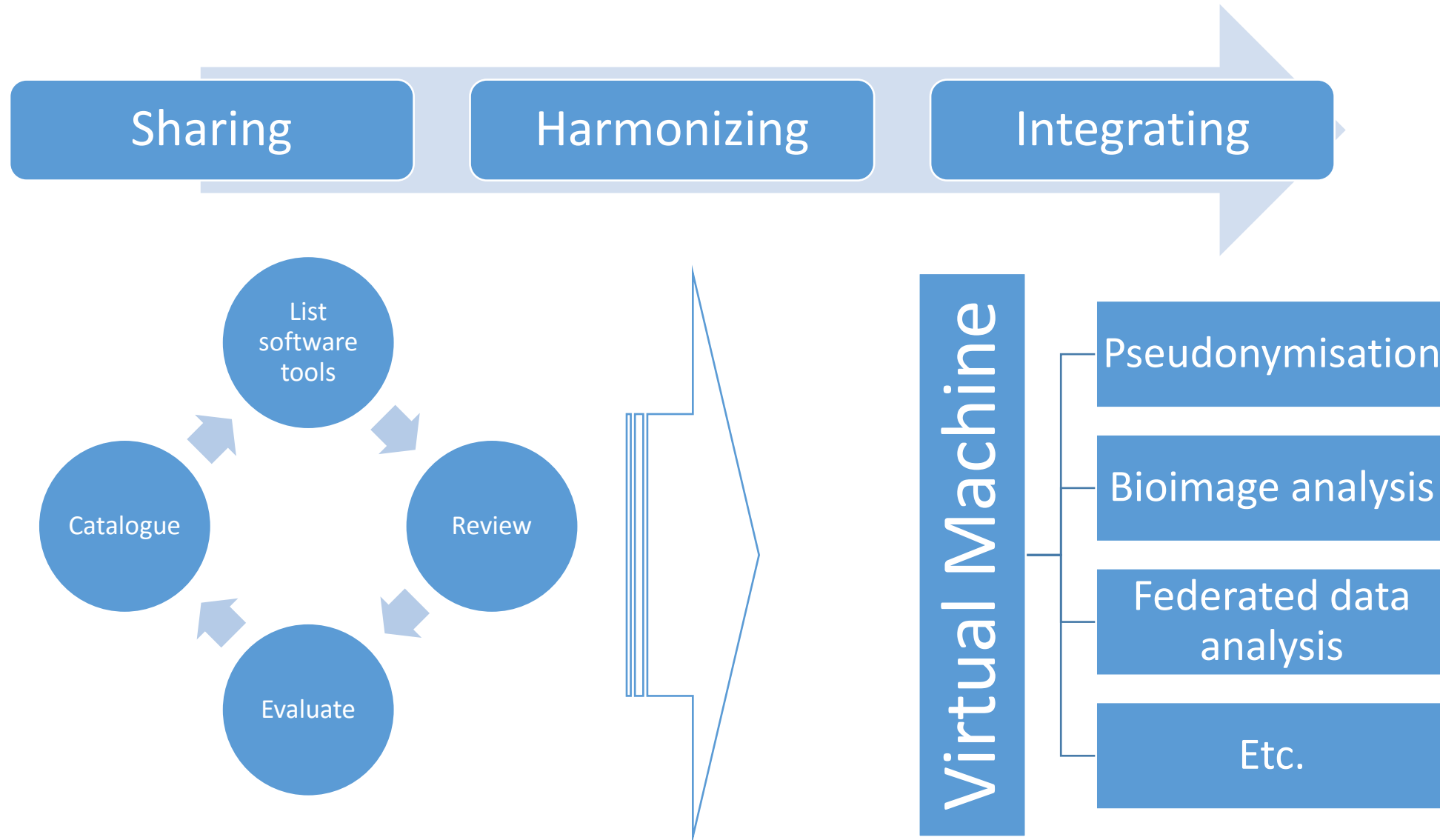


Automated or semi-automated collection of 7,000 cases

# WP4 – Services for the national nodes

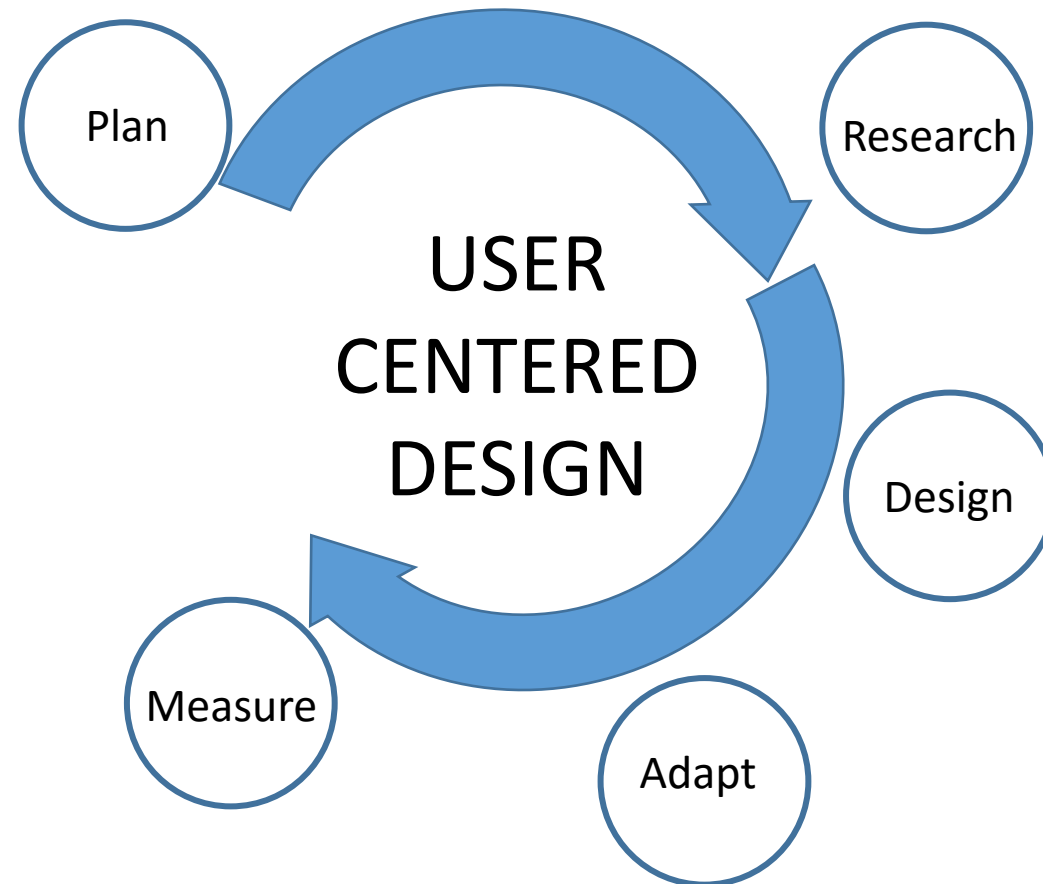
- Hosting services
  - E.g. Sample Locator and Directory
- Support for National Nodes
- Security and privacy

# WP5 – Tools for biobanks





# WP6 – Continuous analysis of user requirements and evaluation of services



# WP7 – Operations and collaboration tools for BBMRI-ERIC services

- Management of hardware and software to run collaboration tools
  - Installation, updates, support and maintenance
- Operations of the catalogue access help desk
- Operations of the Sample request help desk (BBMRI-LPC)
- Tools developed in BioMedBridges
  - Ontology
  - Mappings
  - secure access
  - Biosample database

# WP8 – Facilitating collaboration on IT harmonization issues

- Definition of relevant terms and ontologies
- Biobank metadata characterization
- Quality indicators for biosamples
- Terminologies/ontologies for diseases
- Examples
  - SPREC, Biobank lexicons and MIABIS 2.0

# Thank you

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**dkfz.**

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# Common Service IT Overview

