



# EHDEN

EUROPEAN HEALTH DATA & EVIDENCE NETWORK

## EHDEN: Approach & Strategy

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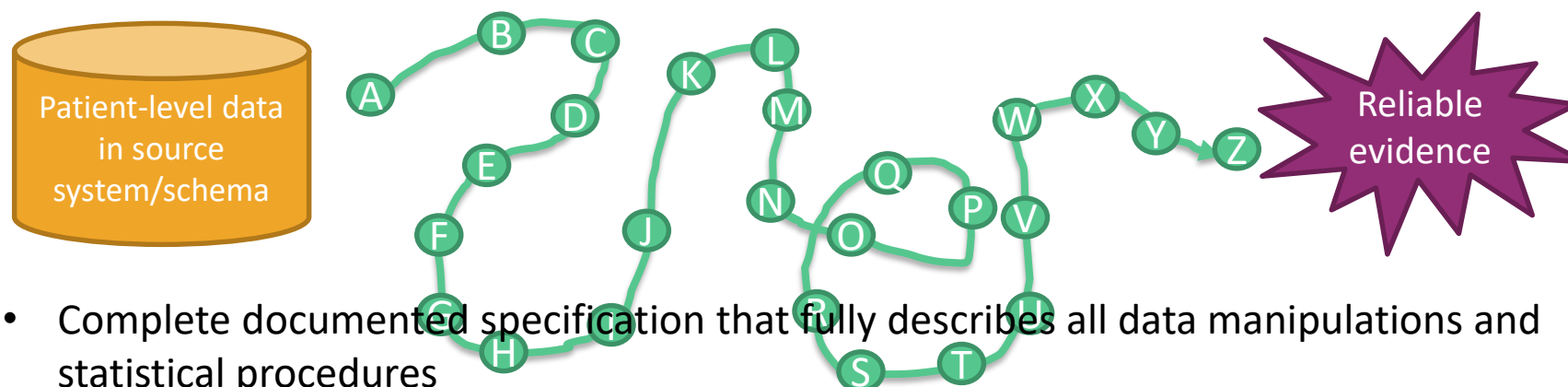
**Courtesy of:** Peter Rijnbeek & Nigel Hughes

Project Coordinator and Project Lead





# THE JOURNEY TO REAL-WORLD EVIDENCE: A FULLY REPRODUCIBLE DATA FLOW



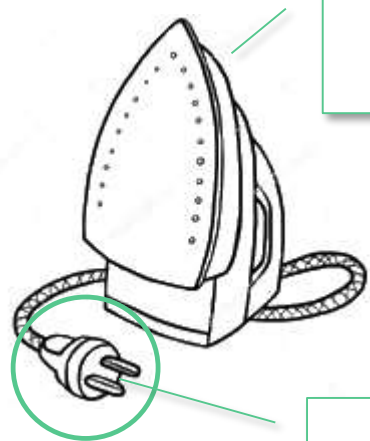
- Complete documented specification that fully describes all data manipulations and statistical procedures
- Full analysis code that executes end-to-end (from source to results) without manual intervention



**GOAL:** to implement a **large sustainable** data **network** (+100m records) in Europe to generate **reliable evidence** for patient care that is **transparent** and fully **reproducible**

