



# UMG-MeDIC

## Establishing a Medical Research Data Service Unit

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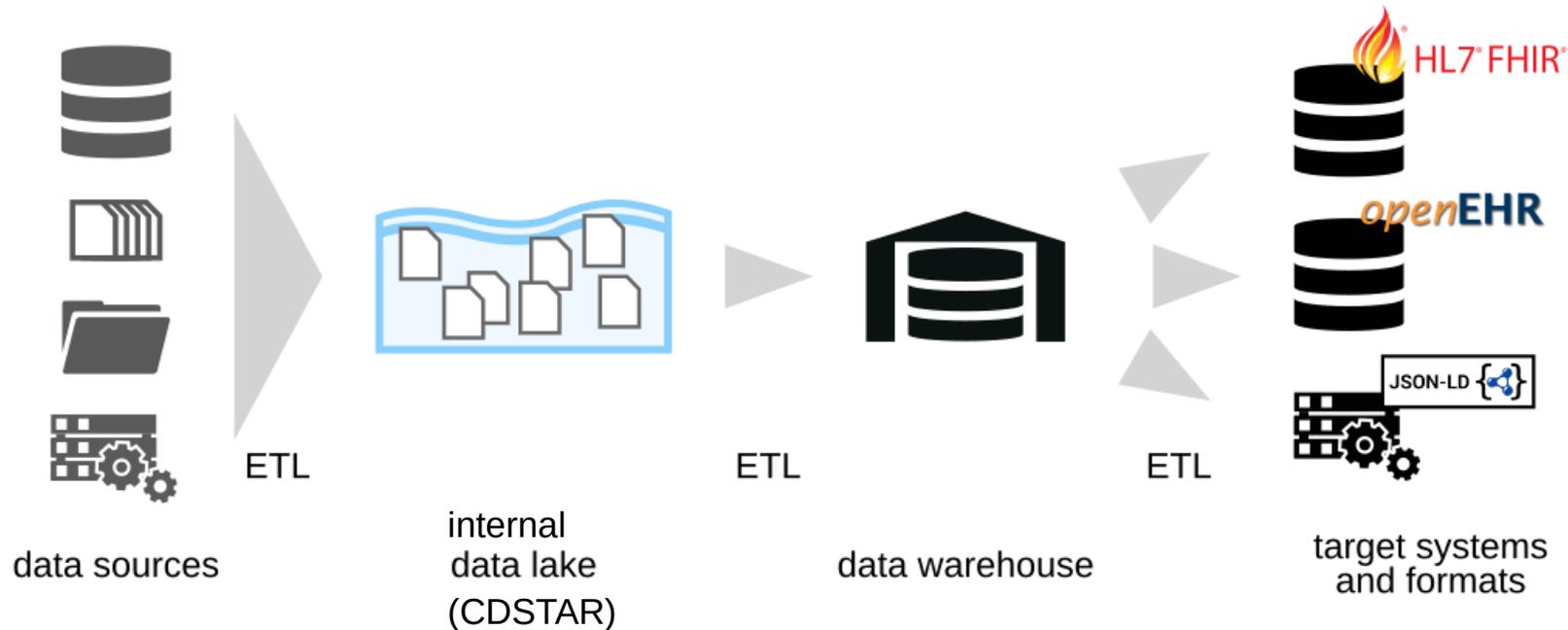
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## What is the purpose of UMG Medical Data Integration Center?

