



# Harmonizing Heritage: Towards FAIR Digital Objects in KIK-IRPA's Intervention Dossiers

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# KIK-IRPA: an interdisciplinary approach

Photographic inventory



Art historical study



Heritage science

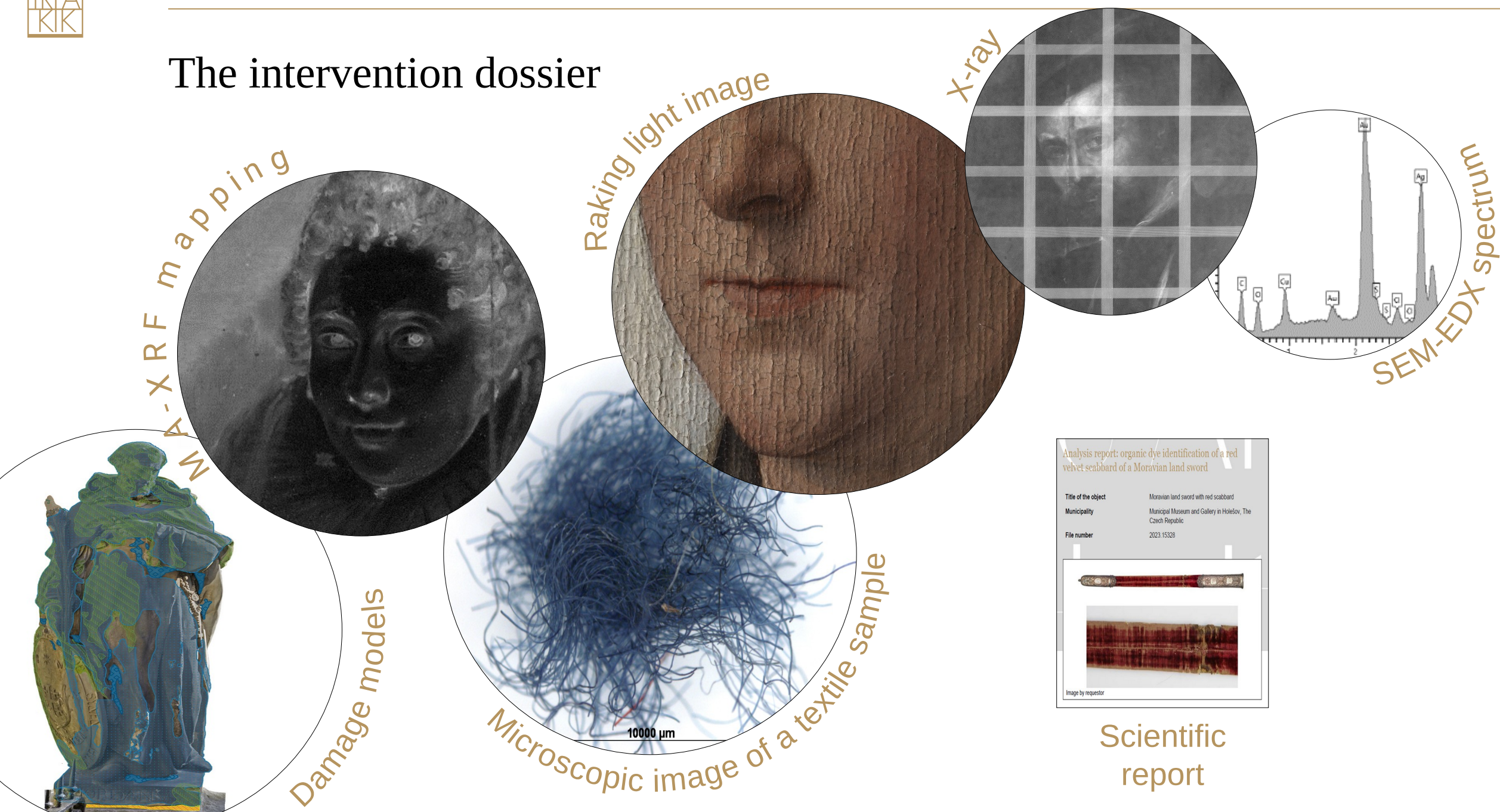


Conservation-restoration





# The intervention dossier



# The challenges: data silos and complexity

From 1938 to present:  
20 000+ intervention dossiers

Mix of paper and digital folders  
Digital born and digitised

Lack of conventions for digital data

- No centralisation
- Own structure / naming
- Proprietary formats

> dossiers