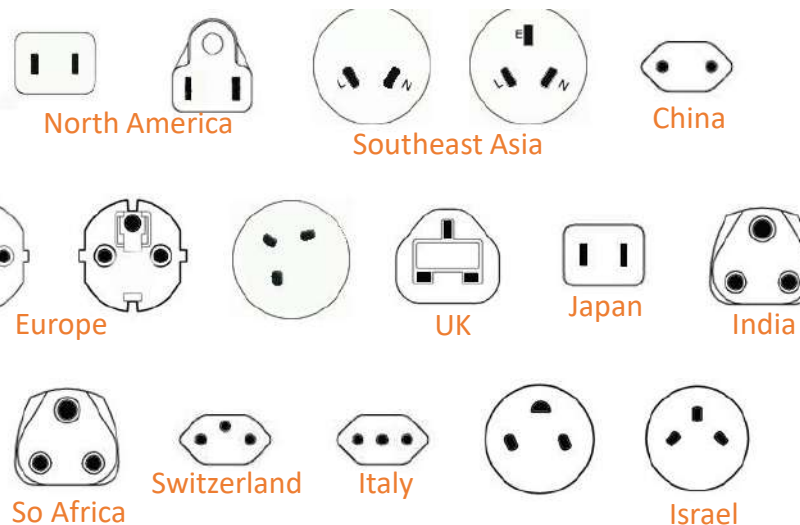


# WHY IS THIS NOT CURRENT PRACTICE?



Analytical method

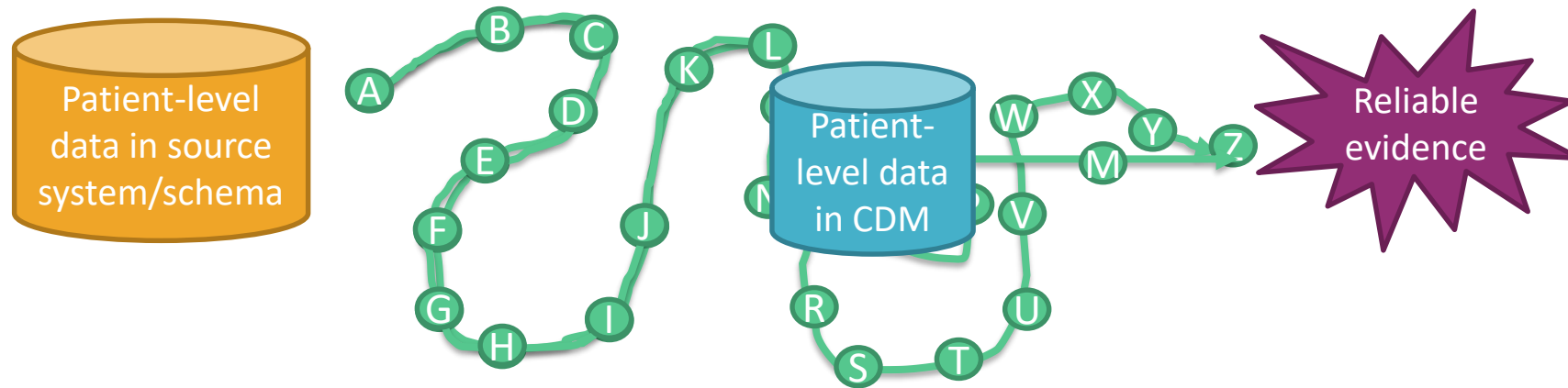
Application to data



- **Interoperability** of data: different structures, different terminologies
- **Standardized analytical pipelines** are needed
- **Services** are needed to build a active data network to answer clinically important questions in a timely manner
- A strong **community** is needed covering all of Europe that collaboratively will improve patient care



# A COMMON DATA MODEL AND STANDARDIZED VOCABULARIES



- Use of a **common data model** splits the journey into two segments: 1) data standardization, 2) analysis execution
- **CDM** creates opportunity for re-use of data curation and analysis step



