South African Research Data Infrastructure

SAEON Open Data Platform
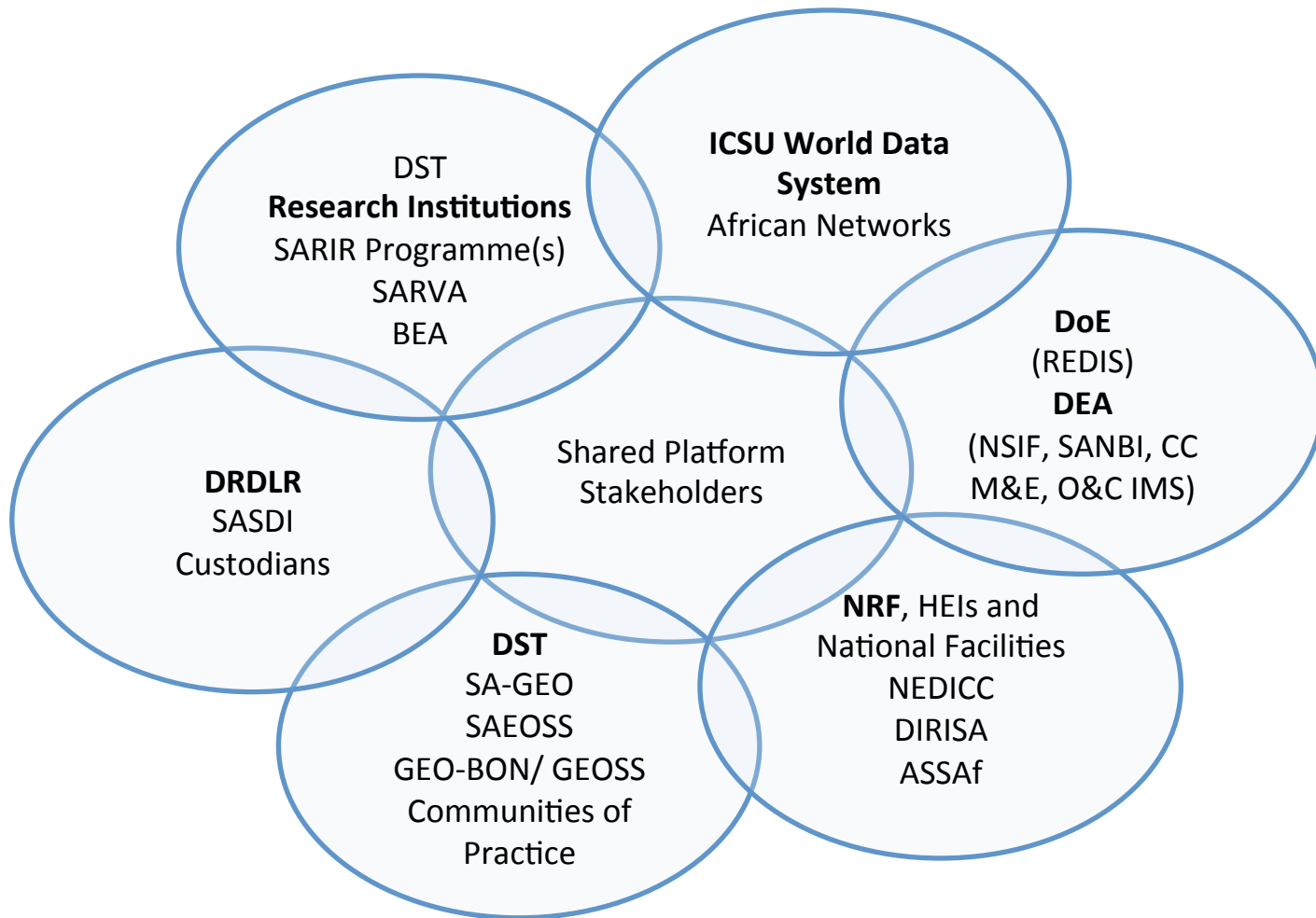