A folder somewhere on my drive

Illogical organisation



Image without metadata.tiff



No idea what this file is.txt



Raw data in proprietary file format.bcf

Stuff that does not belong here



No naming convention.pdf



No naming convention, illogical versioning.pdf



No persistent identifiers.pdf

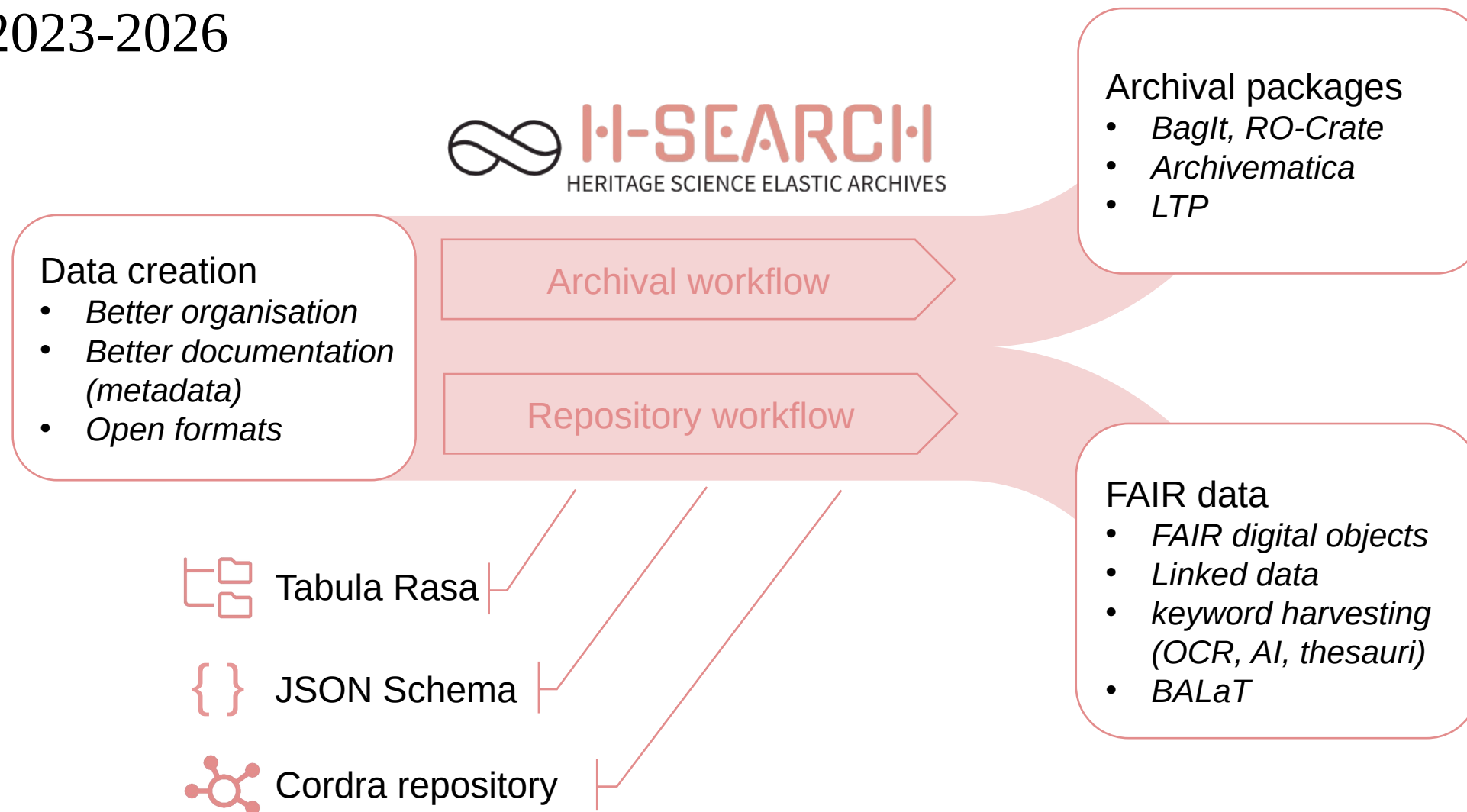


Random copyrighted image from the internet.png



# The H-SEARCH project

## 2023-2026



# The ingestion strategy: two paths to FAIR



## Existing datasets

- *Digitised*
- *Digital born*

## New shared drive 'Tabula Rasa'

- *Naming conventions*
- *Predefined structure*
- *Mandatory deposit*
- *Central storage*

