

# PHKG = high-quality, interoperable 'Digital Twin' of patient health records

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- Curation process today
- Curation workflows in AIDAVA
- EHDS and PHKG: implementation of EEHRxF and Requests

## Problem we need to solve

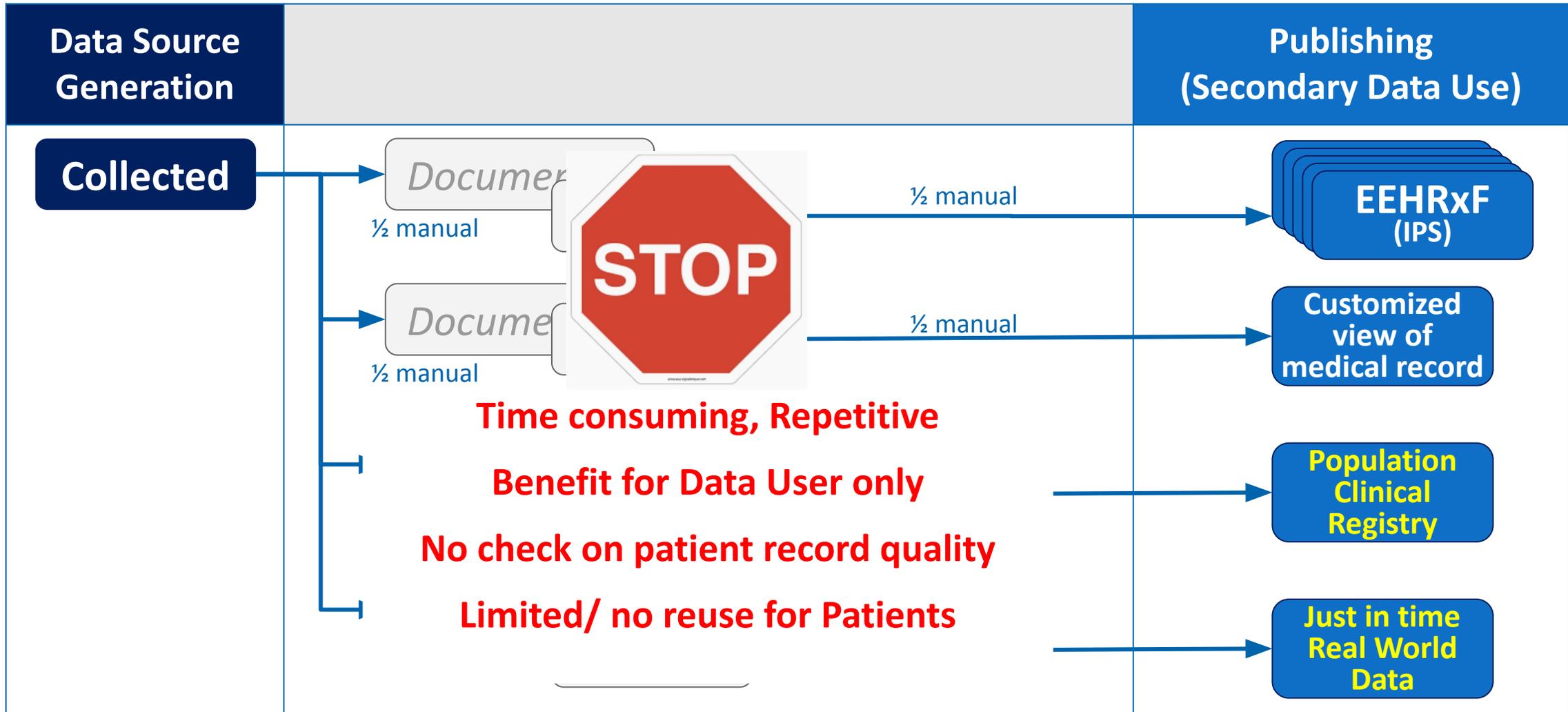
### *The painful reality about health data*