# EHDEN: VISION, MISSION & VALUES

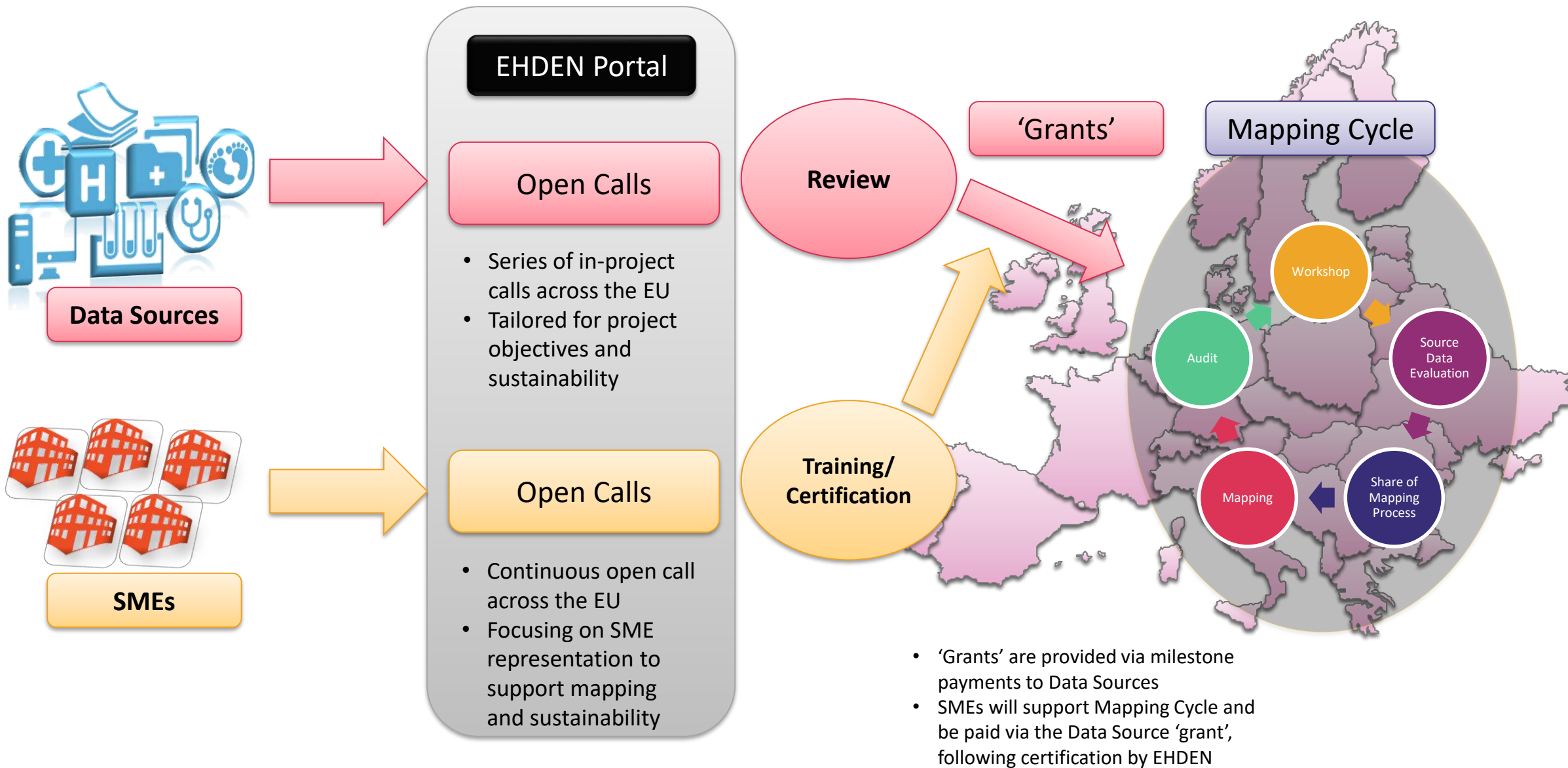
Vision: The European Health Data & Evidence Network (EHDEN) aspires to be the **trusted** observational research **ecosystem** to enable better **health decisions, outcomes and care**

Mission: Our mission is to provide a new paradigm for the **discovery** and **analysis** of health data in Europe, by building a **large-scale, federated network of data sources standardised to a common data model**

