

Virtual Hubs for Facilitating access to Geospatial Open Data in Open SDI

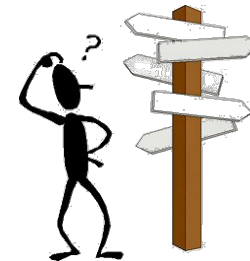
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○ **Interoperability:** geo OD are highly heterogeneous

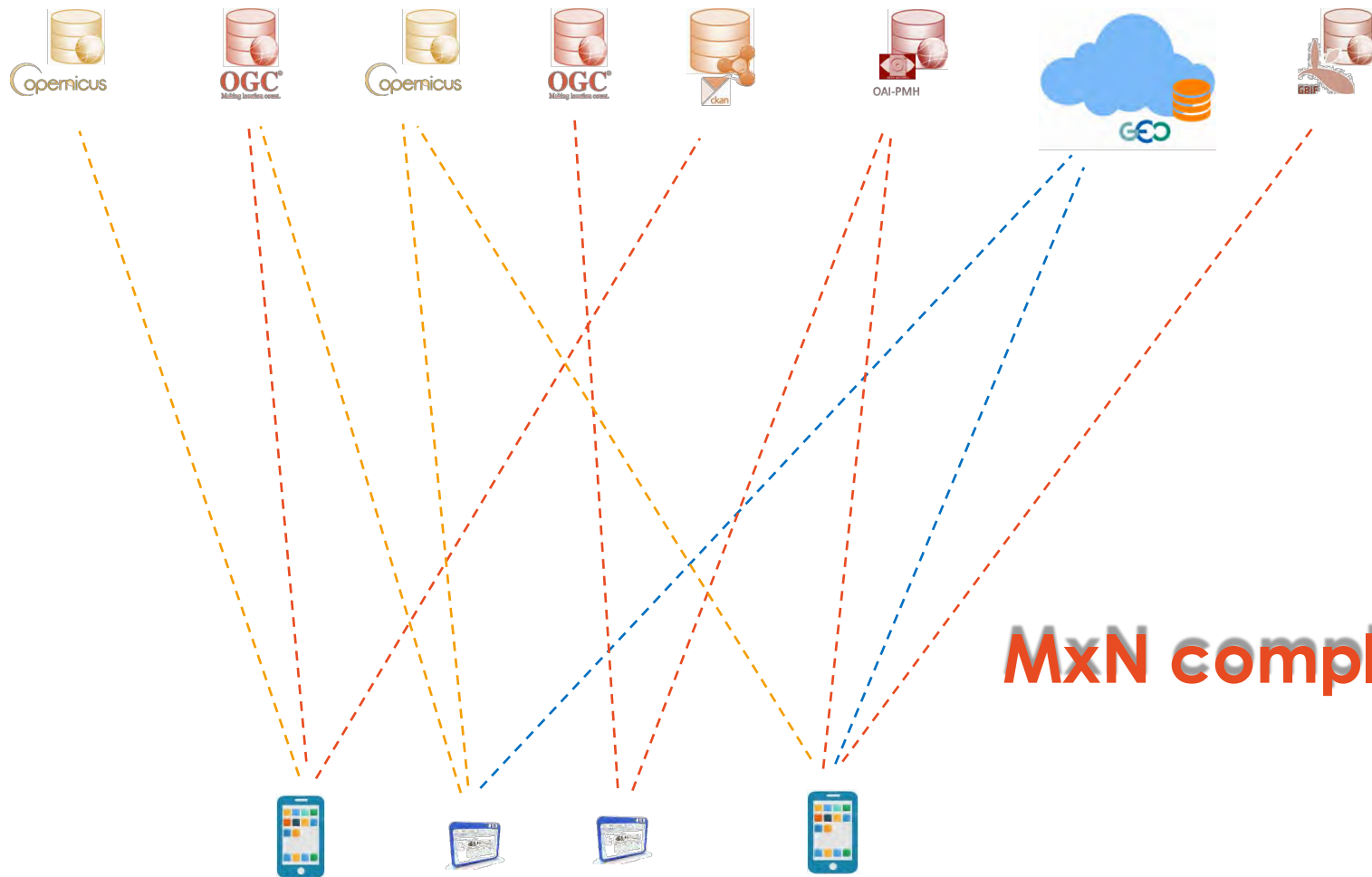
- Data/metadata model and formats
- Coordinate Reference Systems
- Data services specifications
- Quality and reliability
- Semantics

