

Research data - forever FAIR: Finnish perspective

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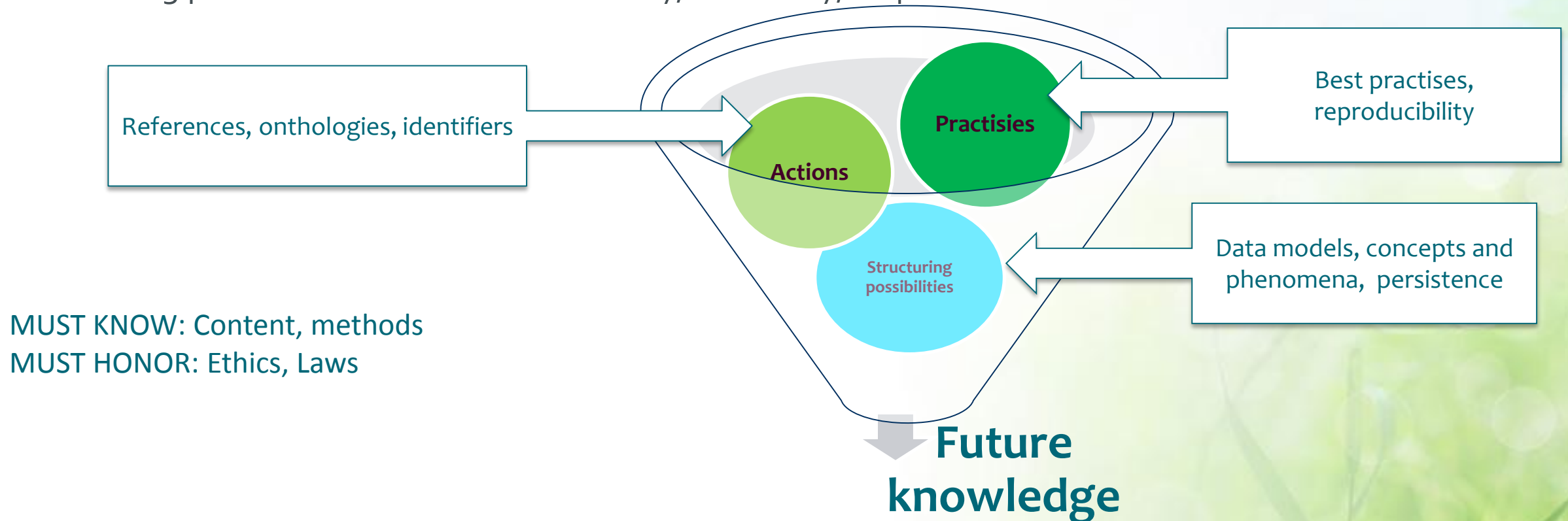
CSC - IT Centre for Science, Finland