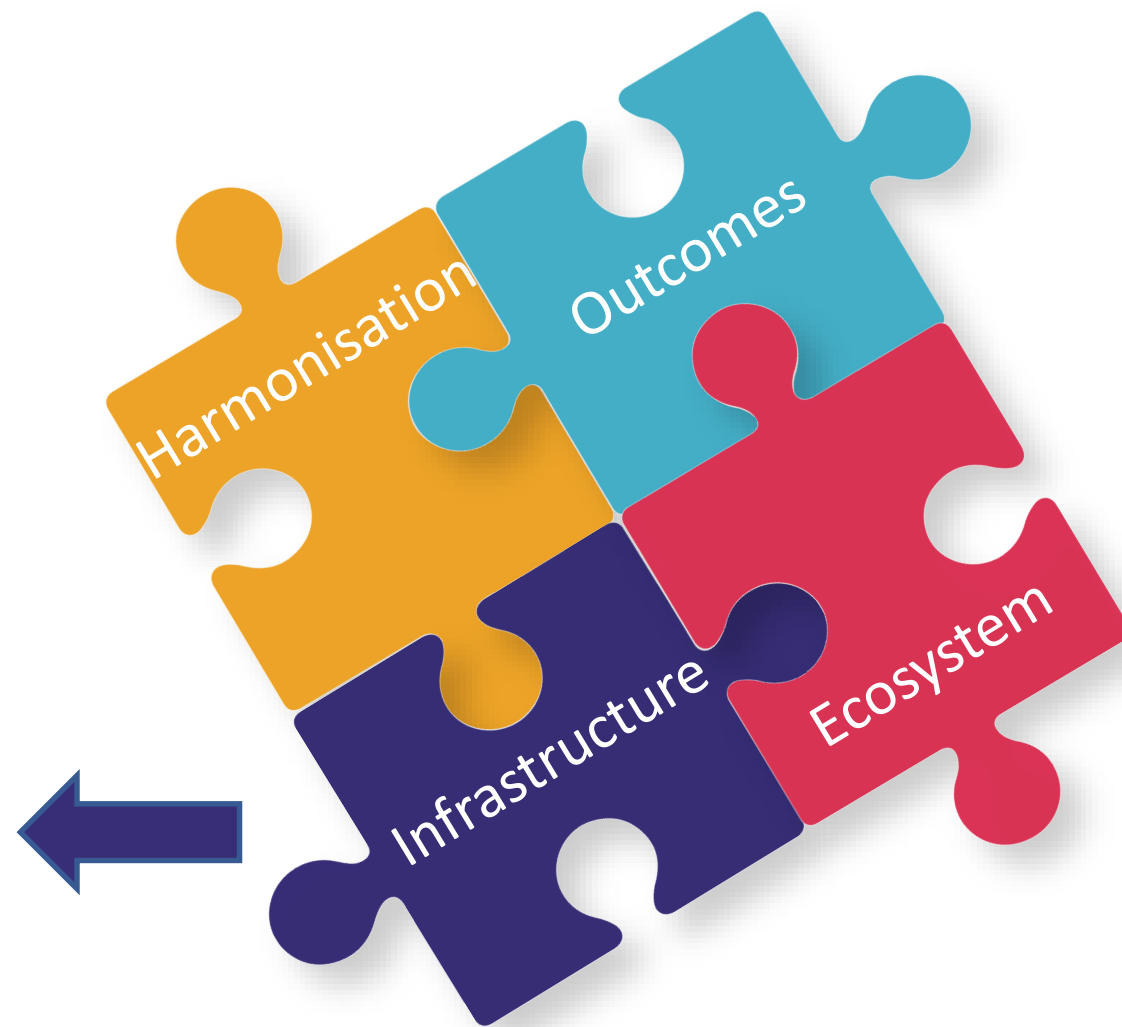
## Values:

Diversity  
Excellence  
Perseverance  
Education  
Openness  
Quality  
Beneficence  
Reproducibility  
Sustainability  
Coverage  
Efficiency  
Community