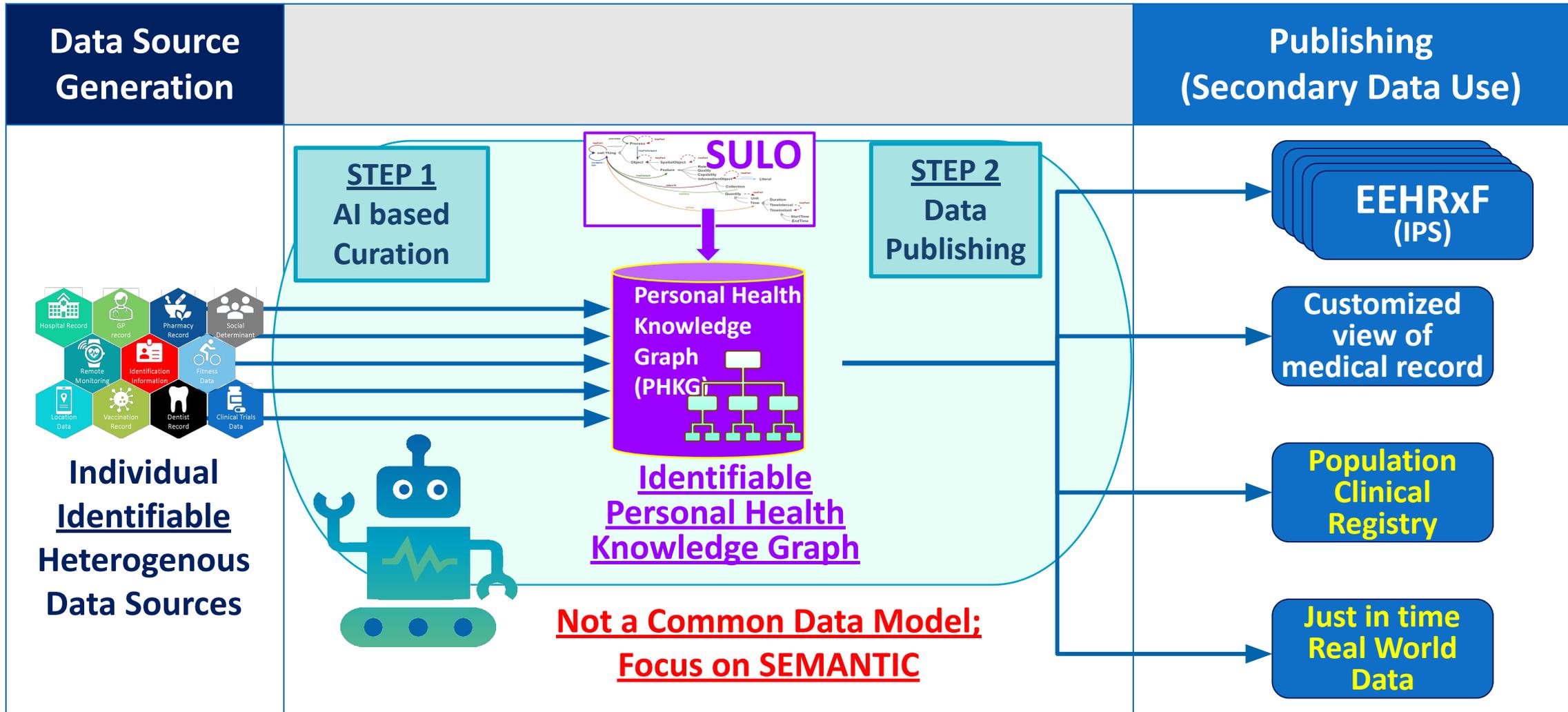
- **Scattered** across multiple systems ( $\pm 40\%$  hospital,  $\pm 60\%$  others)
- **Heterogeneous**: different standards (HL7, openEHR..): no interoperability
- **Not readily processable**: up to 80% in narrative format ( $\pm 40\%$  full text,  $\pm 40\%$  chunks of text)
- **Not well documented**: most EHRs old (90's) with limited documentation
- **Redundant & error-prone**: up to 30% redundancy, 40% of errors (10% potentially life threatening)