KNOWLEDGE AND UNDERSTANDING



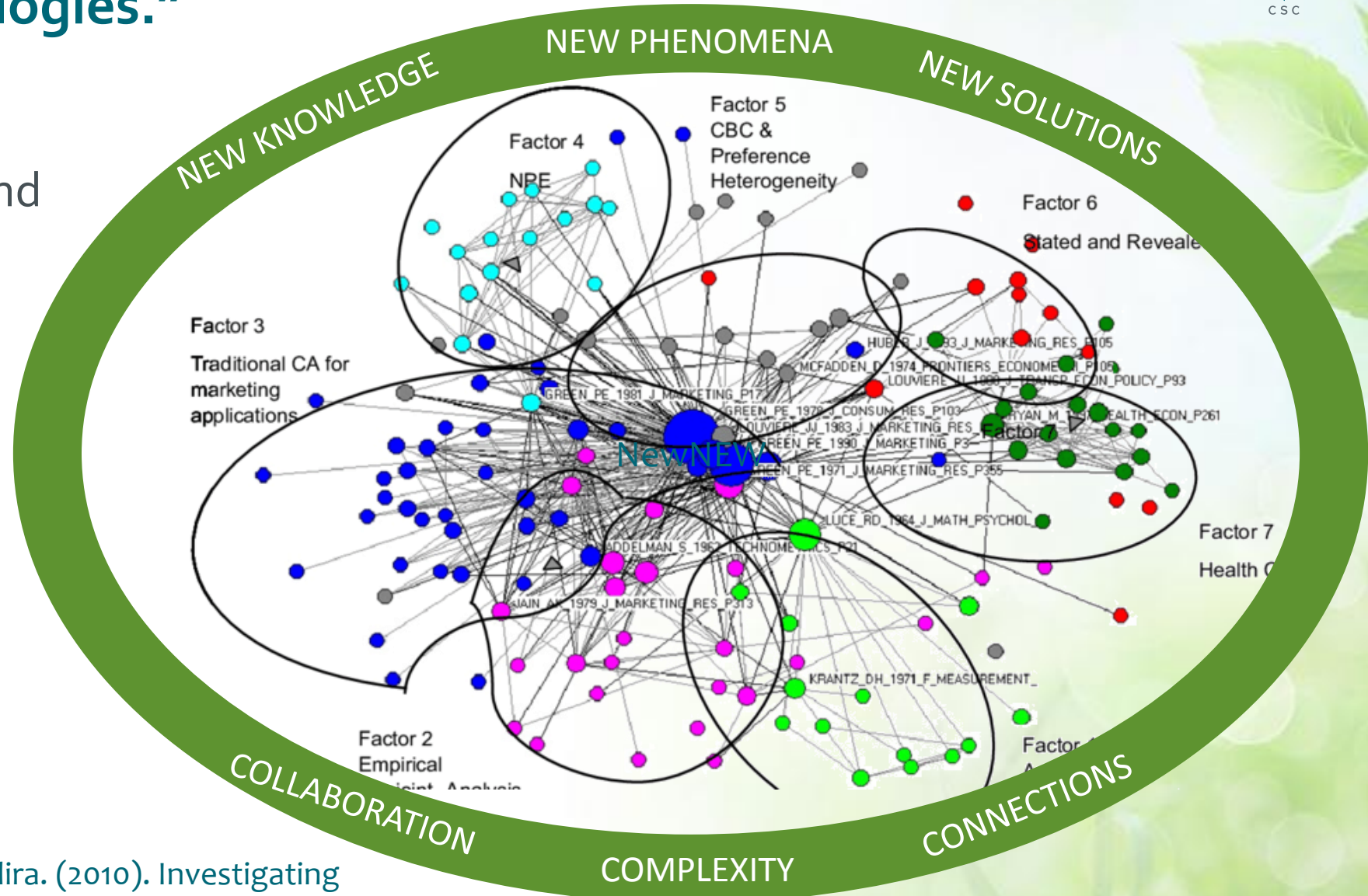
- Horizon of making sense, thinking and communication:
 - Practises of knowing: methods, documentation, orderliness, accuracy, critical thinking, objectivity, ethics, information sources
 - Actions of knowing: previous contexts, bias detection and control, deduction and induction, drawing conclusions
 - Structuring possibilities for future: verifiability, testability, responsible science



"The future of science is about multidisciplinary collaboration and applying new technologies."

GREATEST CONCERNS:

- Correctness of results and conclusions
- Ethical standards
- Meaningfulness
- Validity
- Reliability
- Privacy
- Utility



Teichert, Thorsten & Shehu, Edlira. (2010). Investigating Research Streams of Conjoint Analysis: A Bibliometric Study.

Structuring possibilities: Building resilience

- Resilience is not a response to any specific threat, but relates to a more general ability to adopt to disruptions and crises regardless of their exact characteristics.
- **Goal:** Creating preconditions for responsible science and re-use of scientific results and materials
- Information management is about lifecycle management: data, metadata, research and analysis methods, documents, publications, agreements, IPR etc.
- Defining and managing high-value materials (high re-use potential) is a multi-leveled issue, where the main responsibilities should lie within research organizations.