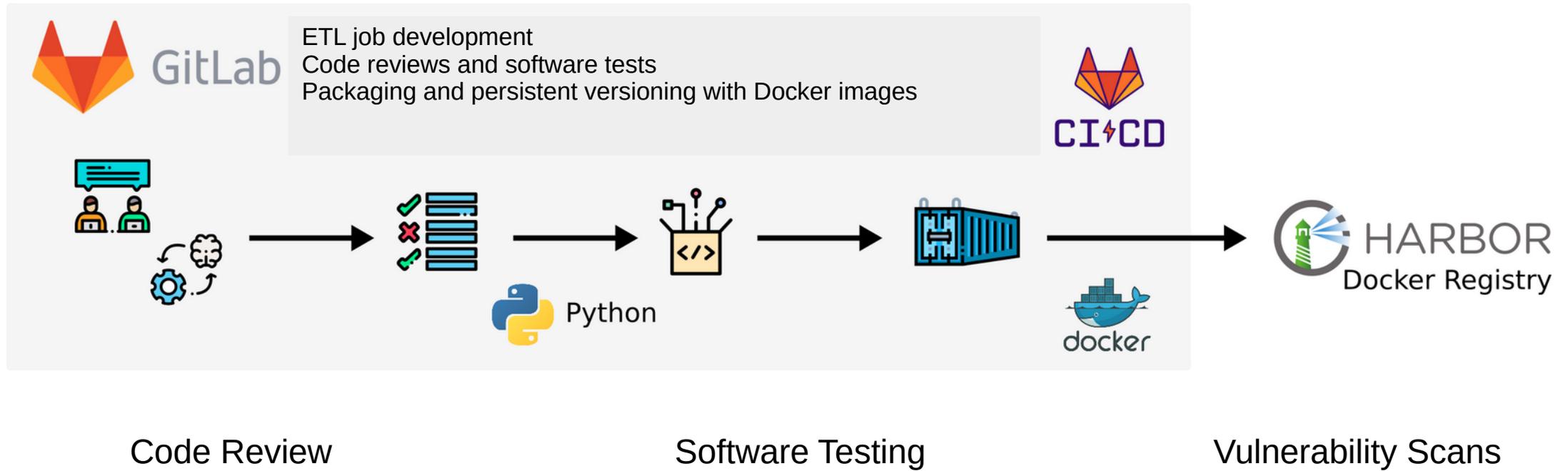
- Enable data driven medical research
  - By providing access to pseudonymized data from multiple routine patient care information systems
  - By providing data science and medical domain expertise
- Create a integrated database of all medical data at UMG
  - UMG-MeDIC is a central service unit and a permanent part of the research infrastructure
  - UMG-MeDIC shall become the single point of contact/access for cross-organisational (data-centric) research projects
- Provide the organisational and legal framework for research use of medical data.

## What is the technical challenge at UMG-MeDIC?



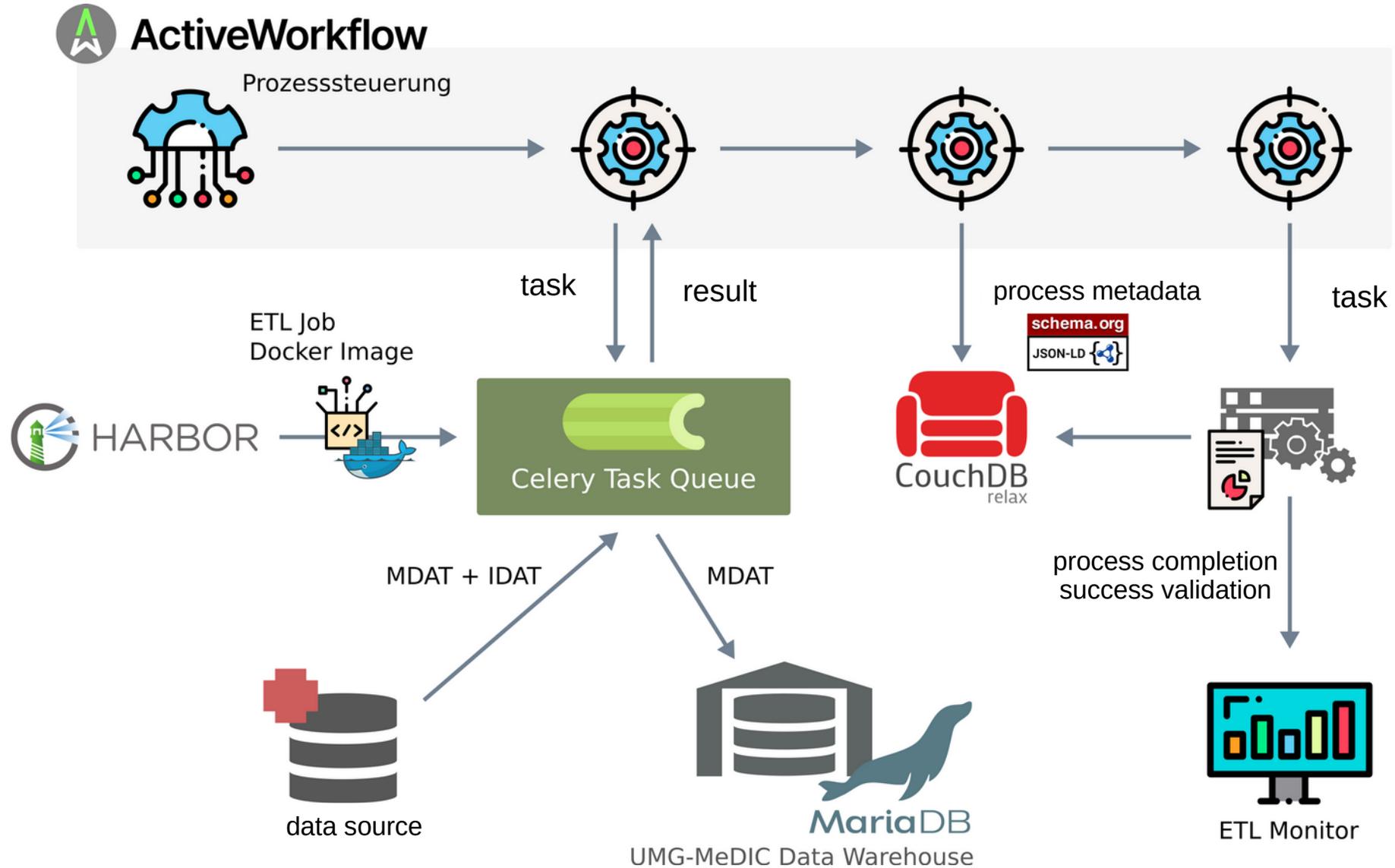
1. scalability, validity, traceability of all data transfer and manipulation activities
2. meaningful integration of data from many heterogeneous source systems (medical domain knowledge)
3. provide access to data in any required target format

