

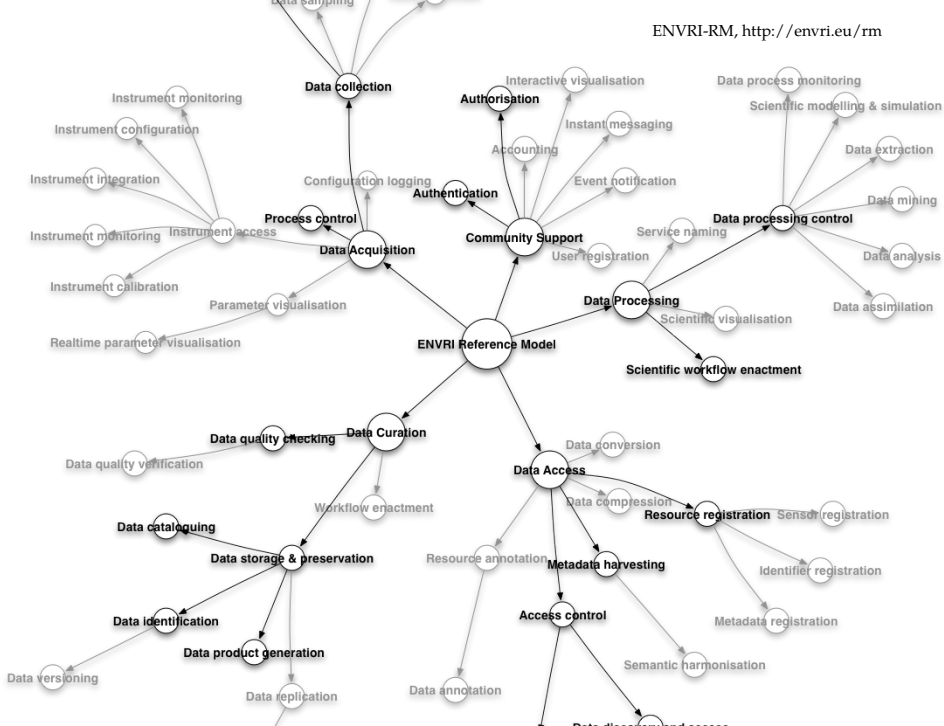
ICOS Carbon Portal
August 10-14, 2015, Lund, Sweden


