



Leiden University  
Medical Center

## From legacy to *FHIR ready* medical centre

**FHIR Devdays 2018**

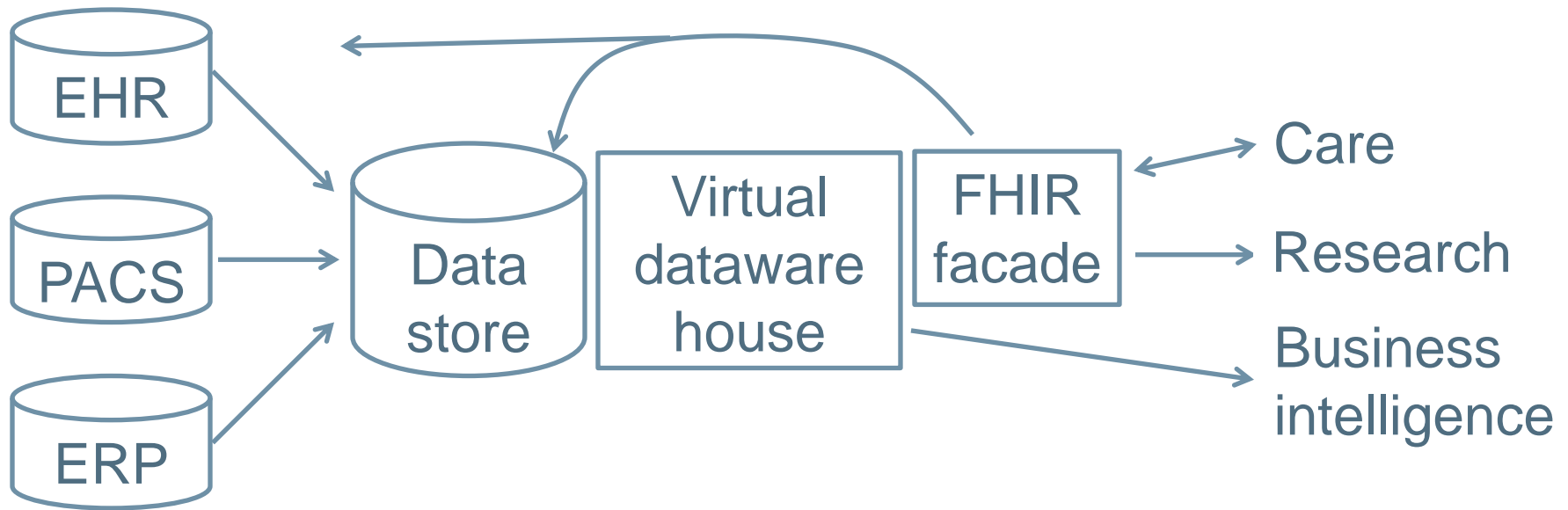
Bram Wesselo



# Project

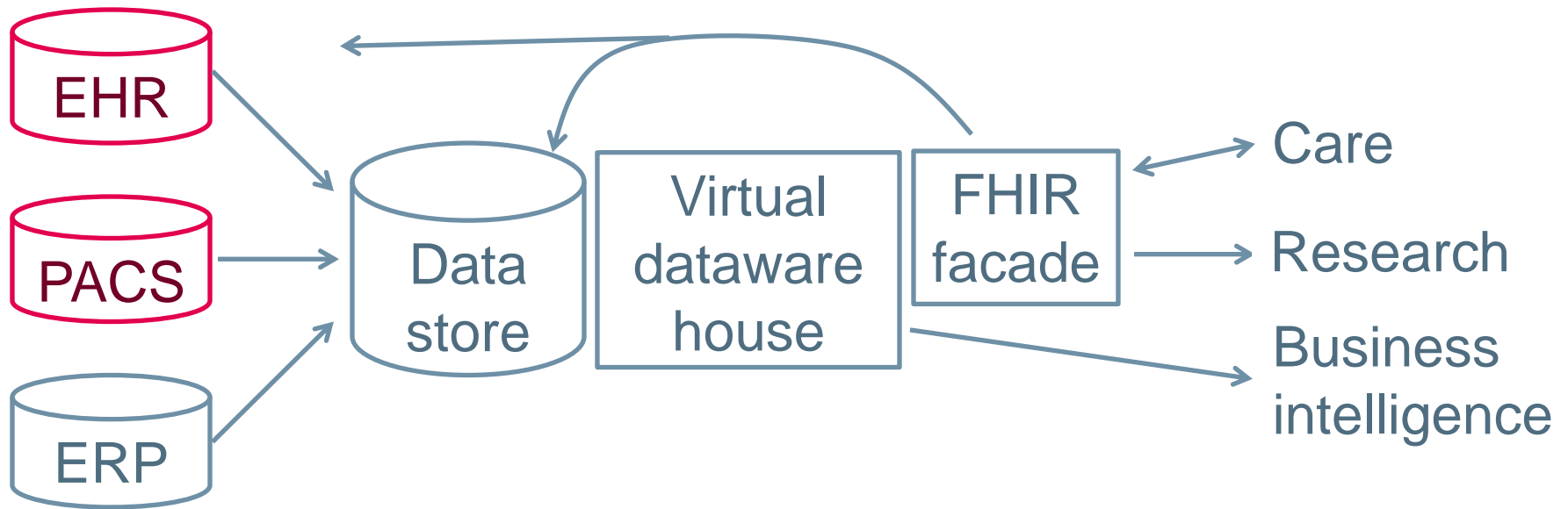
- Shorten the time to develop data-products
  - Replace existing datawarehouse(s)
- Support business intelligence, research **and care**
- Started this June 2018, team of 12