## UMG-MeDIC Data Workflow Development Process



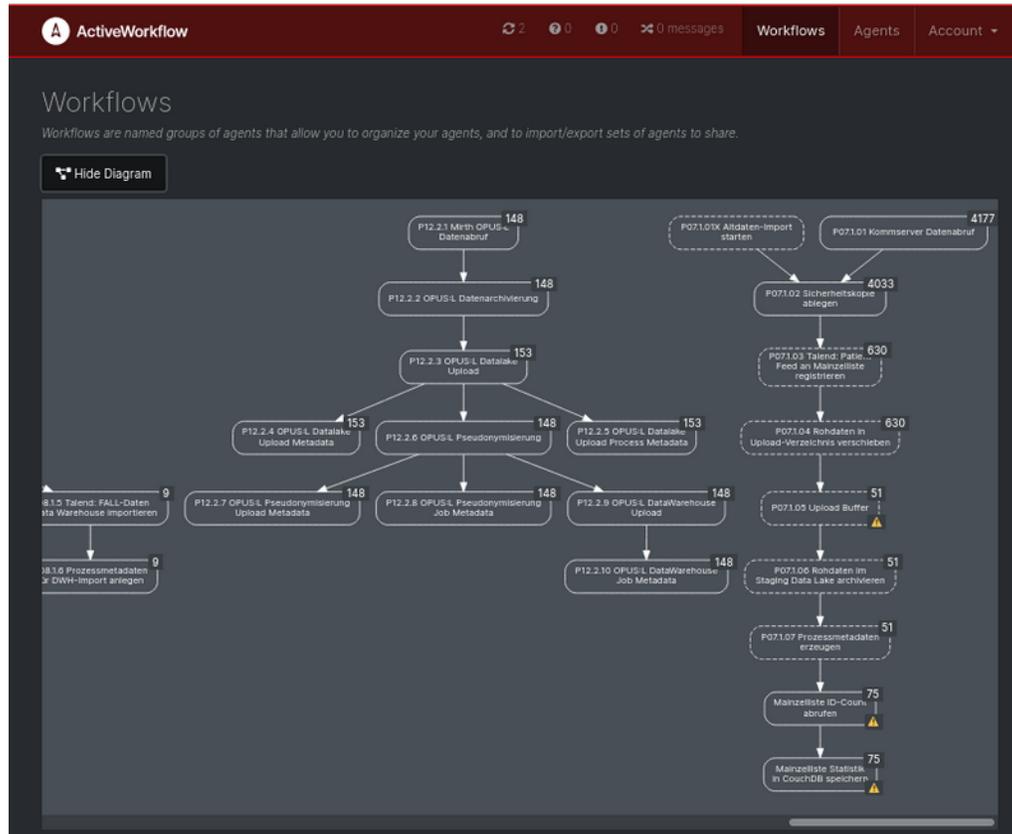
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# Data Workflow: basic structure



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# ActiveWorkflow as internal process orchestration framework:



**P02\_Bewegungsdaten workflow**

Dieser Workflow lädt die Bewegungsdaten in den Staging Data Lake, pseudonymisiert die Patienten- und Fallnummer und lädt die pseudonymisierten Daten in den MeDIC Data Lake. Anschließend werden die pseudonymisierten Daten in das DWH geladen.