Knowledge-based environmental research infrastructure

Markus Stocker

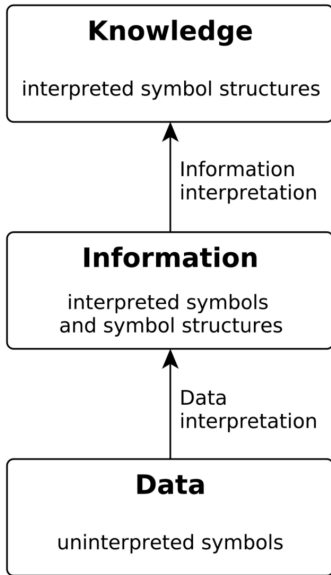


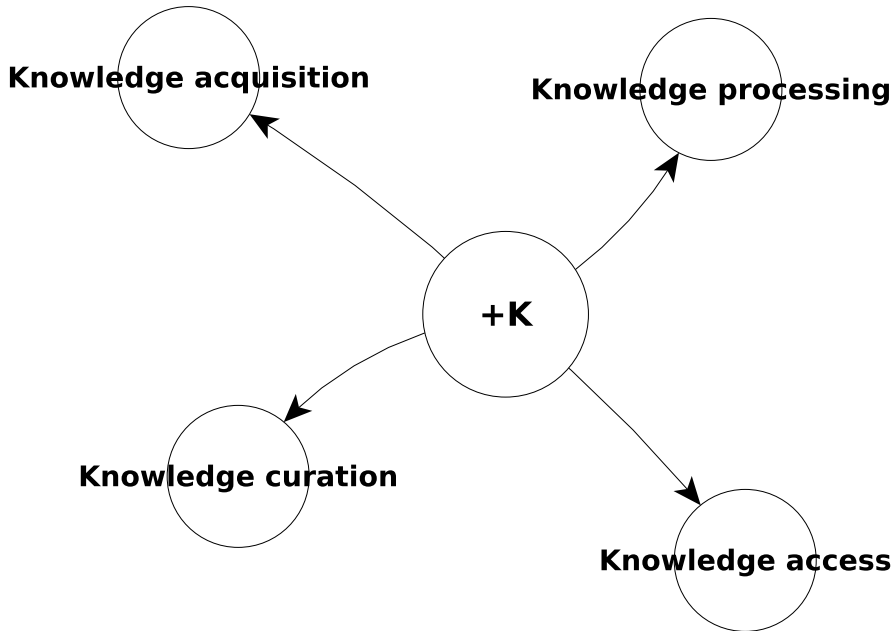
UNIVERSITY OF
EASTERN FINLAND

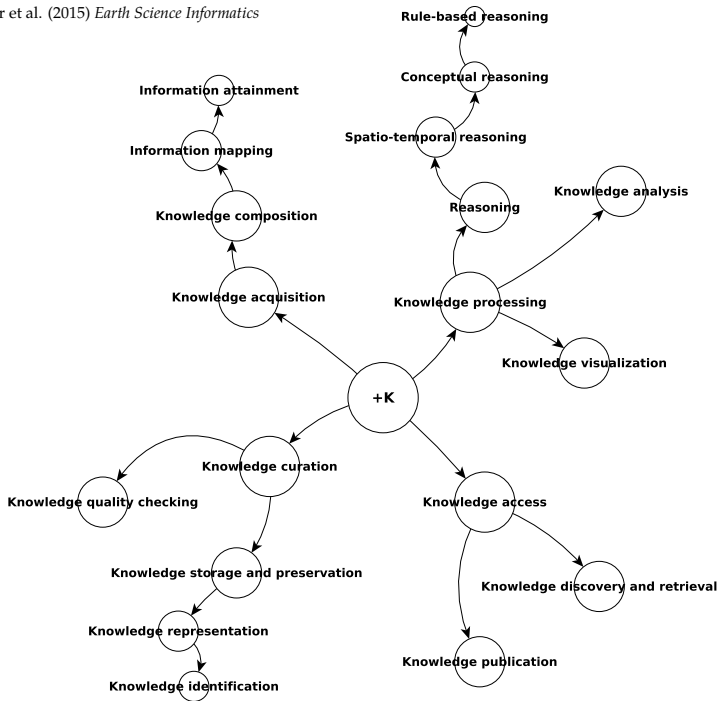




Can an environmental research infrastructure
help creating and managing information
and knowledge



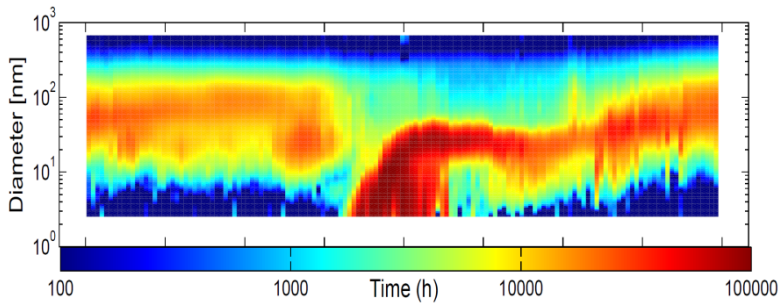




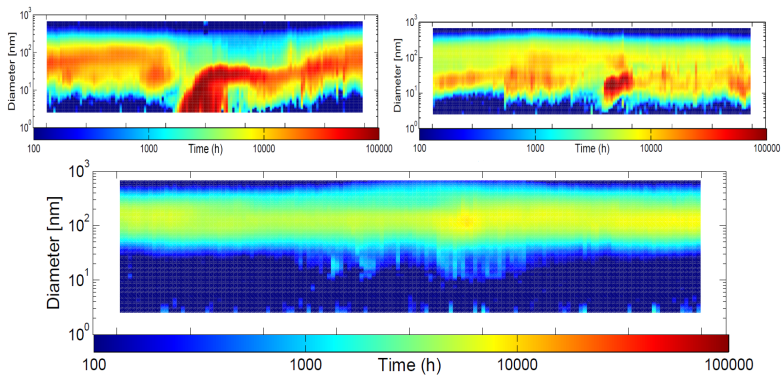
Example



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Hamed et al. (2007) *Atmos. Chem. Phys.*, 7, 355-376



Hamed et al. (2007) *Atmos. Chem. Phys.*, 7, 355-376

Result

Excel sheet showing the day and the event class

Day	Event class
15.06.2014	1
16.06.2014	0
17.06.2014	3
...	...

Knowledge-based ERI would ...

- ▶ Support the researcher in data analysis
 - ▶ Automated assessment of event class
 - ▶ Allow for curation (review) of its assessment
- ▶ Relate contextual information
 - ▶ Date, event class, location, plot, other event attributes
 - ▶ Create a knowledge object
- ▶ Represent knowledge object
 - ▶ According to a formal vocabulary (ontology)
 - ▶ Using suitable data formats (e.g. RDF)
- ▶ Manage and process knowledge objects
 - ▶ Persist knowledge objects (knowledge base)
 - ▶ Reasoning to infer new knowledge (rules)

Summary of the week so far ...

- ▶ Overview of CP
- ▶ Walk-through some experimental tools
- ▶ Checked existing ontologies
 - ▶ Adopt or take inspiration
 - ▶ Organization, time, space ontologies
- ▶ Hands on
 - ▶ Integration of a space ontology
 - ▶ Code review
- ▶ Talks during mornings
- ▶ An afternoon at GIS center