## Semi-automatic ingestion in Cordra

- *Best effort*
- *Development of procedures*

## Future datasets

## Metahub: user-friendly interface for Cordra

- *Guided forms*
- *Powerful search*
- *Graphical overview*

## Automatically stored in Cordra

- *Fully described*
- *By the creators*



Metahub

Research activities

Projects

## Research activities

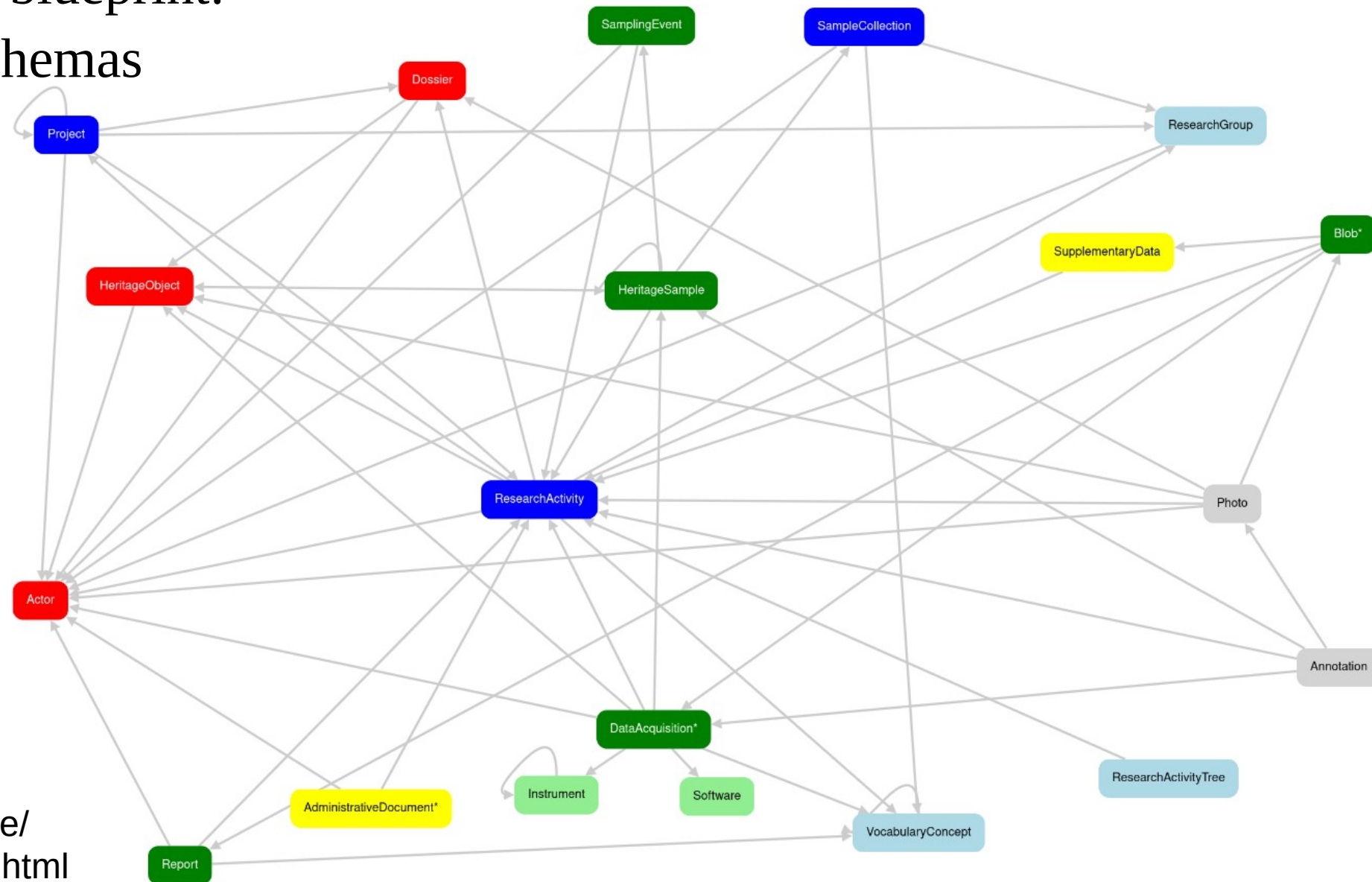
Keywords

Dossier number	Mnemonic	Main title
2024.15414	Rue Sainte Catherine 40-42, Bruxelles	Rapport d'analyse et étude sur les poutres
2022.14965		Pigmentanalyse van
2021.14668	Pandandrum, Panamarenko	Identificatie van de
2020.14435	Bruxelles, Maison du roi	Analyses d'échantill
2020.14435	Bruxelles, Maison du roi	Bruxelles, Maison d
2019.14225	Laken, Koninklijke serres	Etude des finitions
2017.13760	Reliekbeurzen, Namen	Caractérisation des
2017.13760	Reliekbeurzen, Namen	Radiocarbon dating
2017.13760	Reliekbeurzen, Namen	Identification par M
2017.13760	Reliekbeurzen, Namen	Materiaal-technisch