DESIGNED FOR CHANGE: THE OBJECTS ARE ETERNAL, THE SERVICES CAN TRANSFORM AND CHANGE



Research data not separated from research,
has a stronger role to play in solving societal problems

FAIR-principles : Building resilience

(EU Council Conclusions on Open Science)

Force11: <https://www.force11.org/group/fairgroup/fairprinciples>



FAIR-principles are the embodiment of good data management

F (Findable)

- How easy it is to find the data by search engines and other tools?
- Descriptive metadata
- Persistent Identifiers

A (Accessible)

- How to share the data, in principle and practice
- Access status

I (Interoperable)

- Seamless workflows and processes
- Data documentation
- XML standards

R (Re-usable)

- Rights and Licenses
- Purposes of processing
- Curation

“Blueprint” for data-intensive infrastructure

Produce and process

- Collect and generate, store, process, compare

Data preparation and management

- Describe, pack, update, curate

Data sharing

- Create model for sharing, create interfaces, share metadata

Education, guidelines and support services

Optimize fast access

Data storage
Optimize preservation

Optimize availability

Processing and analysis tools

Collaboration platforms

Search tools

Metadata: managing information models, ontologies etc.

Digital preservation: packaging, agreements, curation and migration

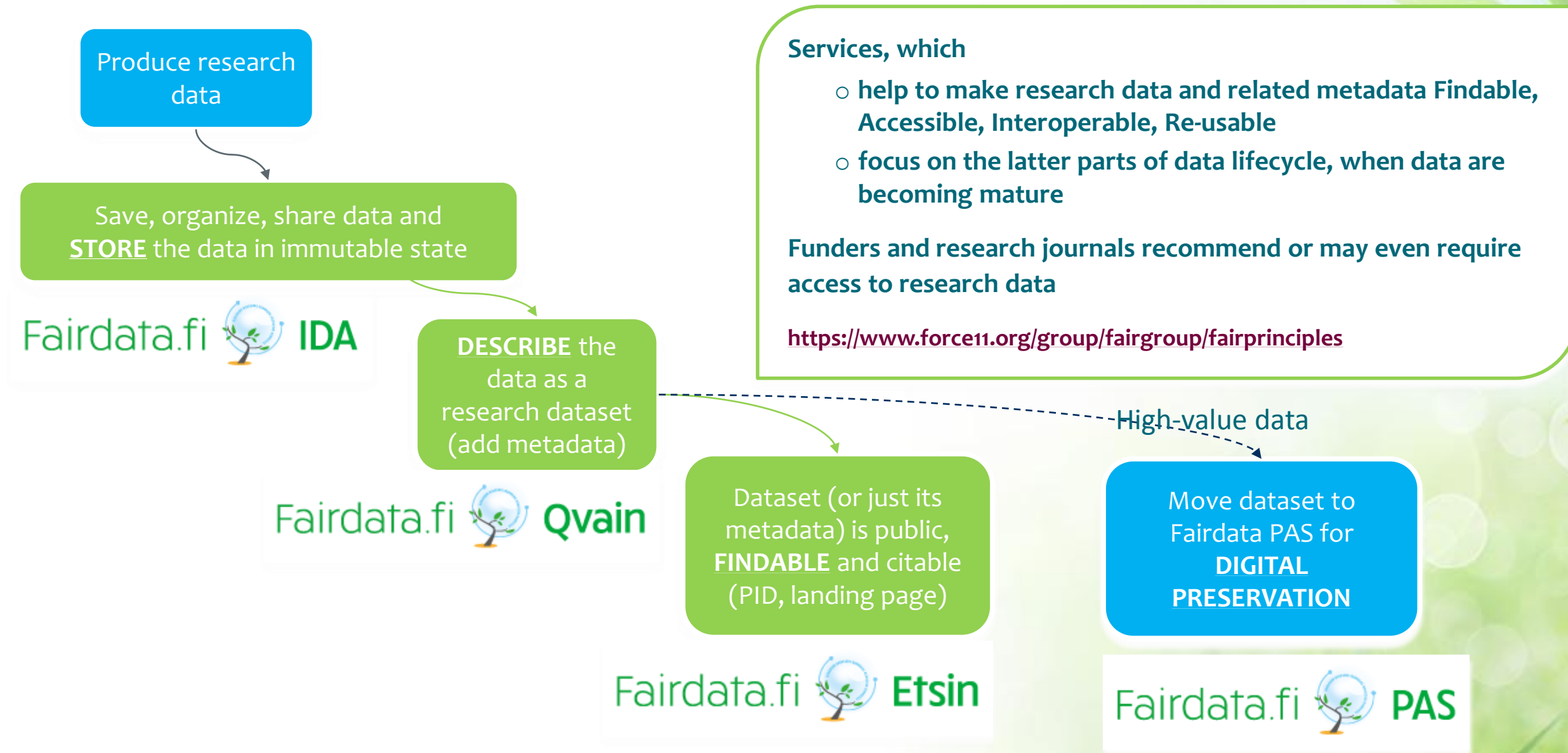
Open interfaces

Authorization tools

Distribution portals

Laws/Policies /Data Management plans /Preservation plans

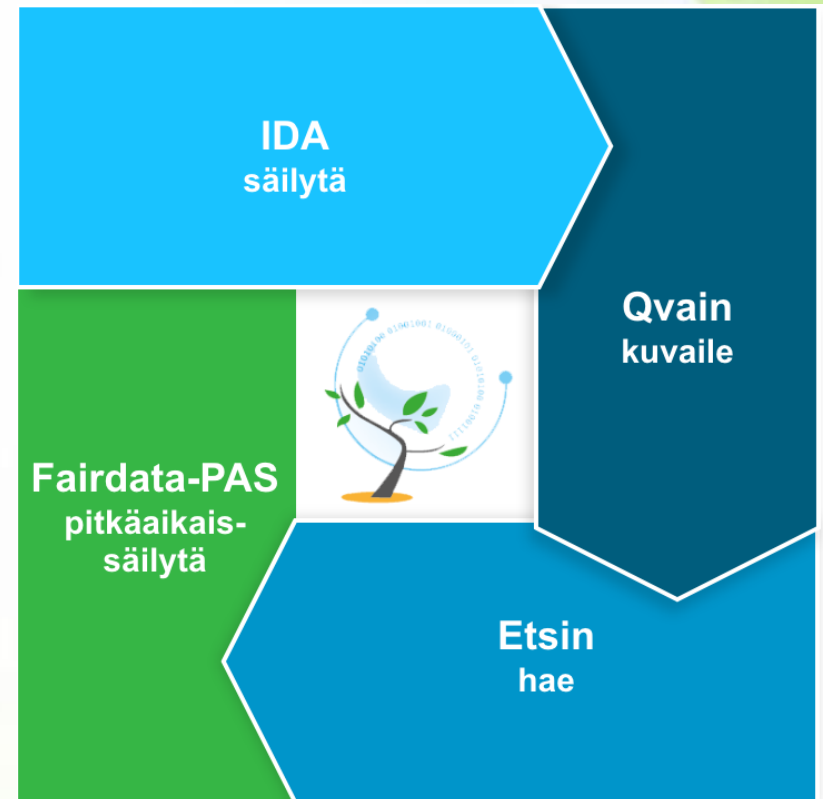
THE FAIRDATA.FI SERVICE PORTFOLIO