○ **Usability**

- Complex service interfaces
- Complex metadata/data models/encodings



N data sources



MxN complexity

M applications

○ Federation:

- Strong mandate for imposing and enforcing the adoption of a common specification.
- Example: INSPIRE

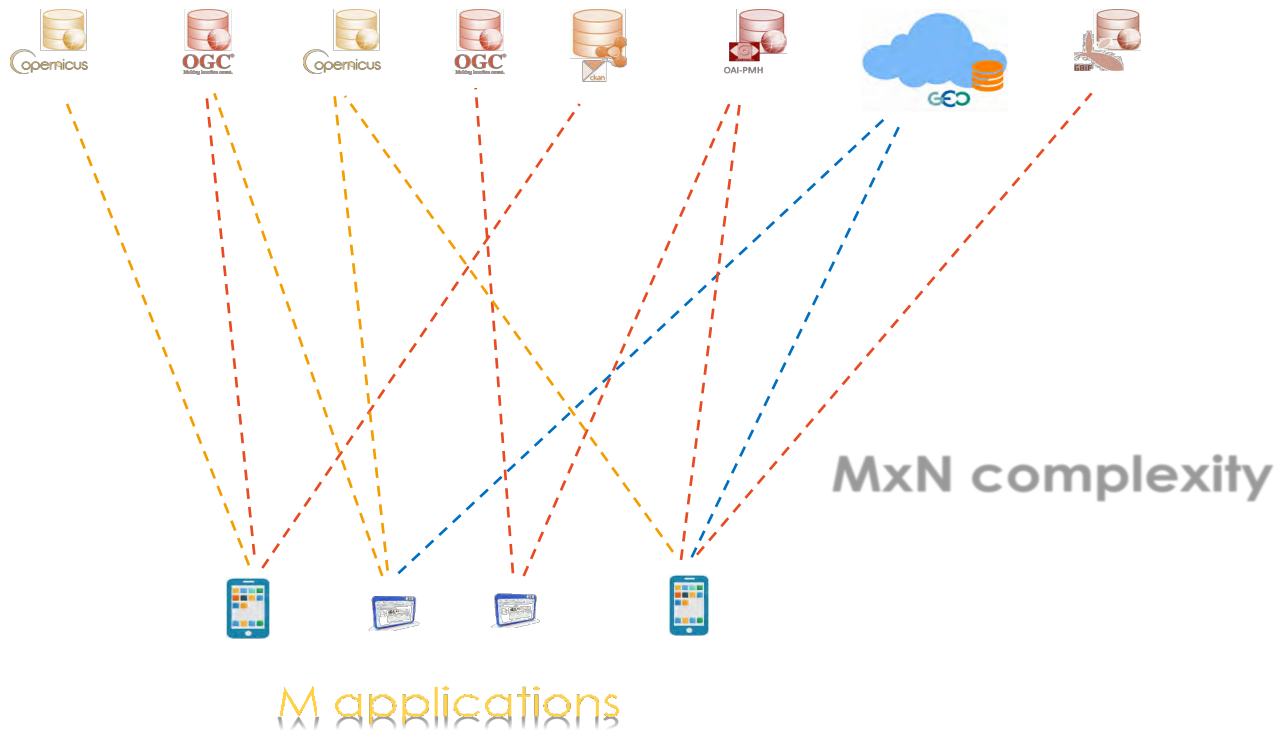
○ Brokering:

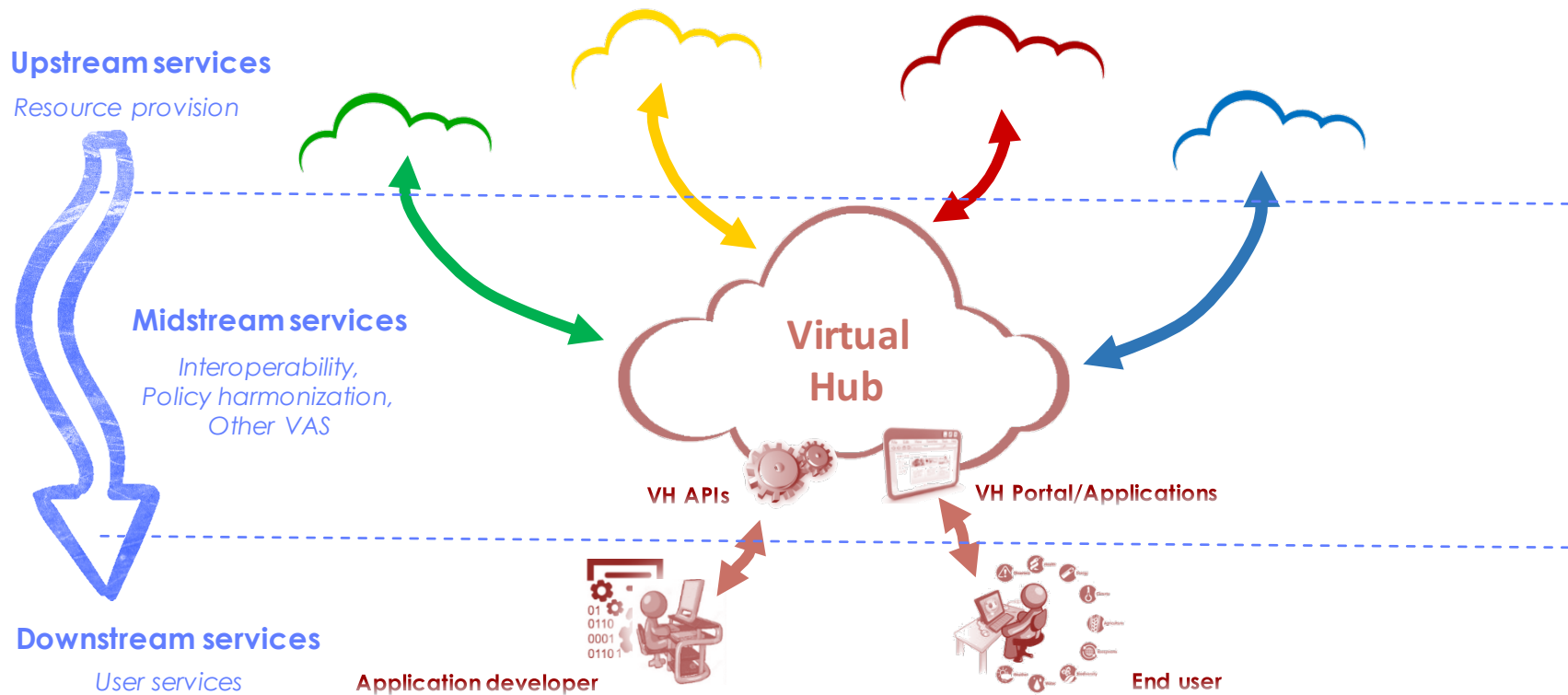
- No common specification is defined, specific components (brokers) mediate and harmonizes (try) existing systems
- The broker acts as a hub for publishing, discovering and accessing open data
- Non geospatial example: CKAN

Federation (in practice)

European NEtwork for Redistributing Geospatial Information to user Communities - Open Data