**Data Quality enhancement of INDIVIDUAL records is not scalable as long as they are not interoperable and reusable,**

# Impact: time consuming access to high-quality, reusable data for clinical care and research

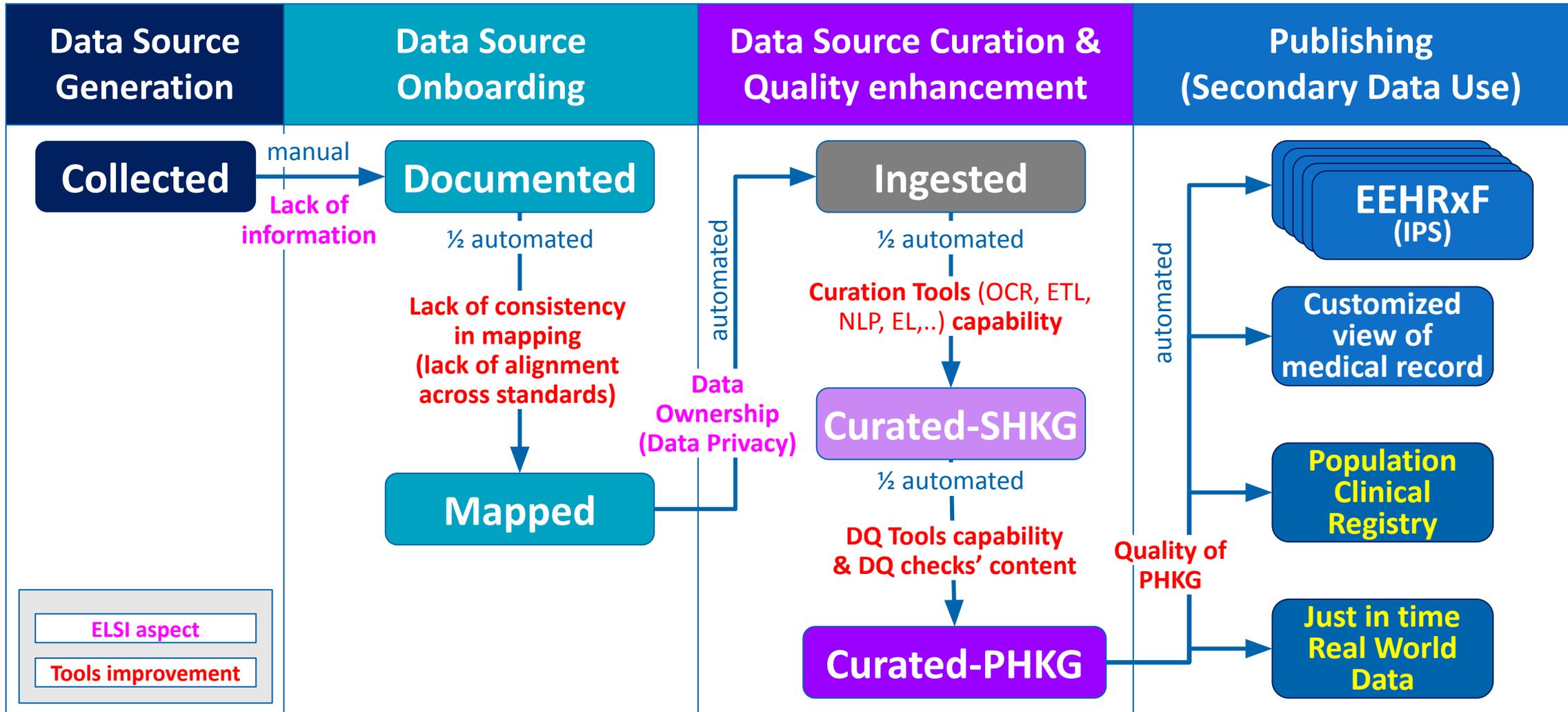