Fairdata.fi – Shared integrated services for storing, describing and sharing

Make your data safe , documented and citable

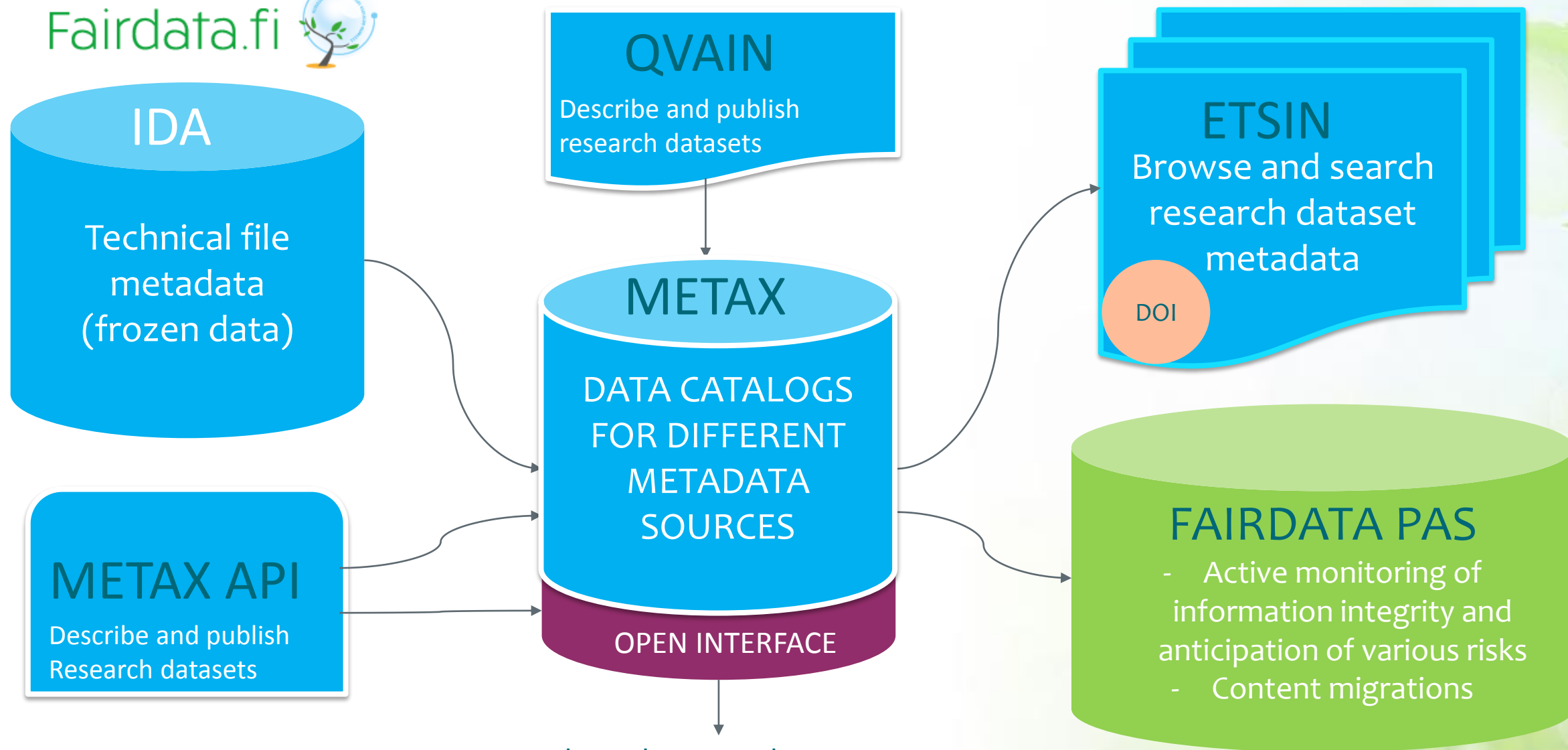
- **IDA** – Research Data Storage Service
- **ETSIN** – Research Data Finder
- **QVAIN** – Research Dataset Metadata Tool
- **FAIRDATA PAS** – Digital Preservation Service for Research Data



Provided by MinEdu, produced by CSC and National Library of Finland

Metadata flows in

Fairdata.fi 



Harvested to other metadata resources,
like the Finnish research metadata hub

What to think in preserving the research data?

Preservation desing has to consider

- Purposes of processing
- Laws and regulations
- Information safety
- Use cases
- Sharing
- Dynamic/Permanet
- Data policies nad guidelines of funders and organisations
- Agreements



Where to store?

