

ENHANCING HEALTHCARE INSIGHTS

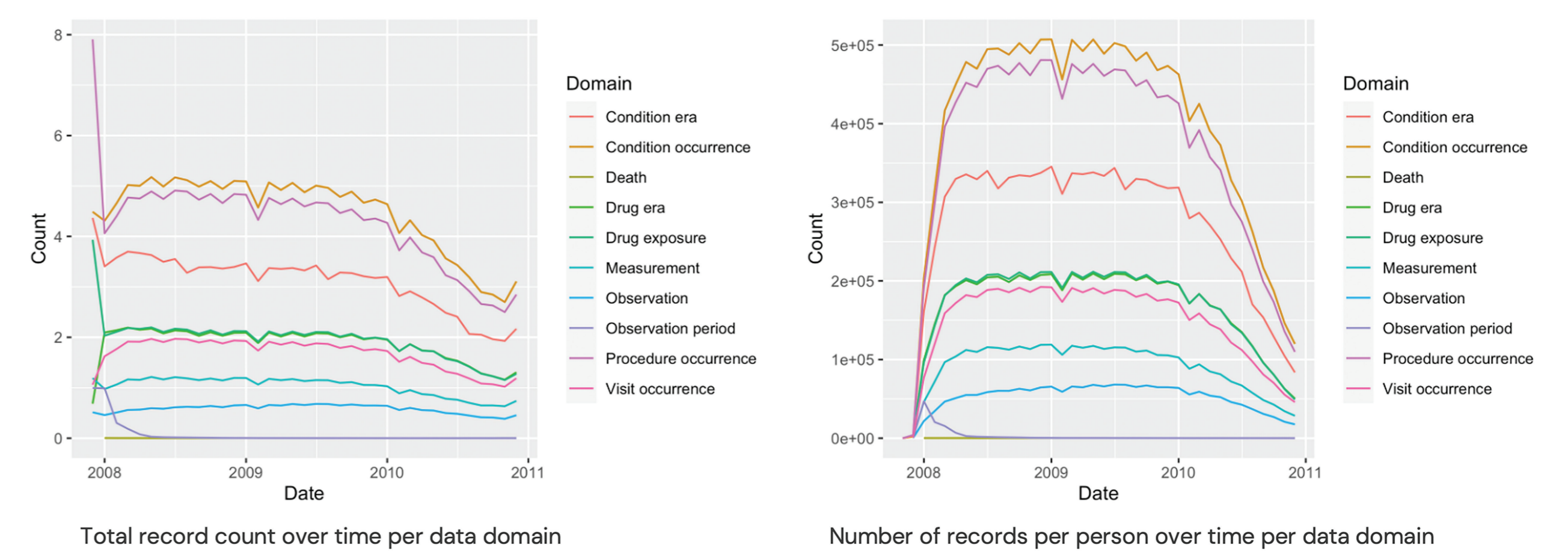
OMOP Harmonization and Integration of Surgical Procedure Database into EHDEN with BC Platforms' Solutions

BACKGROUND: Real-world data (RWD) offers valuable insights into healthcare patterns and outcomes, serving as a cornerstone for evidence-based decision-making in healthcare ¹. BC Platforms, an EHDEN certified SME and a global leader in building data networks for the life sciences industry, offers OMOP harmonization services. BC Platforms provided the OMOP solutions for the Data partner, who wanted to harmonize the clinical data of +750,000 patients collected between 2014 and 2022.

BC Platforms provides a comprehensive solution for OMOP harmonization:

1. Ensuring the capture of the information to the greatest extent possible from the data partner's database
2. Facilitating the seamless integration of healthcare records into global healthcare research initiatives

DESCRIPTIVE STATISTICS
REPORT ON OMOP
CDM Inspection report
for the Medicare Claims
Synthetic Public Use
Files database