# Introducing AIDAVA: automate data curation & quality enhancement of heterogeneous data with AI



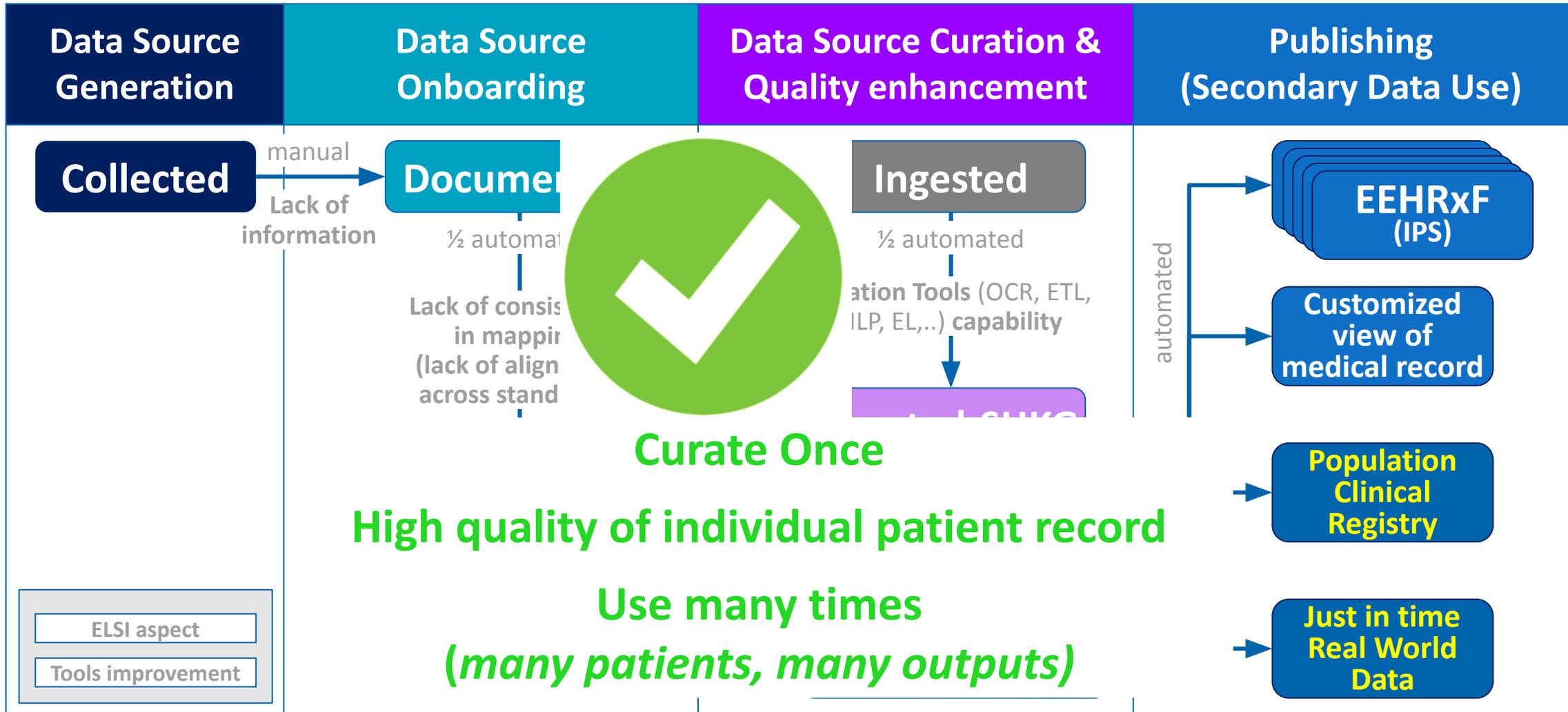
# Proposed solution: a set of steps with automation potential