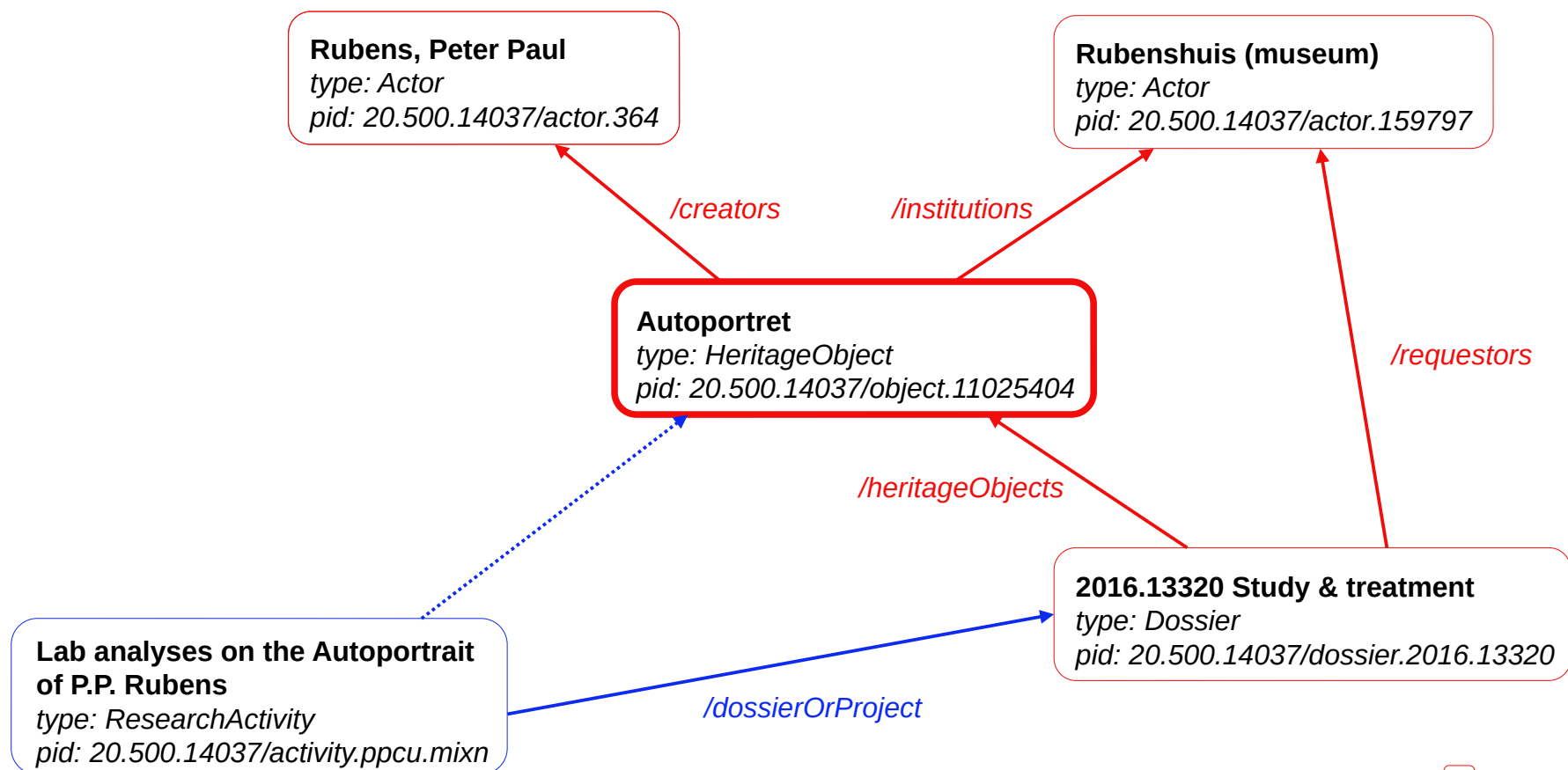
# The semantic blueprint: 40+ JSON Schemas



[https://  
corda.kikirpa.be/  
schema\\_graph.html](https://corda.kikirpa.be/schema_graph.html)