# HOW? - THE EHDEN OPEN CALL PROCESS

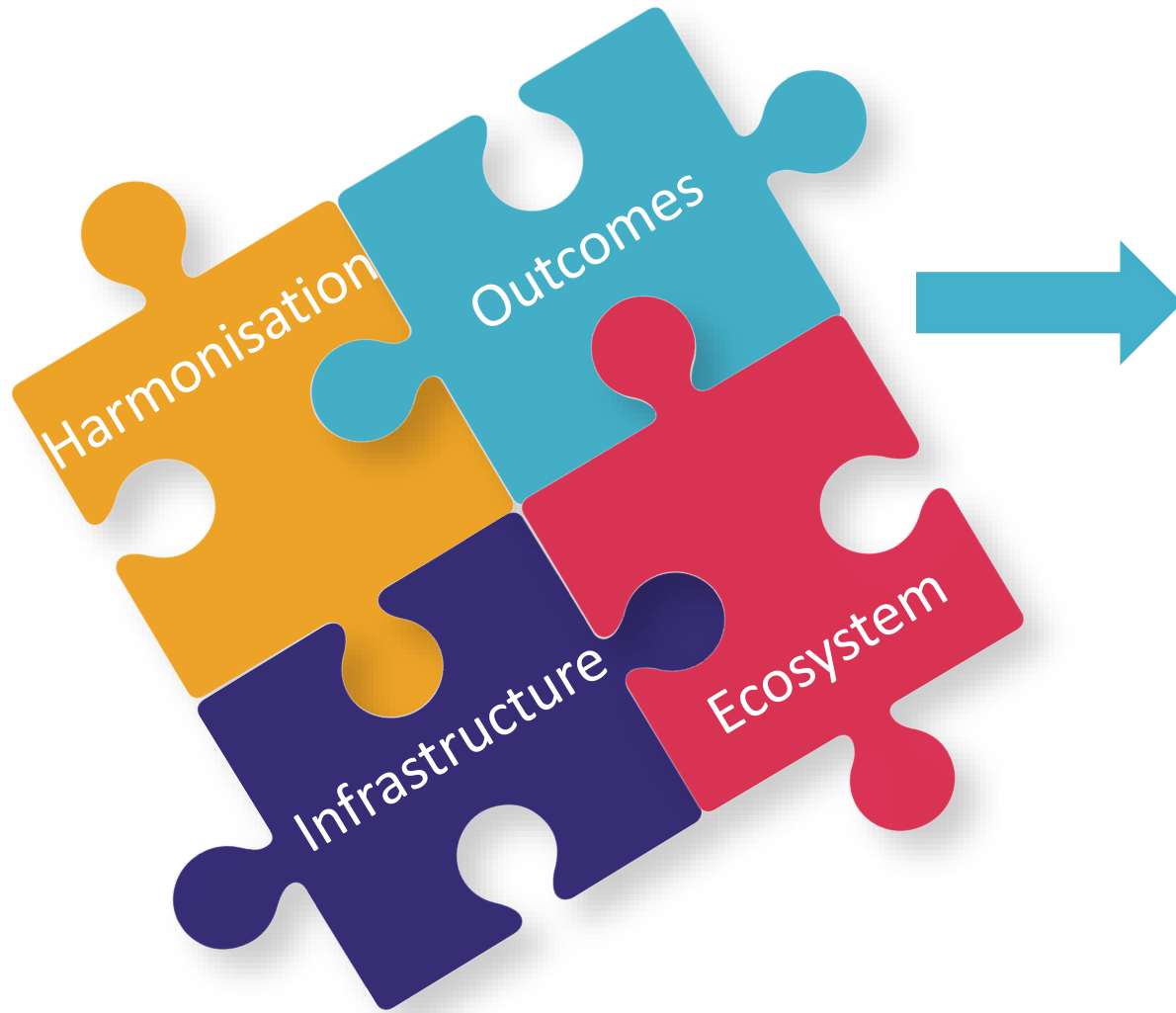


- Build the infrastructure to enable federated studies on an unprecedented scale in Europe
- Leverage and further develop OHDSI and other tools for high quality analyses
- Use Case driven development
- Ensure interoperability on a global level