# The new dataplatform



Database connection: source application have few API's  
One copy of the 'raw' data for performance & auditing  
FHIR data model (Dutch HCIM's)

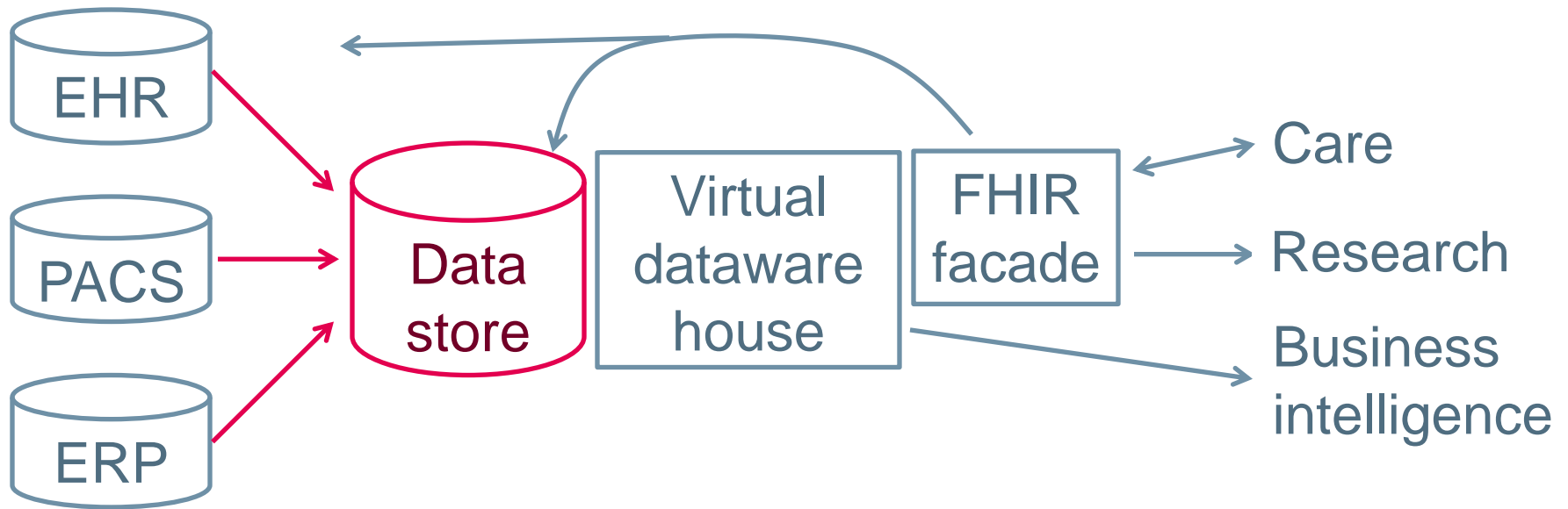
# Source databases



Need for near-real-time data:

- Enabled Change Data Capture wherever possible

# Data store

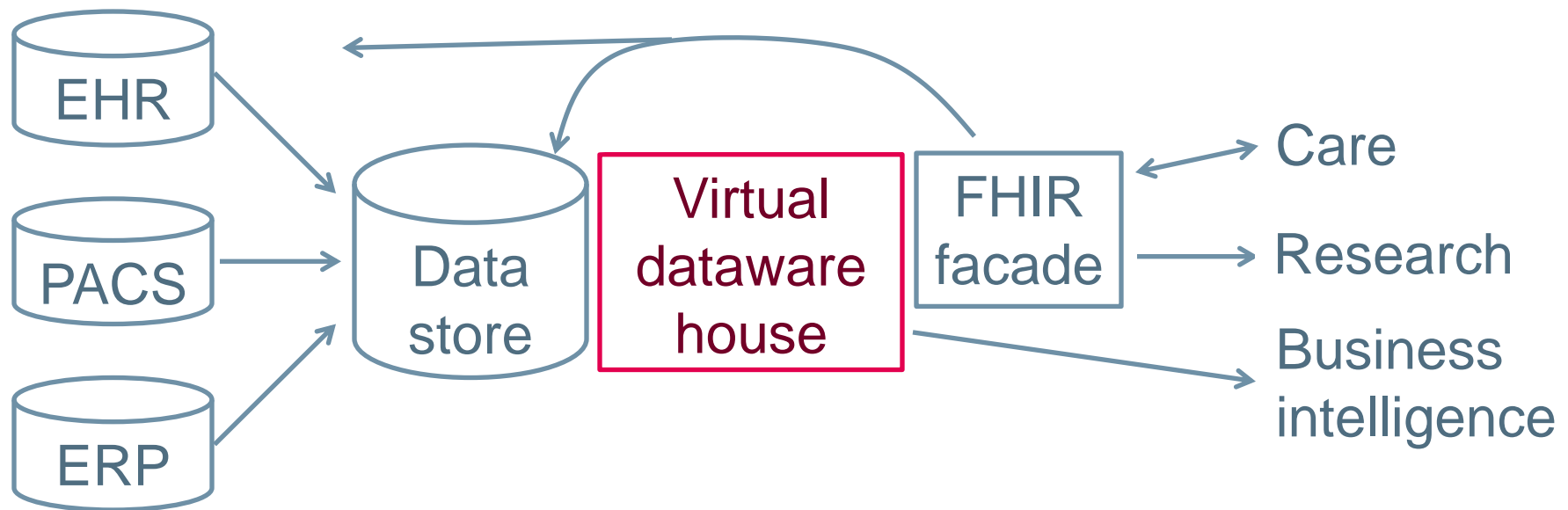


After initial 'copy': incremental loads every 5 min.

Using temporal tables to keep track of history

Materialize expensive operations (Postprocessing)

# Virtual datawarehouse



Mapping source fields to FHIR elements

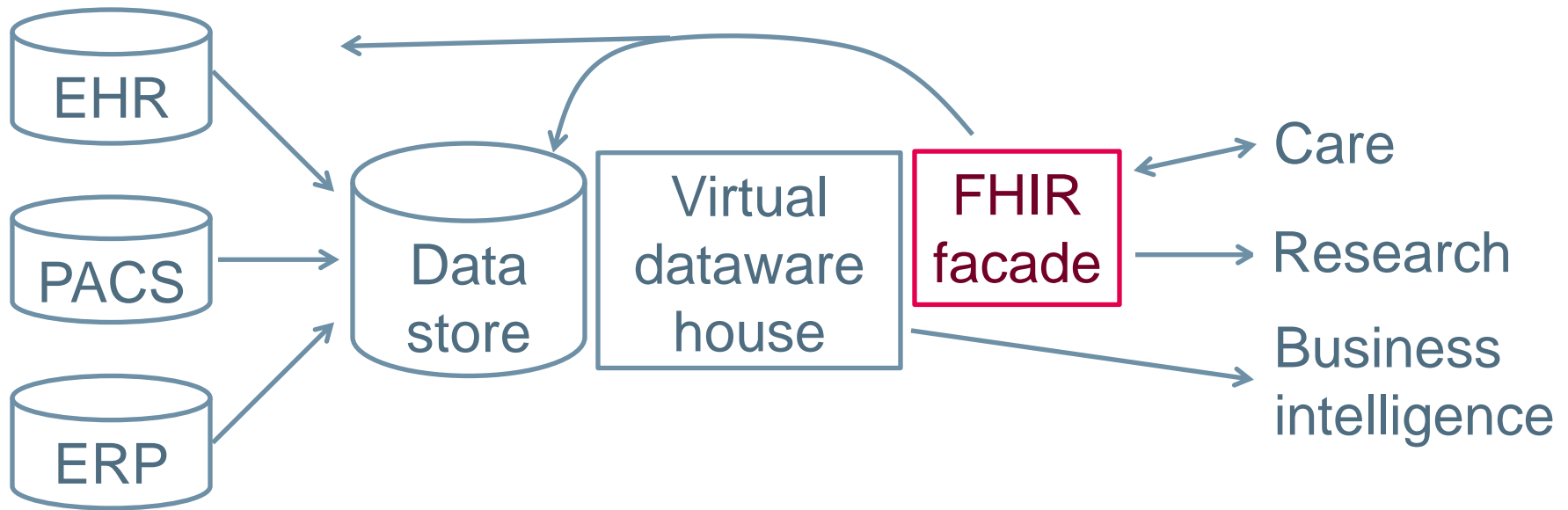
Mapping source datasets to FHIR datasets

Somehow include Finance/HRM in the FHIR data model

Validate everything (continuous consistency checks)

Performance tuning (o.a. references split per source table)

# The new dataplatform



1-to-1 mapping to FHIR-API (hopefully)

Storing data from FHIR-enabled systems to data store

FHIR subscription mechanism hard to implement

Authorization? Consent?

## Questions?