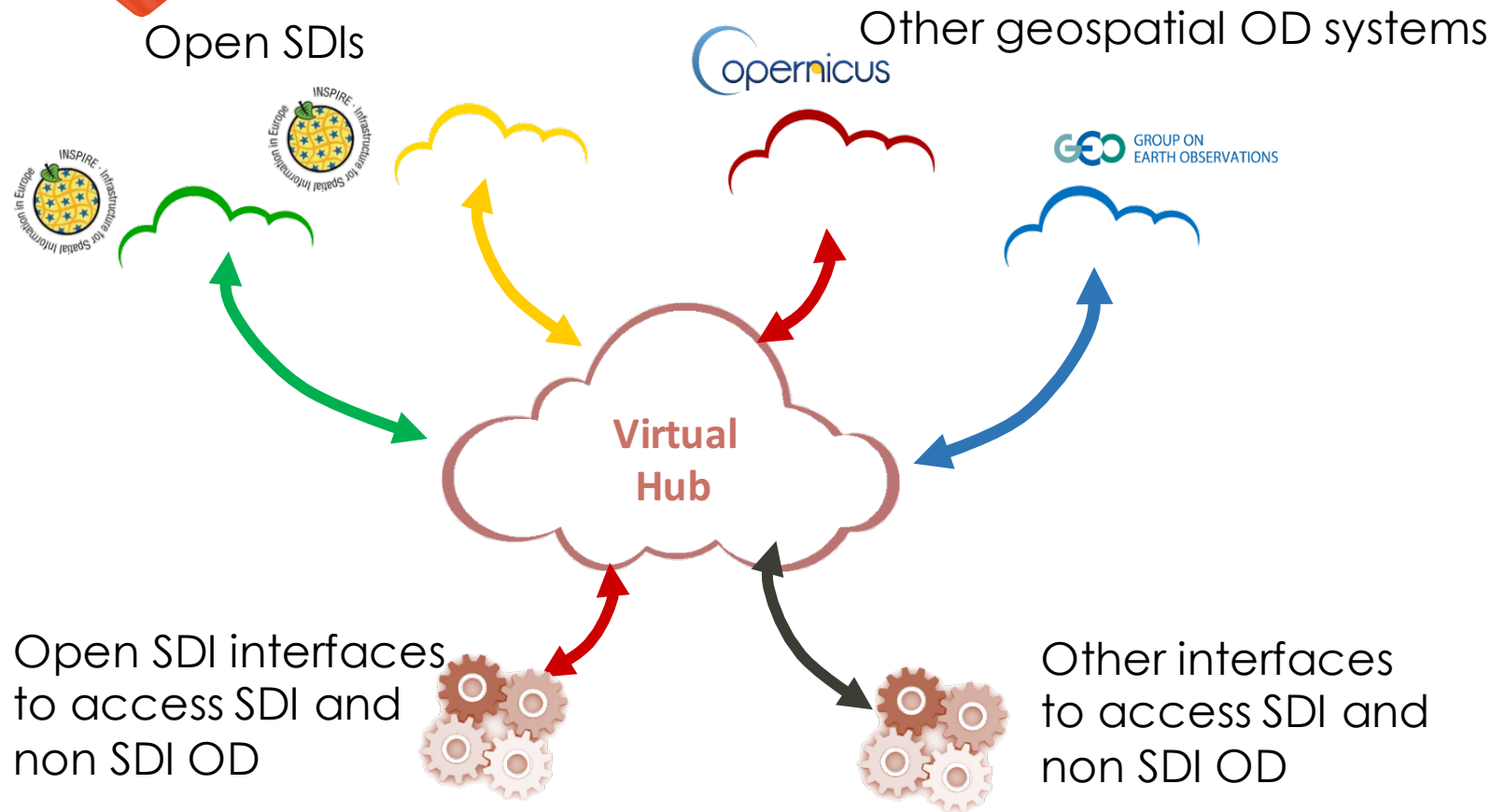
N data sources





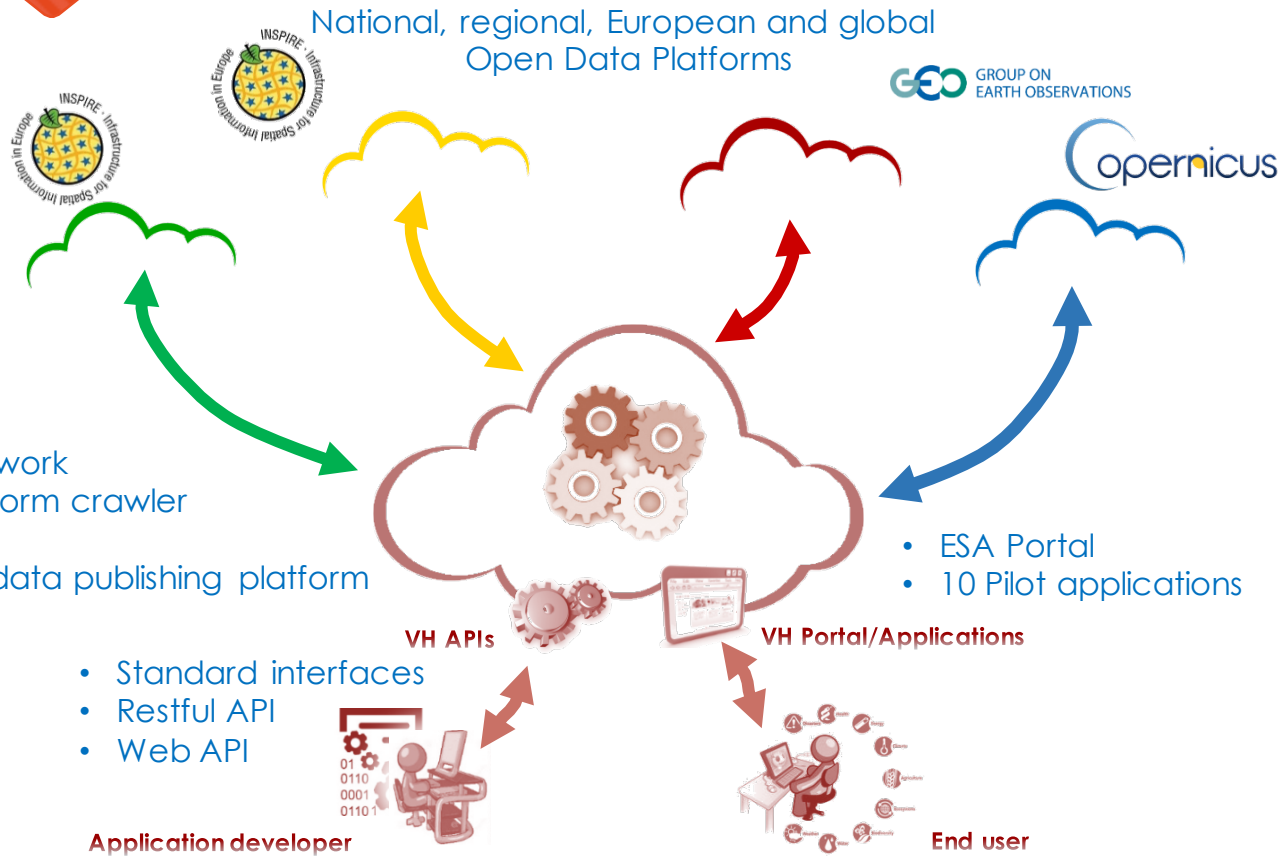
Why an open SDI may use a Virtual Hub?

European Network for Redistributing Geospatial Information to user Communities - Open Data