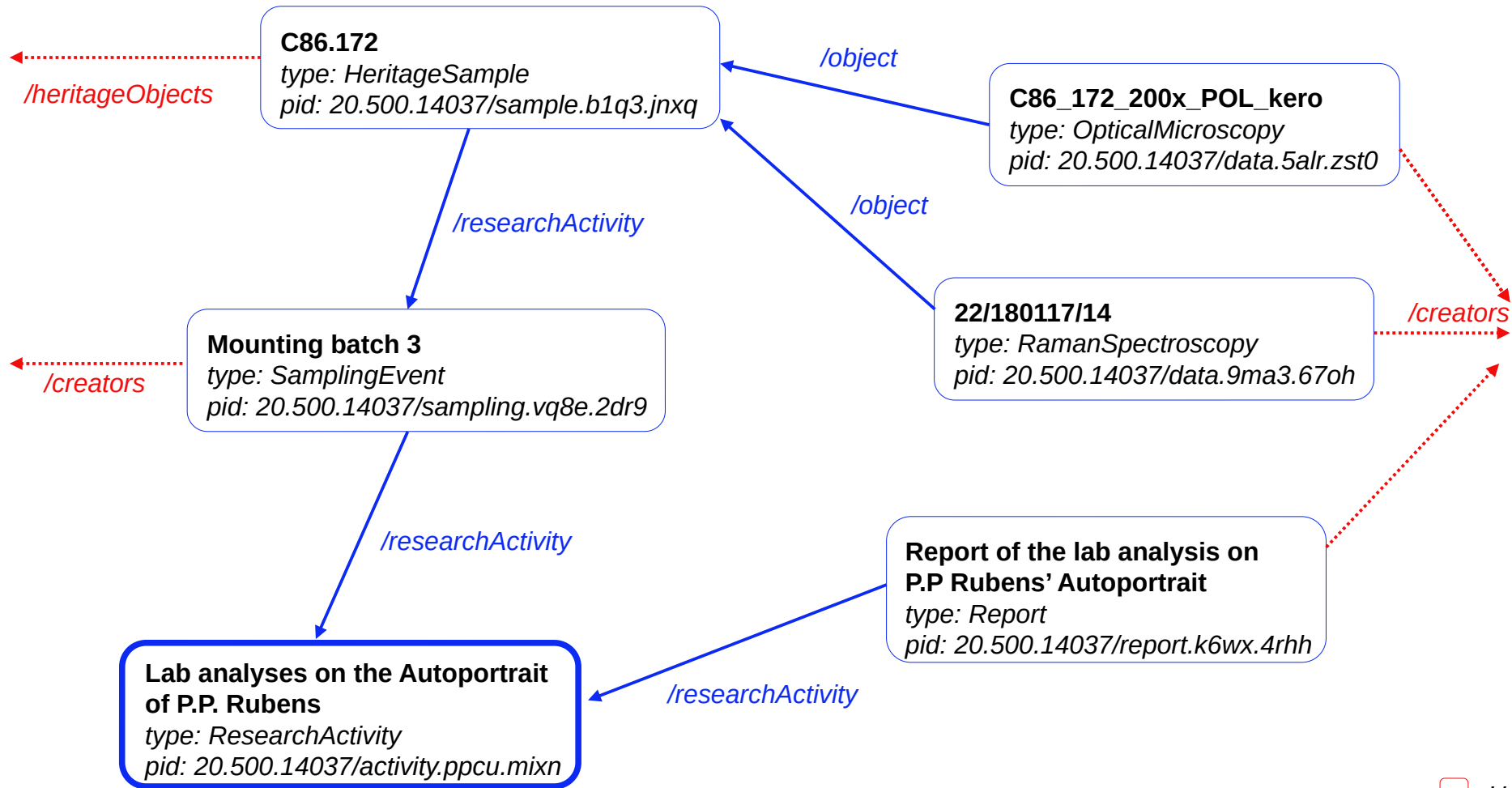
# The FDO ecosystem: context and actors