# BUILDING THE ECO-SYSTEM: OUTCOMES

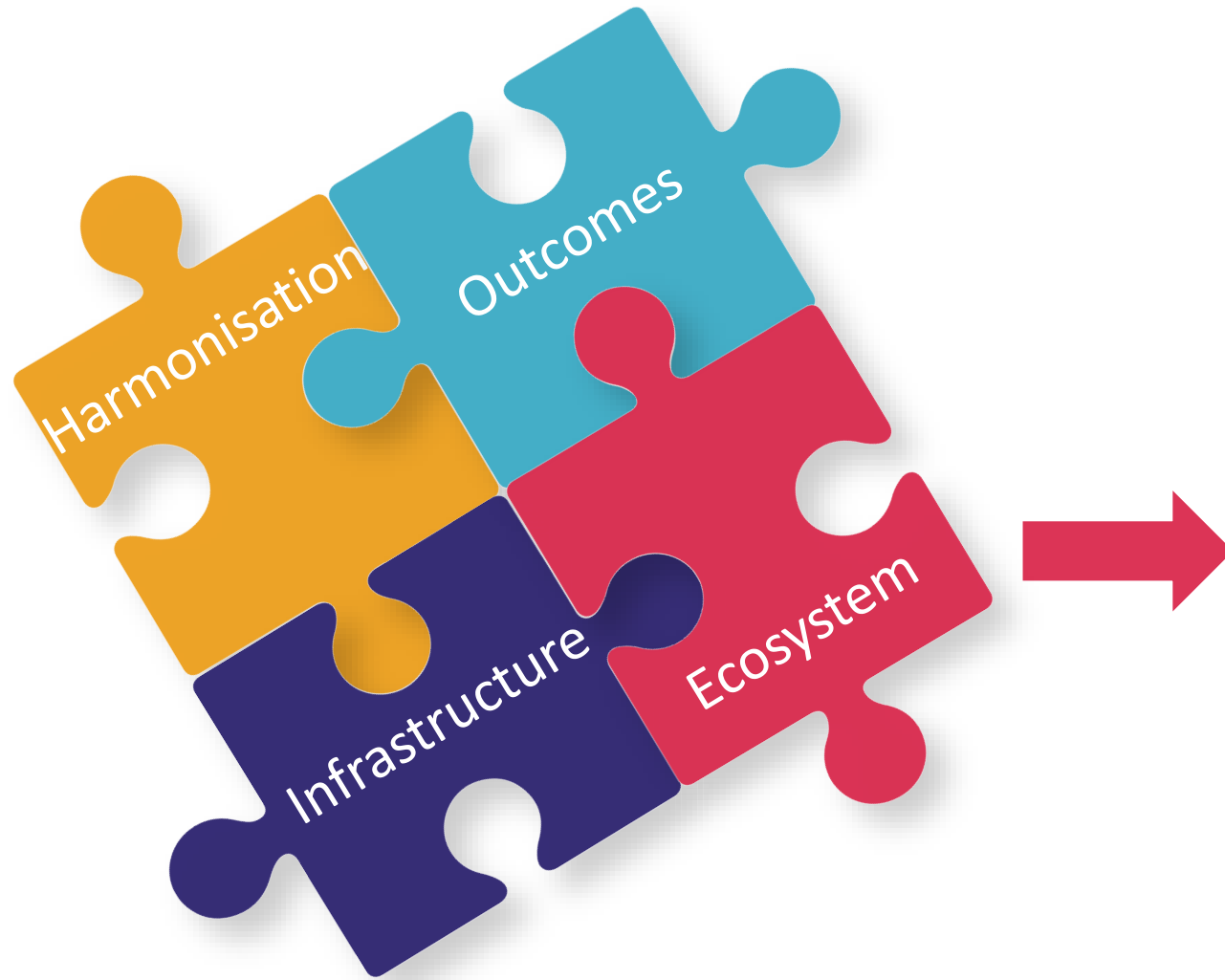


- Incorporation of outcome standards (ICHOM)
- Supporting outcomes-based research and medicine
- Demonstrate the additive value of EHDEN through use cases





# BUILDING THE ECO-SYSTEM: ECOSYSTEM



- A trusted **federated data network** expanding beyond EHDEN's lifetime
- European-wide network of **certified SMEs**
- Enable new and **augmented health services** during and after EHDEN
- Stimulate active **collaboration** within the community
- **Sustainability** is a responsibility of all stakeholders