METHODS

Figure 1: Schema of ETL flow for OMOP harmonization solution

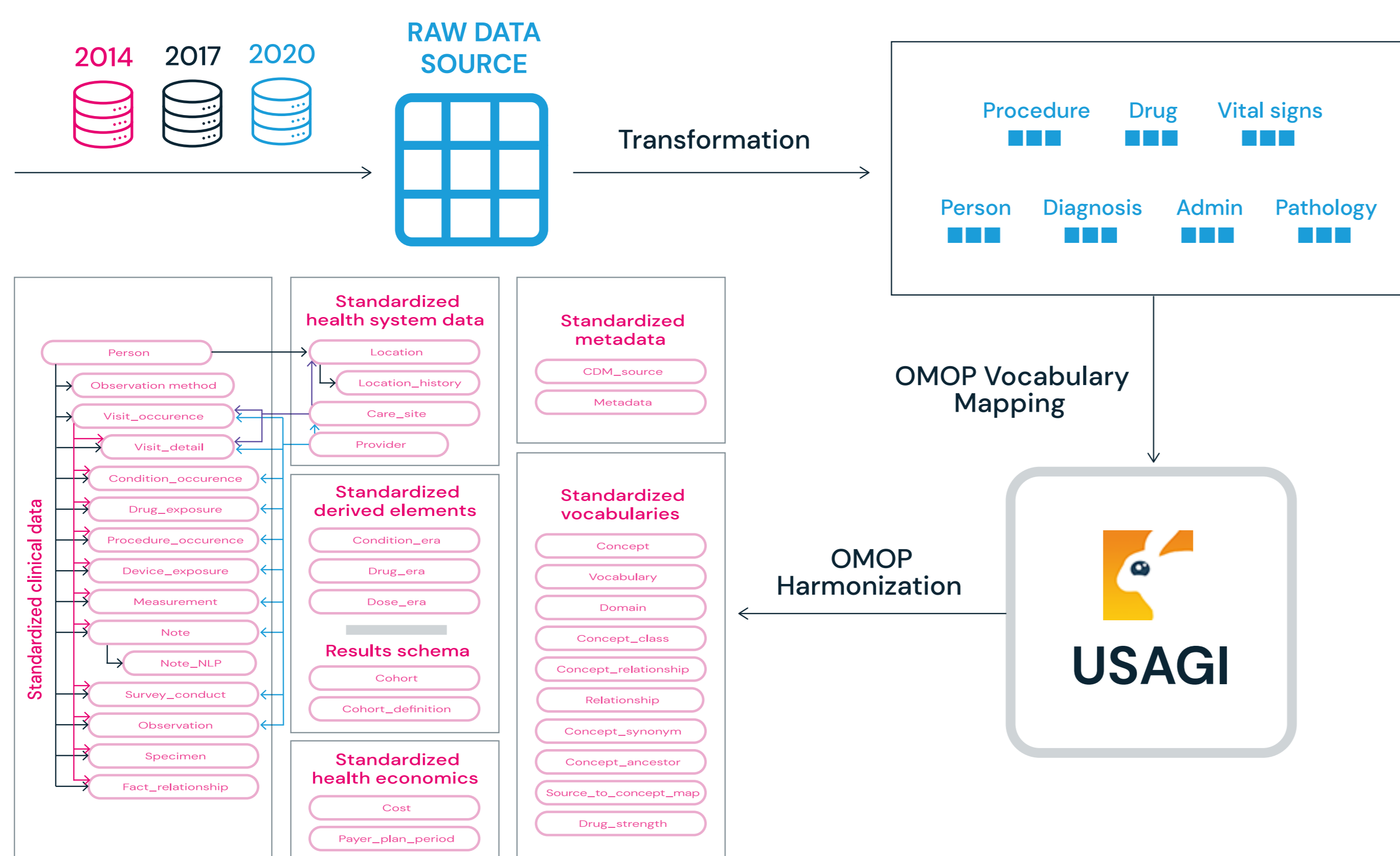
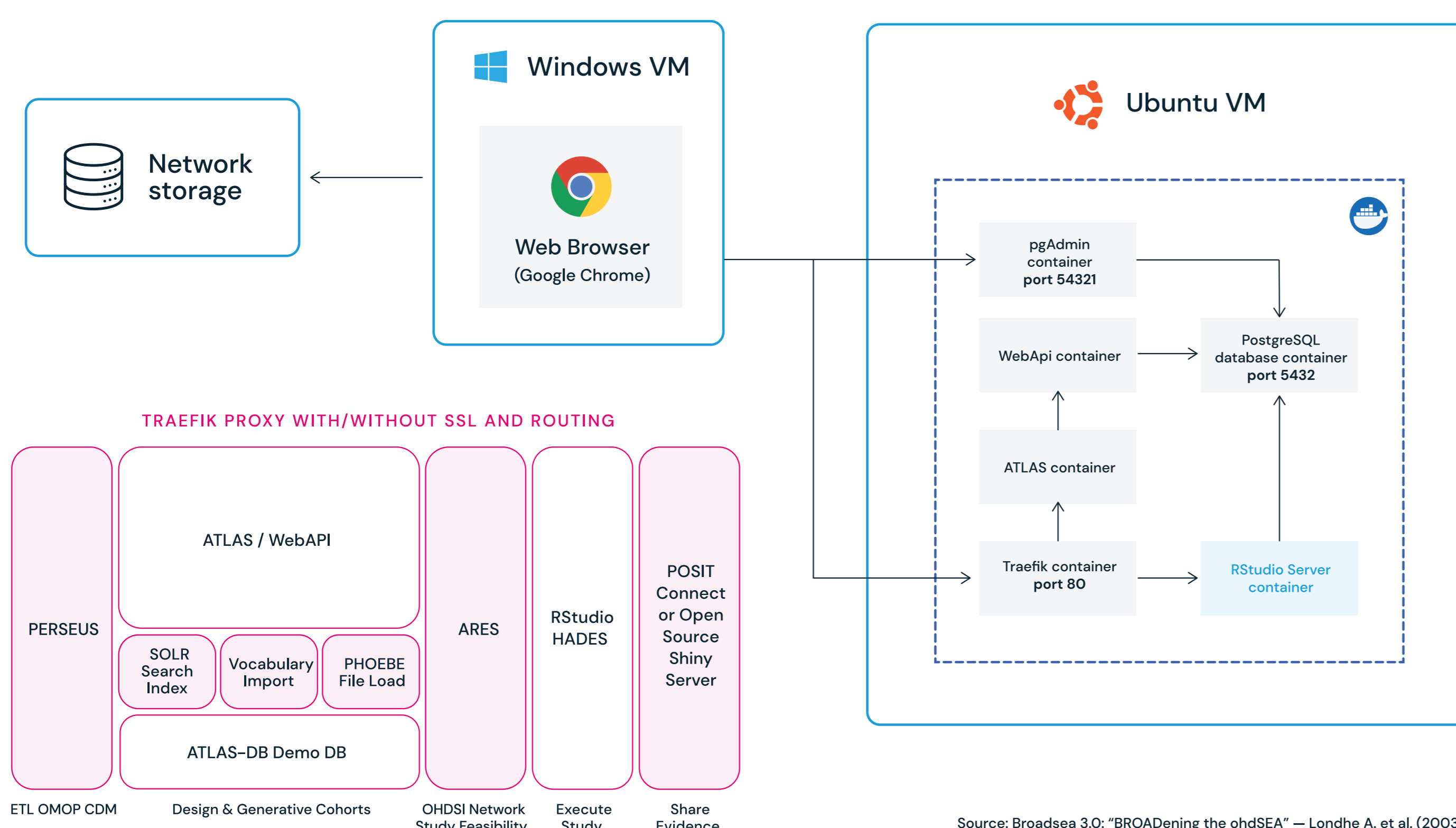


Figure 2: Portable docker solution for OMOP database and EHDEN integration in multi-layer virtual machine (VM) infrastructure



DISCUSSION:

- Understanding the raw data are required careful before implementing the harmonization solution
- Manual curation and translation to English were needed for free-text mapping to OMOP vocabularies
- Relationships between OMOP tables required manual adjustments to address issues related to the raw data

RESULTS

1. Encompassing the raw data, OMOP solutions with tables across multiple domains, and the development of ETL documents together with source code to facilitate the ETL of data into the final OMOP database
2. Facilitating seamless synchronization with OMOP data, empowering DPs to make informed decisions while ensuring compliance with privacy regulations
3. Enabling the seamless integration of surgical databases into healthcare research initiatives across Europe, fostering collaboration and facilitating evidence-based decision-making in the healthcare domain

References:

1. Dang A. Real-World Evidence: A Primer. Pharmaceut Med. 2023 Jan;37(1):25–36. doi: 10.1007/s40290-022-00456-6. Epub 2023 Jan 5. PMID: 36604368; PMCID: PMC9815890.
2. Londhe A. et al, Broadsea 3.0: "BROADening the ohdSEA", 2023, OHDIS work package