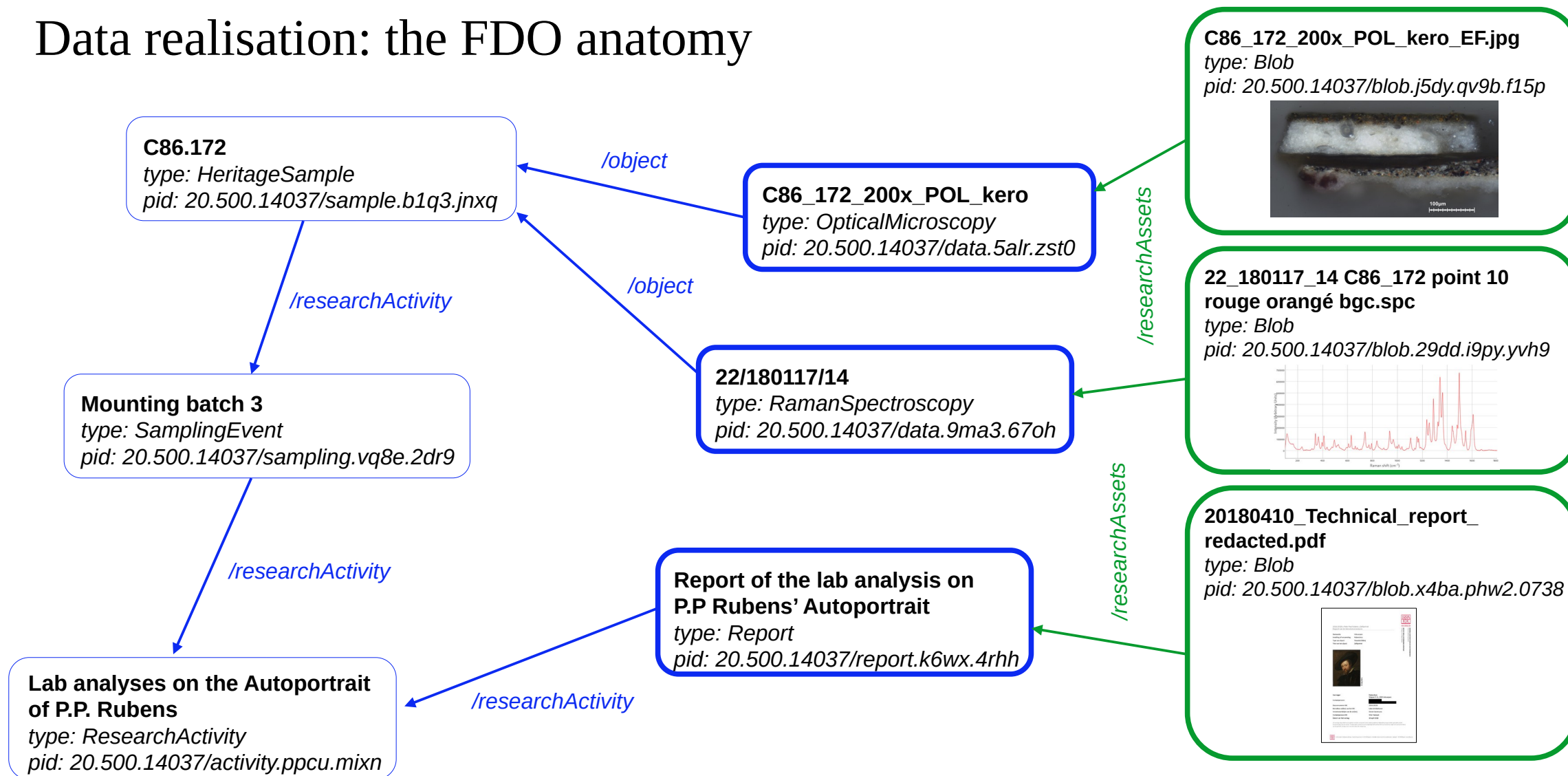
- Harvested from Axiell Collections CMS
- Native Cordra metadata object