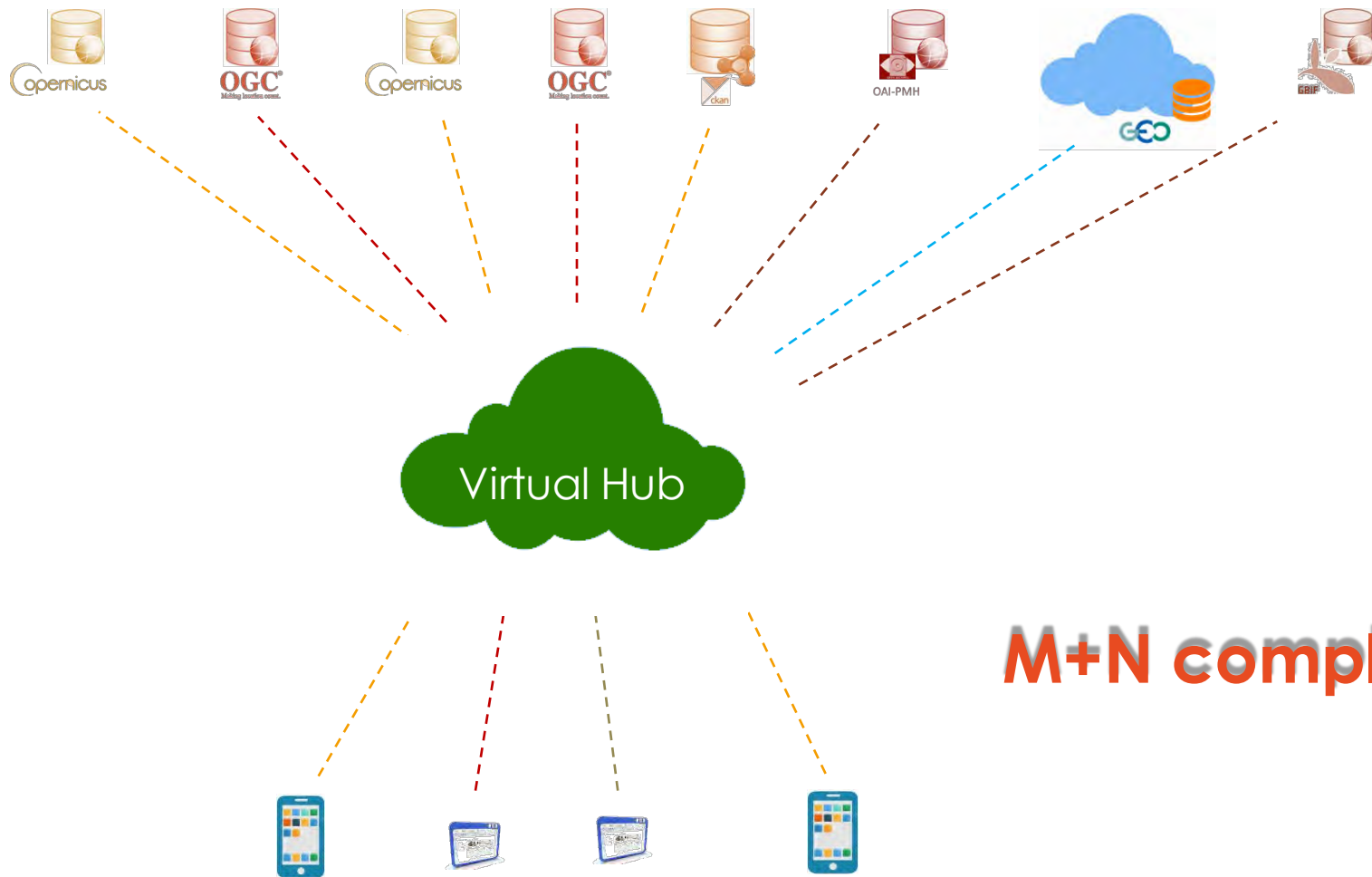


Example: ENERGIC OD Virtual Hub

European Network for Redistributing Geospatial Information to user Communities - Open Data



N data sources



M+N complexity

M applications

- Openness requires to hide our domain complexity
 - Virtual Hubs users are app devs
- Openness requires spatial must not be special for non geo-devs
 - Yes for final users!
- How → e.g. one SDI hub, multiple open APIs
 - Widespread geospatial specifications (e.g. OGC and ISO)
 - Lightweight specifications (e.g. OpenSearch)
 - APIs focused for rapid implementation in JS
 - And keep track of the evolving tech landscape (e.g. reactive applications)
- Legally open + not widely technically usable → closed in practice

- Interested in the topic?
 - <http://www.energic-od.eu/>
- And an INSPIRE workshop this afternoon!
 - *“Open Data Access and Harmonisation by Virtual Hub – ENER GIC OD solutions”*
 - Keynote speakers: Thomas Usländer, Dirk Frigne
 - Consortium speakers: Stefano Nativi, Paolo Mazzetti, Stefan Braumann, Erwan Bocher and Silvano De Zorzi
 - 14:00, room A