## Roadmap

CDIO, SAEON
Systems Architect, DIRISA
Vice-Chair, ICSU-WDS
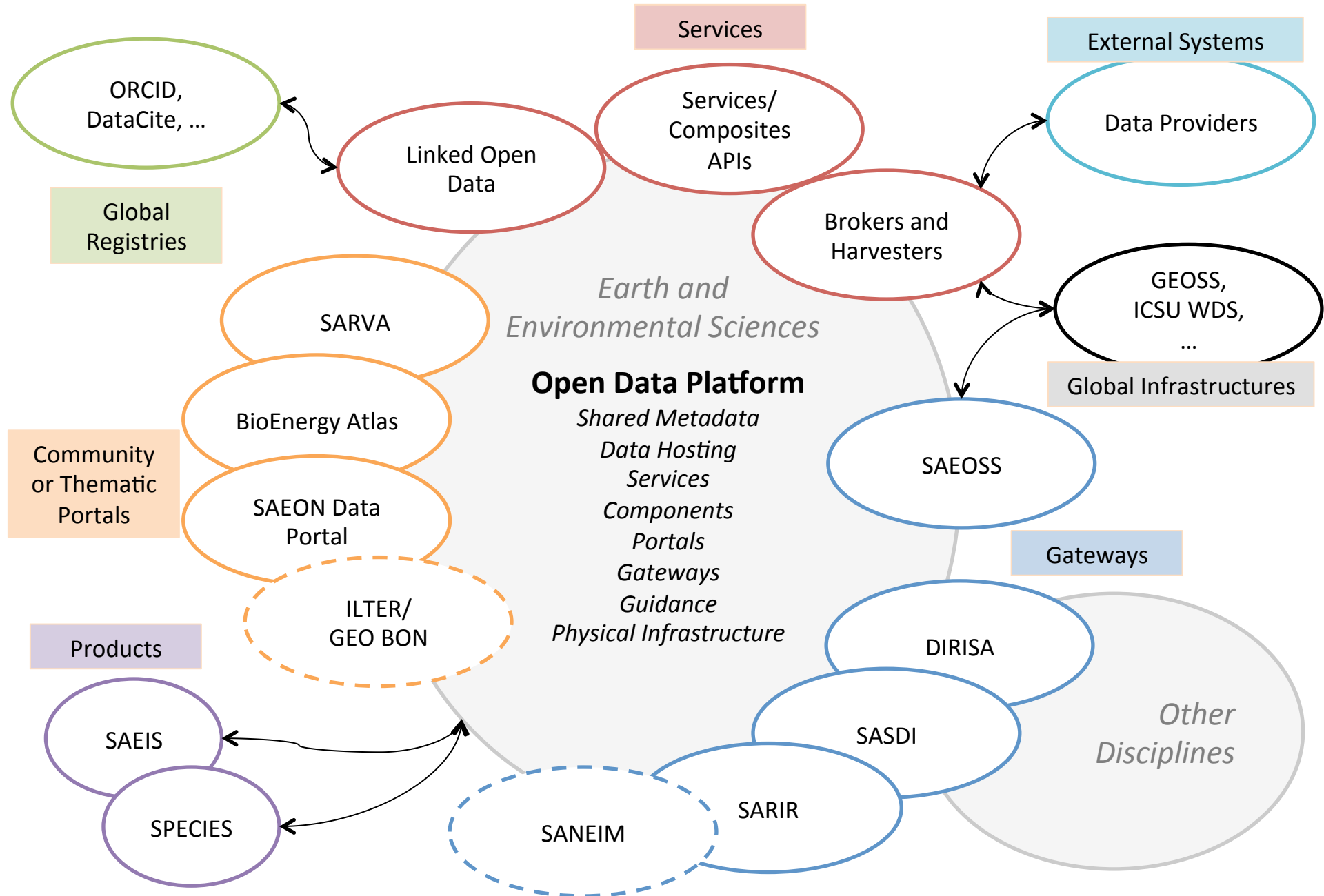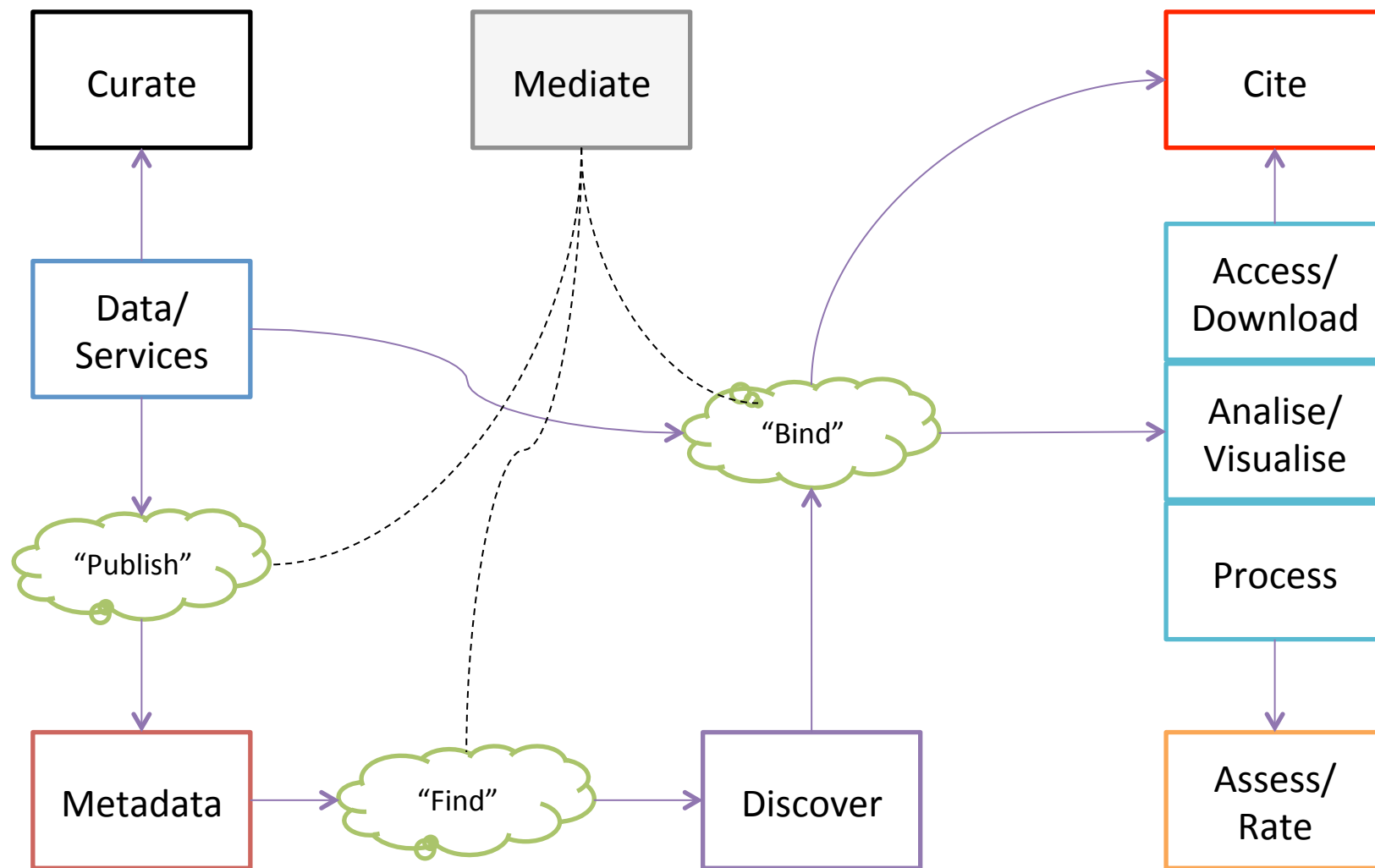
Maintenance of a Shared Roadmap