## *Journey of a data element in AIDAVA*



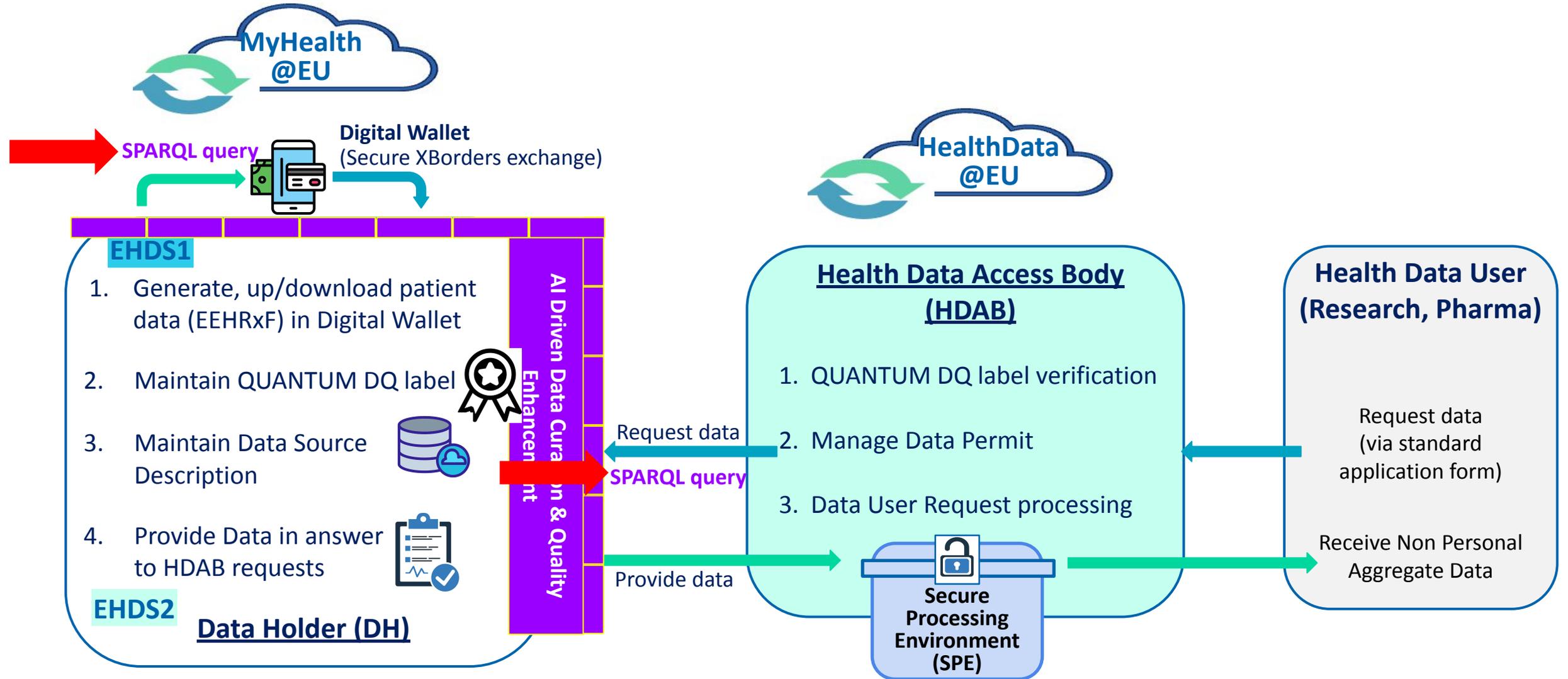
# Proposed solution: a set of steps with automation potential