# The research workflow: deep provenance



# Data realisation: the FDO anatomy

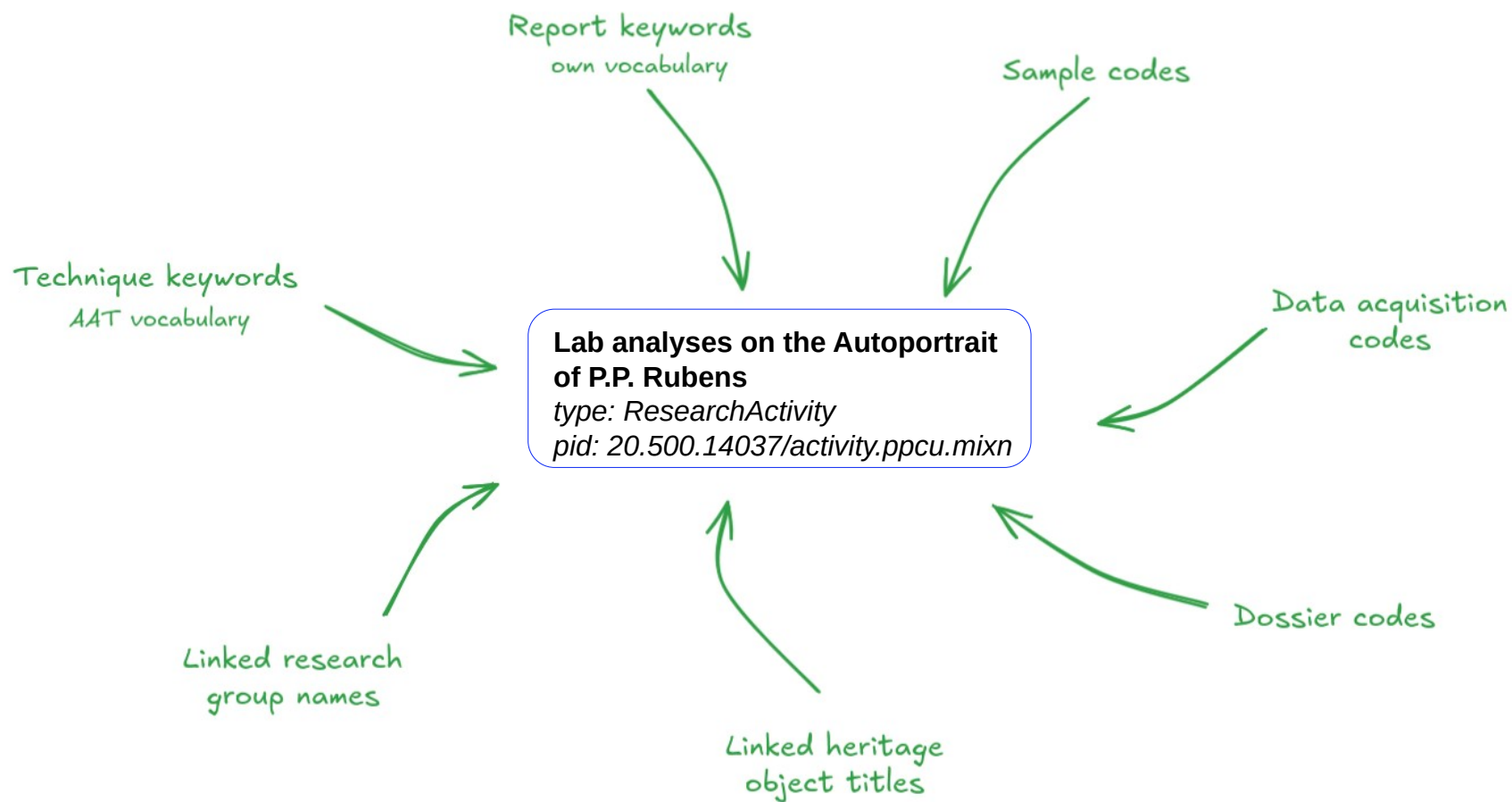


Native Cordra metadata object

Native Cordra bitstream object



# Optimising discovery: performance-driven denormalisation



## Lifecycle methods

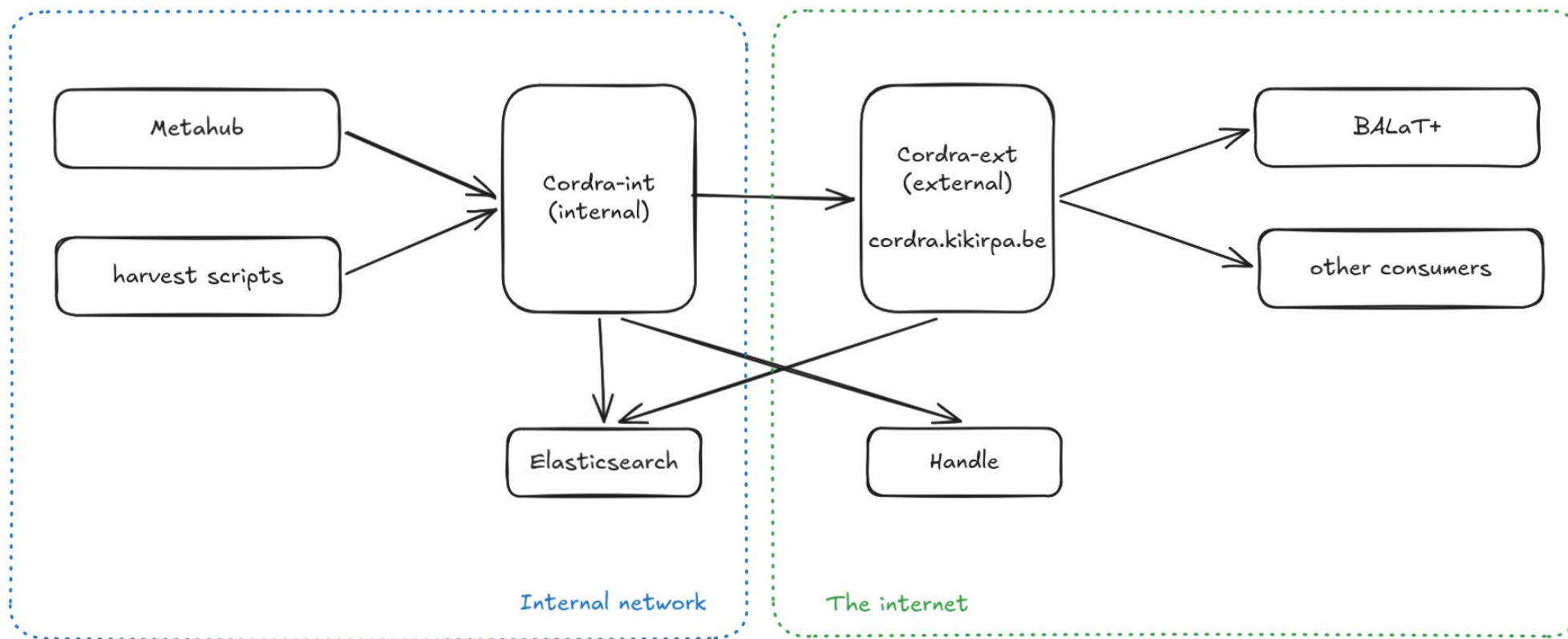
- On create
- On update

## Type methods (operations)

## AI-assisted enrichment

- OCR
- Keyword harvesting
- Summaries
- Translations

## From internal research to global access: the tale of the two Cordras




Only “published” digital objects are synchronised with the external Cordra instance



KIK-IRPA DIGITAL COLLECTIONS

# Explore our heritage

SEARCH



All



Objects



Photos



Library



People &amp; Institutions



Research activities





Annotations


 Description  Data  Graph  Related objects  Related dossier  Related project

# Lab analyses on the Autoportrait of P.P. Rubens


## CREATORS


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## FILES

Browse and download in the Data tab.

 [Open Data tab](#)

## ABSTRACT

Ter ondersteuning van de conservatie-restauratiebehandeling worden de stratigrafische opbouw van de originele en latere verf- en vernislagen bestudeerd. In deze studie werden zowel niet-invasieve als invasieve analyses uitgevoerd. Röntgenstralenfluorescentiespectrometrie en digitale microscopie zijn niet-invasieve methodes, waarbij de analyse rechtstreeks op het schilderij gebeurt, zonder staalname. De staalnames waren nodig om de stratigrafische opbouw en samenstelling verder te bestuderen; deze stalen werden geanalyseerd met optische microscopie, elektronenmicroscopie, ramanspectroscopie en massaspectrometrie.

## DATES

Research Ended: 2018-04-10

## PUBLICATION YEAR

2018-04-10

## PERSISTENT IDENTIFIER


[hdl:20.500.14037/activity.ppcu.mixn](https://hdl.handle.net/20.500.14037/activity.ppcu.mixn) 