Emerging E&EO Research Data Infrastructure

Generalised Scientific Data Infrastructure Use Case

Curate

Mediate

Cite

Data/
Services

"Bind"

Access/
Download

Analise/
Visualise

Process

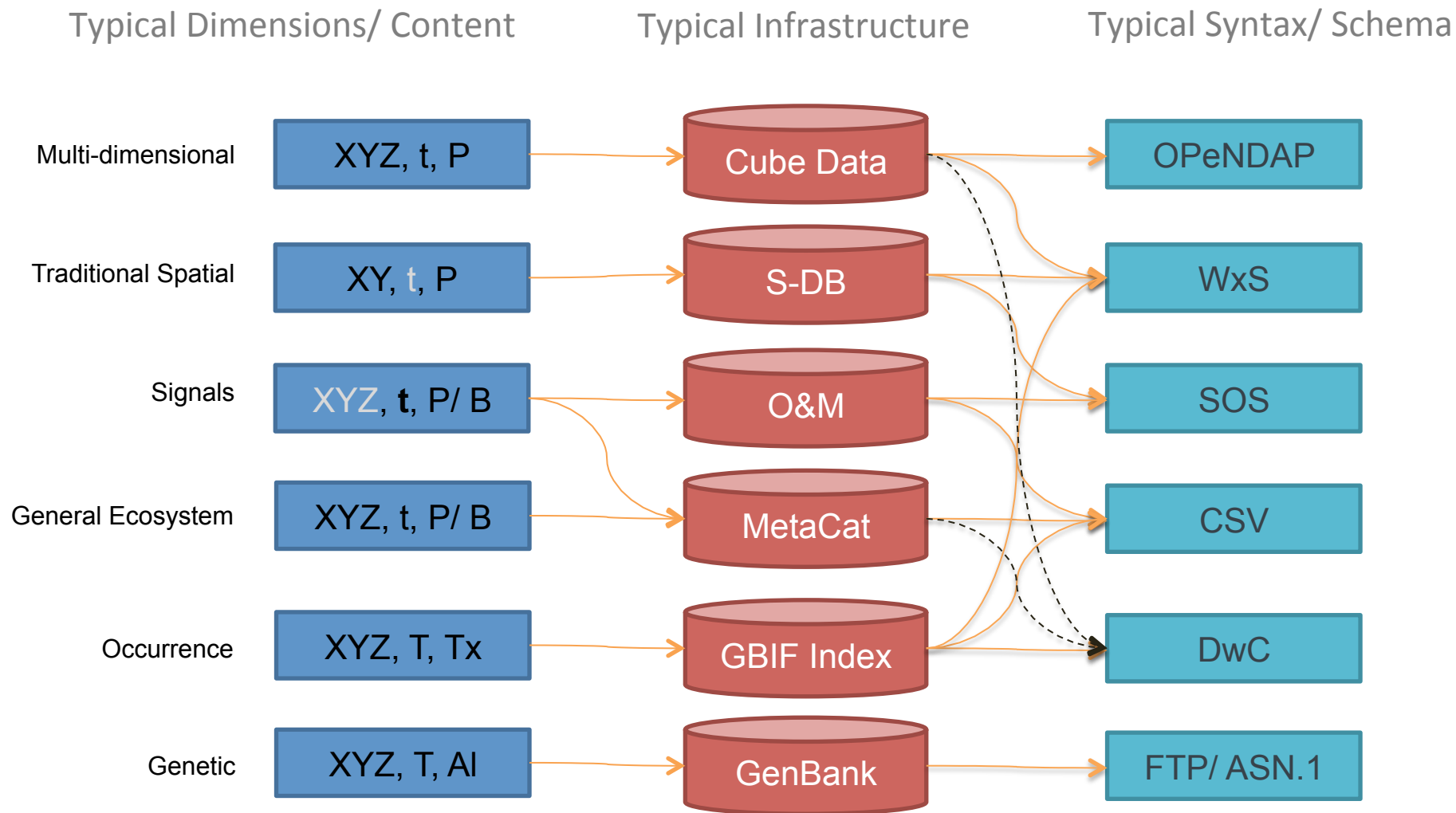"Publish"

Metadata

"Find"

Discover

Assess/
Rate

"Predictable Assembly from Reliable Components"

Options for Participation

Meta-Data Management	Discovery	Data Hosting, Visualisation and Download	Reporting	
Portal	Portal	Portal	Portal	No Infrastructure
Embedding*	Embedding	Embedding	Embedding	Shared Infrastructure
Adapters and Harvesters	CS/W Adapter	Standard Data Services		
REST Services	REST Services	Plug-Ins/ Own Development	REST Services	Mostly Own Infrastructure

Some Generic Data Families and Crosswalk Requirements

Typical Dimensions/ Content

Multi-dimensional	XYZ, t, P
Traditional Spatial	XY, t, P
Signals	XYZ, **t**, P/ B
General Ecosystem	XYZ, t, P/ B
Occurrence	XYZ, T, Tx
Genetic	XYZ, T, Al

Typical Infrastructure

- Cube Data
- S-DB
- O&M
- MetaCat
- GBIF Index
- GenBank

Typical Syntax/ Schema

- OPeNDAP
- WxS
- SOS
- CSV
- DwC
- FTP/ ASN.1

Still Thinking About: ✪ HDF-5 for Everything ✪ Directed Graphs/ RDF for Everything