- Organisations platforms
- CSC platforms
- Resreach Infrastructures
- Discipline-specific repositories
- EU services and platforms (EUDAT, Openaire...)
- Others



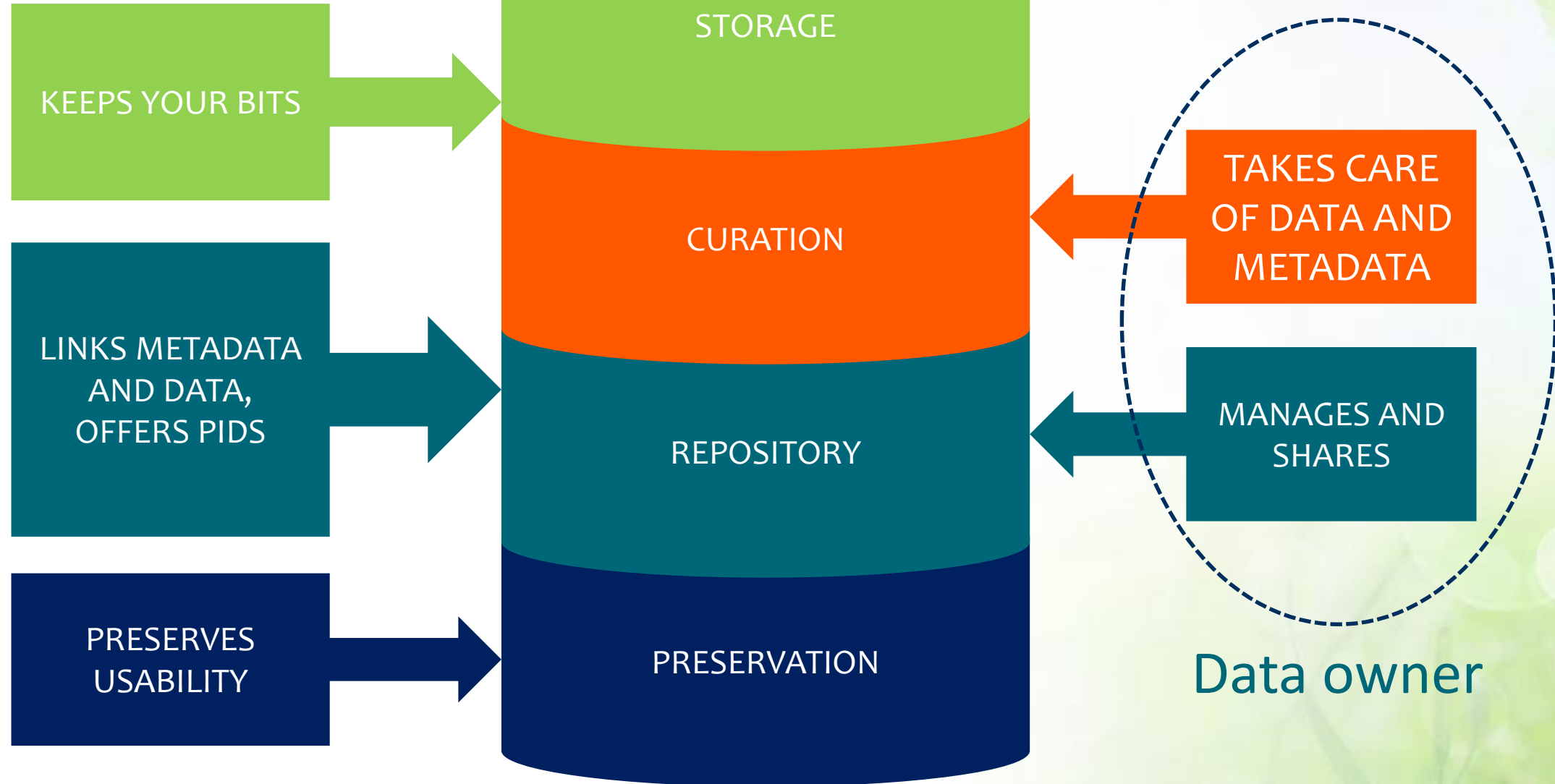
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Data retention

- **Data retention** defines the policies for meeting legal requirements
- Retention time is defined by the purposes of processing
- If it is longer than project span
- => data preservation tools needed
- In Finland, research data can be preseved for ever for research purposes



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Main message:
give the future a chance

**“The important thing in
visionary thinking is to learn
from the past, yet not be
bound by it.”
Albert Einstein**