## KEYWORDS

polarized light microscopy epifluorescence microscopy  
digital microscopy scanning electron microscopy  
micro-Raman spectroscopy macro x-ray fluorescence  
gas chromatography-mass spectrometry  
Material Analysis Report

## CITE

Format

APA 

Citation

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<https://hdl.handle.net/20.500.14037/activity.ppcu.mixn>

 [Copy citation](#)

## EXPORT METADATA

JSON  [Download JSON](#)



# Building the Heritage Science Cloud



ERIC – 2025-...

- Launched in 2025 as the permanent European Research Infrastructure for Heritage Science
- KIK-IRPA: Long-term partner in the preparatory projects (IPERION CH, IPERION HS, E-RIHS PP, E-RIHS IP...).
- DIGILAB Platform: Providing global access to digital resources, FAIR data, and processing tools.



Horizon Europe – 2024-2029

- Establish the community, core infrastructure and the governance model for the **European Collaborative Cloud for Cultural Heritage (ECCCH)**, advancing research on cultural heritage and in developing innovative solutions for the discovery, recovery, conservation, digitisation and valorisation of digital, digitised and digitisable cultural heritage objects
- 21 sister projects
- Working towards a permanent legal structure (EDIC)



ARTEMIS

Horizon Europe – 2025-2028

- **Reactive Heritage Digital Twin (RHDT)**: enable heritage professionals to forecast the consequences of real-life events via sensors and other information collected automatically from other systems, or resulting from computer modeled experiments.
- Develop the cloud-based digital infrastructure that will enable the digital data from different sources to be connected together (ARIADNE, 4CH, DARIAH, **BALaT** and HSDS)



# Bedankt. Merci. Thank you.

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Royal Institute for  
Cultural Heritage