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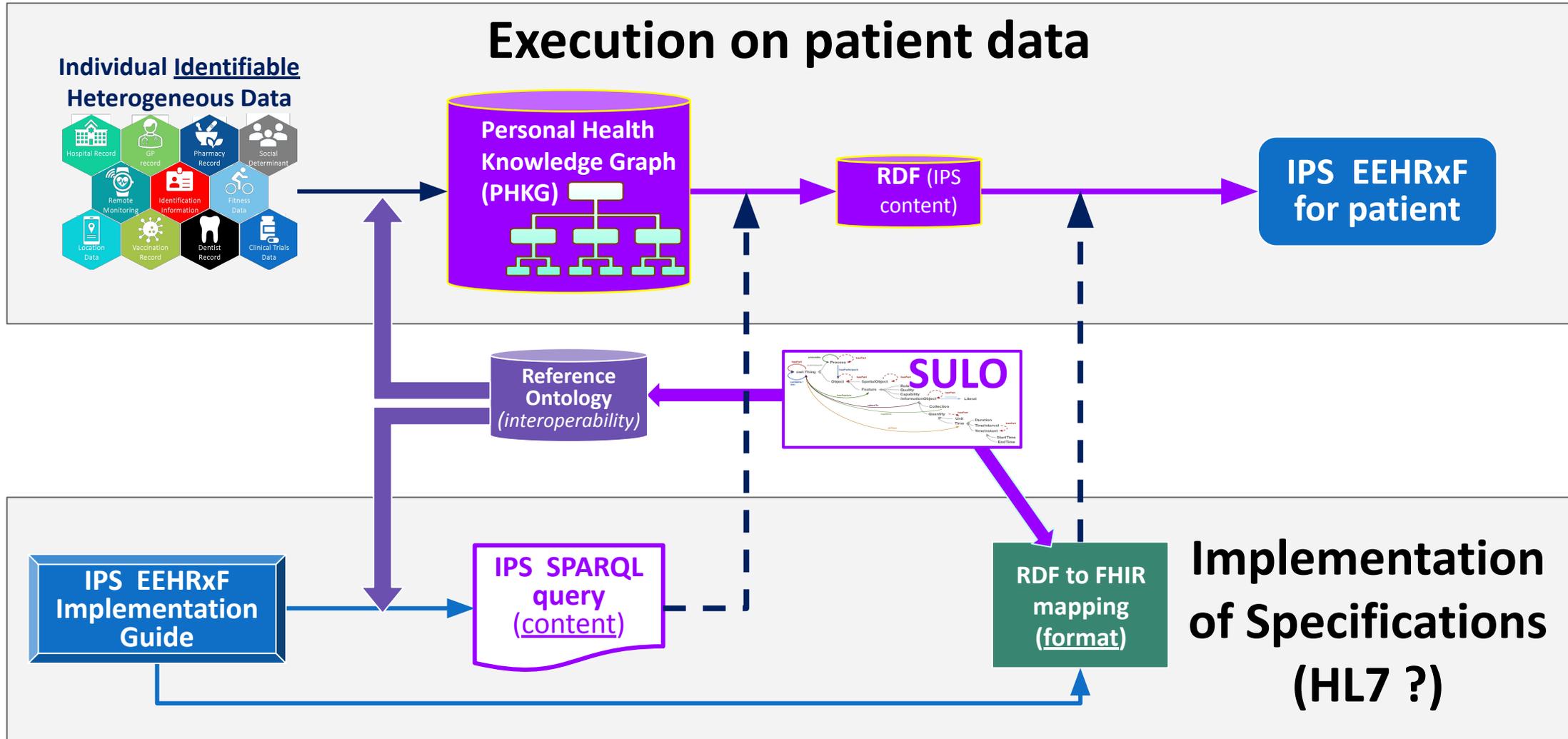
# EHDS Data Flows and PHKG

