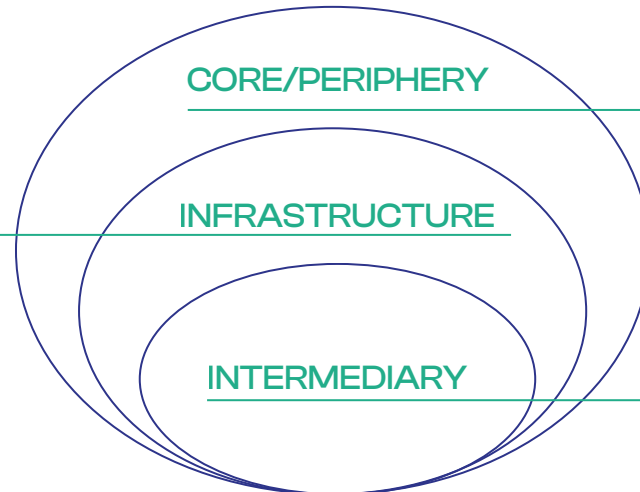


D2.2 describes the **conceptual and architectural framework** for EXCENTRIC's data sharing architecture and outlines a **development plan** for the core technological components and pilot-specific applications.

1. THE KEY CONCEPTS GUIDING THE ARCHITECTURE

Focus on how data moves from producers to reusers, the conditions for reuse, and how legal/technical mechanisms mediate interests. Component parts ("design patterns") help tailor intermediaries to different organisational contexts.



A platform consists of a **modular core** (foundational services) and **peripheral applications**. Core components act as **boundary resources**, shaping ecosystem interactions and embedding values.

A data sharing architecture must evolve from existing systems, practices, and socio-technical conditions. Standards must be flexible enough for different organisations, yet able to support cross-organisational reuse.

2. TECHNICAL COMPONENTS

PERIPHERAL ELEMENTS

DATA HOSTING

Pods, decentralised storage

ANALYTICS

Solid-enables tool built for pilot use cases

CORE ELEMENTS (FOR ALL PILOTS)

STANDARD DATA MODELS

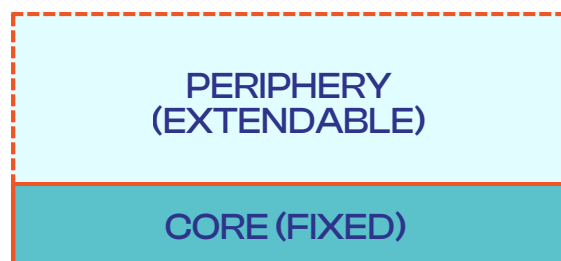
Transaction, person-related, behavioural, biophysical

IDENTITY MANAGEMENT & ACCESS CONTROL

Authentication, authorisation, consent mechanisms

DATA COLLECTION & TRANSFORMATION INTERFACES

Import, standardisation, APIs



3. THE TECHNICAL BACKBONE

SOLID COMPONENTS USED

DATA PODS

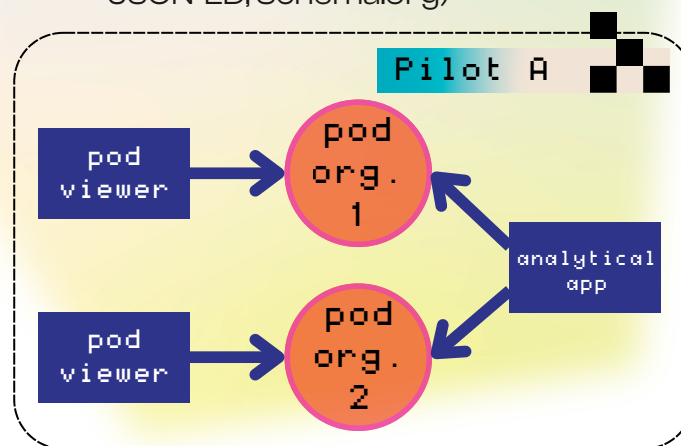
Organisational storage spaces

IDENTITY & ACCESS CONTROL

WebID, Solid-OIDC, WAC/ACP

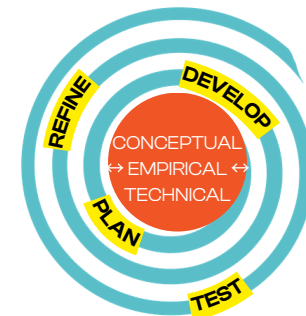
STANDARD DATA MODELS

Shared vocabularies (e.g., JSON-LD, Schema.org)



4. METHODOLOGY

VALUE-SENSITIVE DESIGN + AGILE DEVELOPMENT



Conceptual, empirical, and technical investigations are iteratively combined with agile processes.

VSD ACTIVITIES

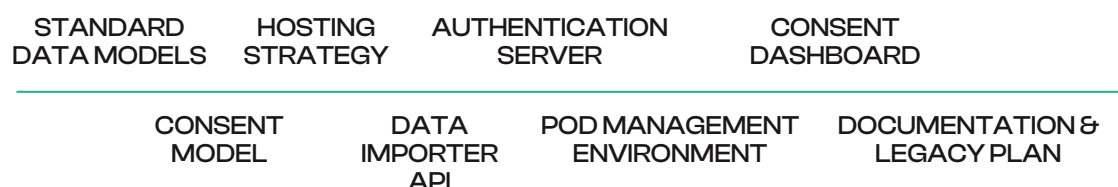
- **Conceptual:** stakeholder identification, value systematisation, value tensions
- **Empirical:** prototyping, interviews, scenario methods, value elicitation
- **Technical:** prioritising values and embedding them in code (value levers)

AGILE PHASES

1. **Preparation** - interviews/workshops, organisational context mapping
2. **Design requirements** - prototypes, value elicitation, requirement specification
3. **Development** - technological features aligned with values
4. **Testing** - value-alignment assessment via user testing

5. DEVELOPMENT PLANS

CORE SOLID ARCHITECTURE (ALL PILOTS)



PILOT-SPECIFIC DEVELOPMENT PLANS

- **TD** Simulation toolbox data models
- **OCF** Venue Master App data sharing mechanisms
- **KBF** / REFS ROI & loyalty indicator dashboards
- **CTL** Diversity analytics dashboard
- **DRM** Narrative game data model
- **ROMAE** audience loyalty and social value assessment