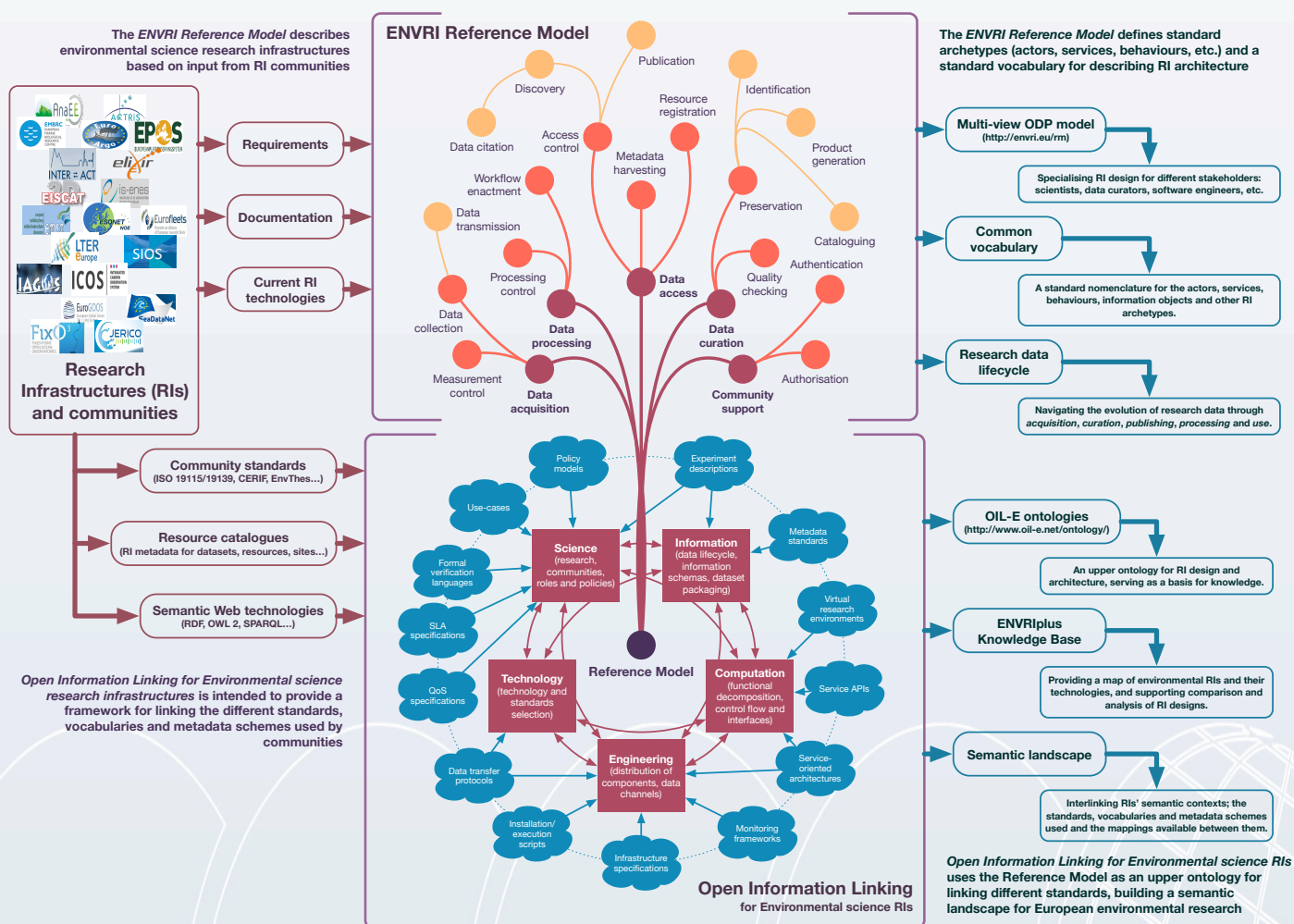


## Open Information Linking for environmental research infrastructures (OIL-E)

### The ENVRIplus project

The ENVRIplus (<http://envriplus.eu/>) project builds upon the work of the original ENVRI project in providing **shared solutions for science and society**, in particular defining **common operations for environmental research infrastructures**. Addressing the need for interoperable services for such diverse topics as identification and citation, curation, provenance and cataloguing, the **Data for Science** theme of ENVRIplus brings together a cluster of environmental research infrastructures (RIs) and ICT institutions to come up with practical solutions to long-standing problems.



OIL-E draws on the state of the art of the environmental RI community to provide common vocabulary that can then be linked to different open standards for data, infrastructure and resources (<http://envri.eu/rm>, <http://oil-e.net/ontology/>).





Supporting environmental research  
with integrated solutions  
- **the Earth is our lab**

## Common vocabularies

The ENVRI Reference Model (<http://envri.eu/rm/>) provides a standard set of **archetypes** for the different classes of actor, information object, behaviour, etc. found within environmental science RIs.

The reference model (ENVRI RM) places these archetypes in the context of the **research data lifecycle**, identifying the critical elements of data acquisition, curation, publishing, processing and use. By referring to ENVRI RM, RI architects can identify which elements are most important to them, determine any gaps within their own (planned) infrastructure, and compare against other RI specifications—in particular looking at *how* other RIs solved the same problems and what technologies they used.

ENVRI RM provides **common vocabulary** for defining:

- The major **actors** in an RI and the **behaviours** they engage in.
- The main **information objects** generated and used within an RI.
- The main **services and resources** needed to support RI **operations**.

By promoting a common set of terms for RI entities, ENVRI RM helps normalise and streamline discourse between different RI initiatives.

## Open Information Linking

Open Information Linking for Environmental science research infrastructures (OIL-E) (<http://www.oil-e.net/>) is intended to provide a **framework for semantic linking** between different RI standards and vocabularies.

Using the archetypes of ENVRI RM to produce an **upper ontology** for RI specifications, OIL-E will provide a **linking model** for describing the overlaps between the different metadata schemes used by RIs to describe their resources, as well as the **semantic mappings** used to convert between schemes.

Using OIL-E, the ENVRIplus project will build a **knowledge base** describing the **semantic landscape** of environmental science RIs in Europe, capturing information about metadata schemes, ontologies, thesauri and other vocabularies used by RIs, helping to navigate the semantic bottlenecks in the establishment of an open science commons in Europe and beyond.

## ENVRI and RDA

The Research Data Alliance (RDA) is an important forum for addressing the challenges facing the open sharing of data, many of which ENVRI also faces.

The recommendations of RDA will bear influence on future revisions of ENVRI RM, and the standards espoused by RDA should be captured within the semantic linking framework of OIL-E. Notable recommendations include the **Data Foundation & Terminology Model** and **Data Type Registries Model**.

At the same time, it is hoped that the intellectual investment of ENVRI into ENVRI RM and OIL-E will be of value to the RDA community, for example regarding research data collections or metadata standards.

## Contact us

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- For more information about ENVRI in general, or to register for updates, visit: <http://envri.eu/>

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