# EHDEN

EUROPEAN HEALTH DATA & EVIDENCE NETWORK

## Project Structure





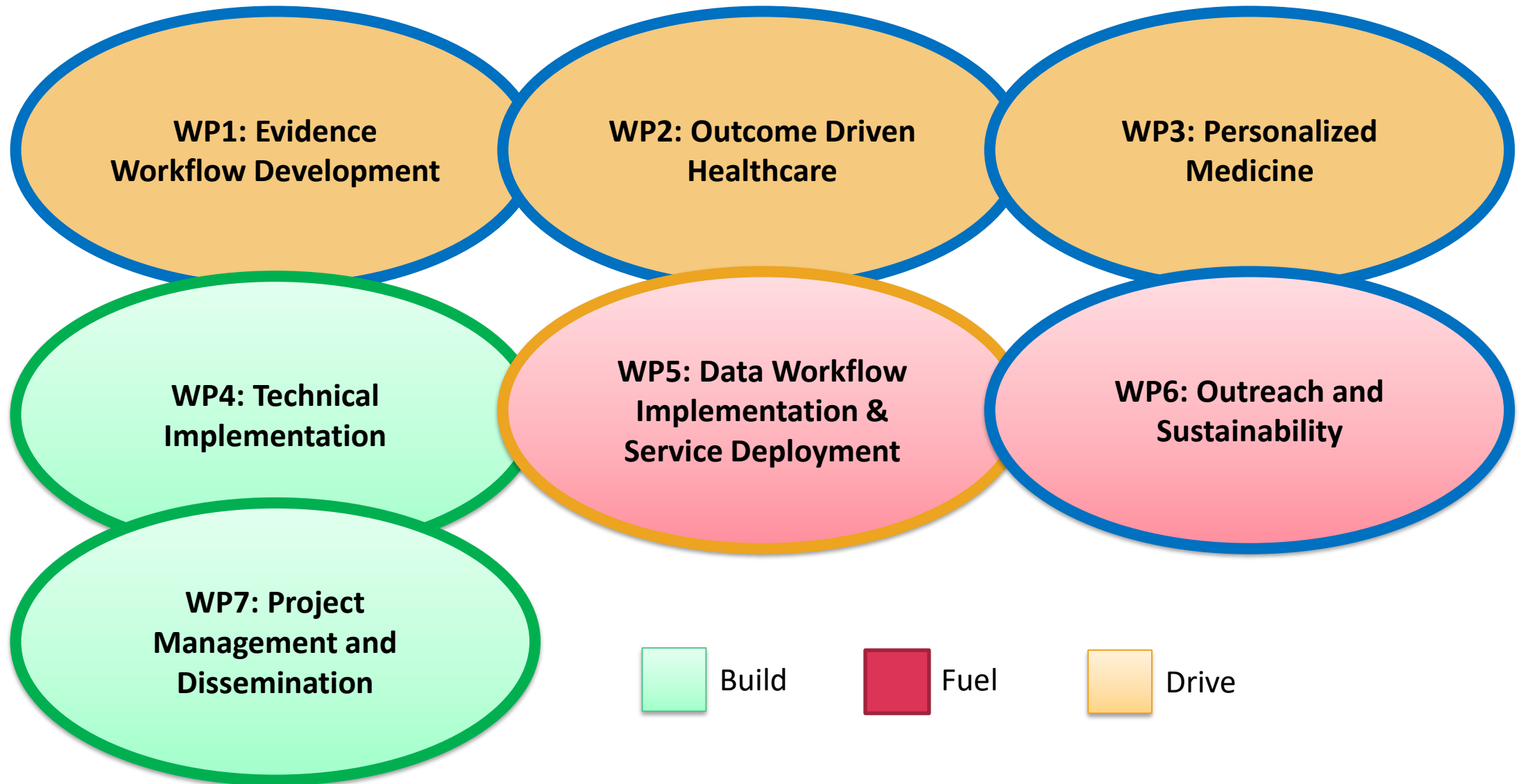
# KEY COMPONENTS FOR EHDEN

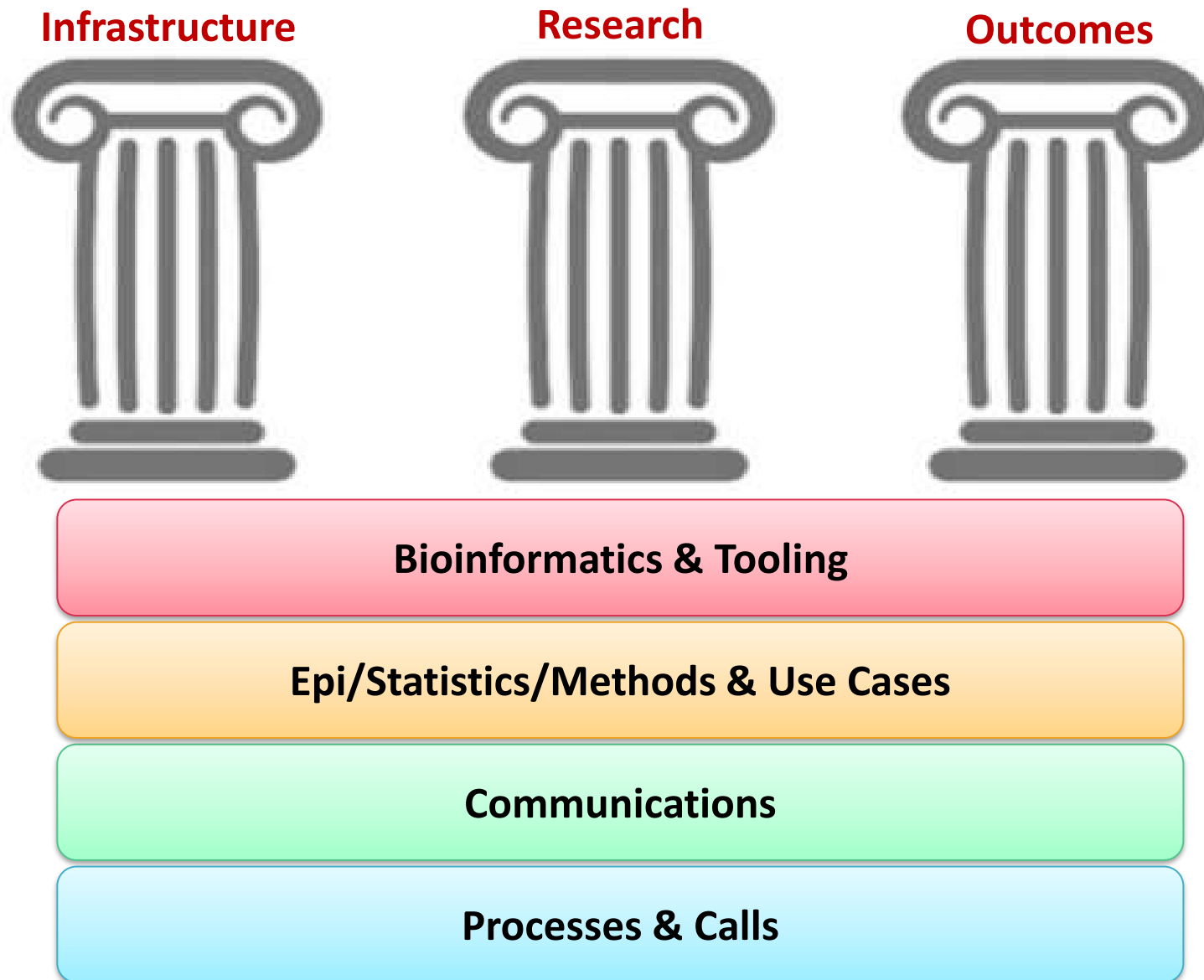


**OUTCOMES**



# EHDEN WORK PACKAGE STRUCTURE









# PILLAR ONE: BUILD





[illegible]

- EHDEN will utilise the best from prior and current (IMI) projects and platforms to develop its own infrastructure
- It will be developing its federated framework, but also analytical tooling and processes to support observational research in the EU, closely associated with the OHDSI EU/Global Open Science/Open Source collaboration



We have the main developers of most tools in the consortium and are closely collaborating with the development teams



## PILLAR TWO: RESEARCH







# EHDEN CAN FACILITATE UNPRECEDENTED RESEARCH IN EUROPE

- There is a very active global research community around the OMOP-CDM (OHDSI) -> Example is the **Oxford Study-A-Thon**
- Our task is to facilitate this at scale in Europe and add **additional tools** and **methods** to the current stack
- In EHDEN research will drive the development of the eco-system with respect to tool and processes, but also to build the necessary trust



**Quality Control** on all steps in the pipeline is needed, starting at source data, ensuring the transformation to the CDM is valid, ensure the analytical pipeline has build in quality measures, etc.

**Result dissemination** that enables others to add new insight on their data after study publication