PHKG as an AI maintained high-quality “digital twin” of patient records



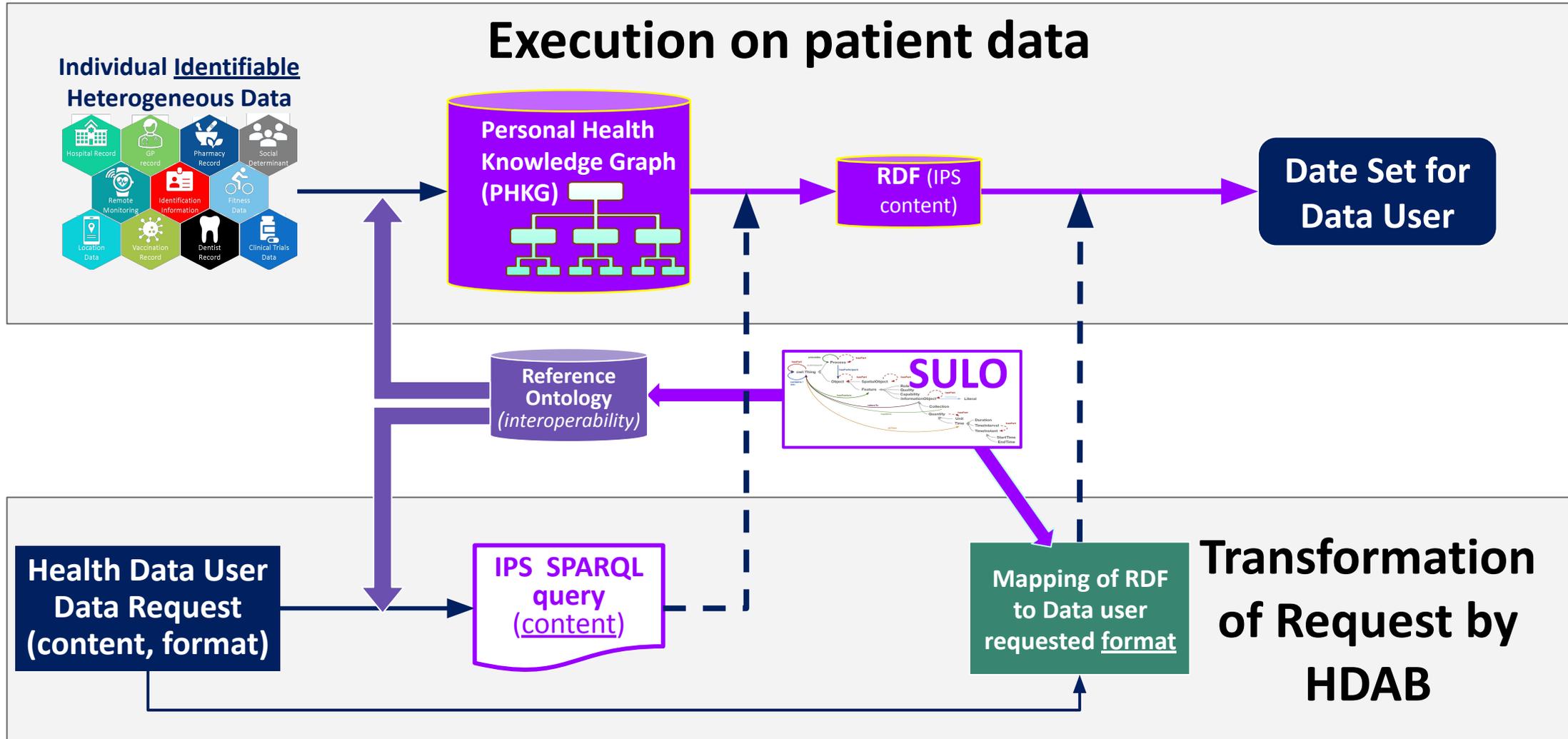
# EHDS Data Flows and PHKG

Implementation of EEHRxF IG on AIDAVA 'digital twin' (PHKG)



# EHDS Data Flows and PHKG

Execution of Data User request on AIDAVA 'digital twin' (PHKG)



***EHDS implementing acts push a lot of requirements on 'data holders' (and more specifically hospitals). This makes sense as hospitals are the 'holders' of the patient data, at the core of health systems.***

***However, without supporting tools and automation, the additional burden (cost, needed skills) to hospitals might be unbearable for most and lead to EU digital divide in health.***

***AIDAVA - properly extended & implemented - could help without requiring changes into the regulations & implementing acts while bringing benefits to patients, providers and the whole EU health system.***