Show Diagram

+ New Agent Edit Export Delete Enable all Agents Disable all Agents

Search

Name	Schedule	Last Check	Last Message In	Last Message Out	Messages	Issues	Actions
P02.1.5 Prozessmetadaten anlegen (DWH Upload)	Never	2m ago	13h ago	13h ago	39		Actions
P02.1.1 Übertrage Bewegungsdaten in das Arbeitsverzeichnis	Every 5h	4h ago	2m ago	13h ago	39		Actions
P02.1.2 Upload in Staging Data Lake	Every 2m	<1m ago	13h ago	13h ago	39		Actions
P02.1.3a Pseudonymisierung	Every 2m	<1m ago	13h ago	13h ago	39		Actions
P02.1.3b Archivmetadaten anlegen (Quelldaten)	Every 2m	<1m ago	13h ago	13h ago	39		Actions
P02.1.3c Prozessmetadaten anlegen (Quelldaten)	Never		13h ago	13h ago	39		Actions
P02.1.3d Archiviere Originaldatei	Never		13h ago	13h ago	39		Actions
P02.1.4a DWH Upload	Every 2m	<1m ago	13h ago	13h ago	39		Actions

<https://www.activeworkflow.org>

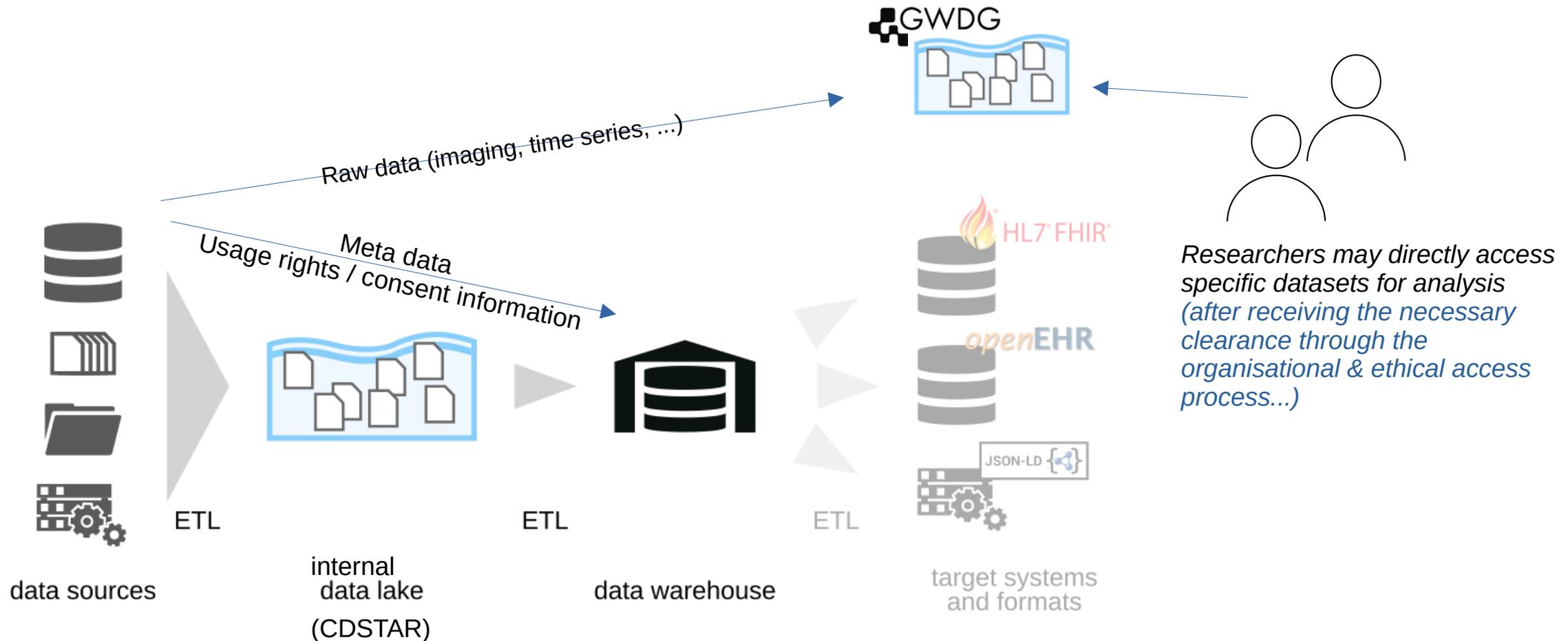
<https://gitlab.gwdg.de/medinfpub/umg-medic/technik/aw-agents/docker-agent>

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## GWDG Data Lake & UMG-MeDIC ?





# UMG-MeDIC

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