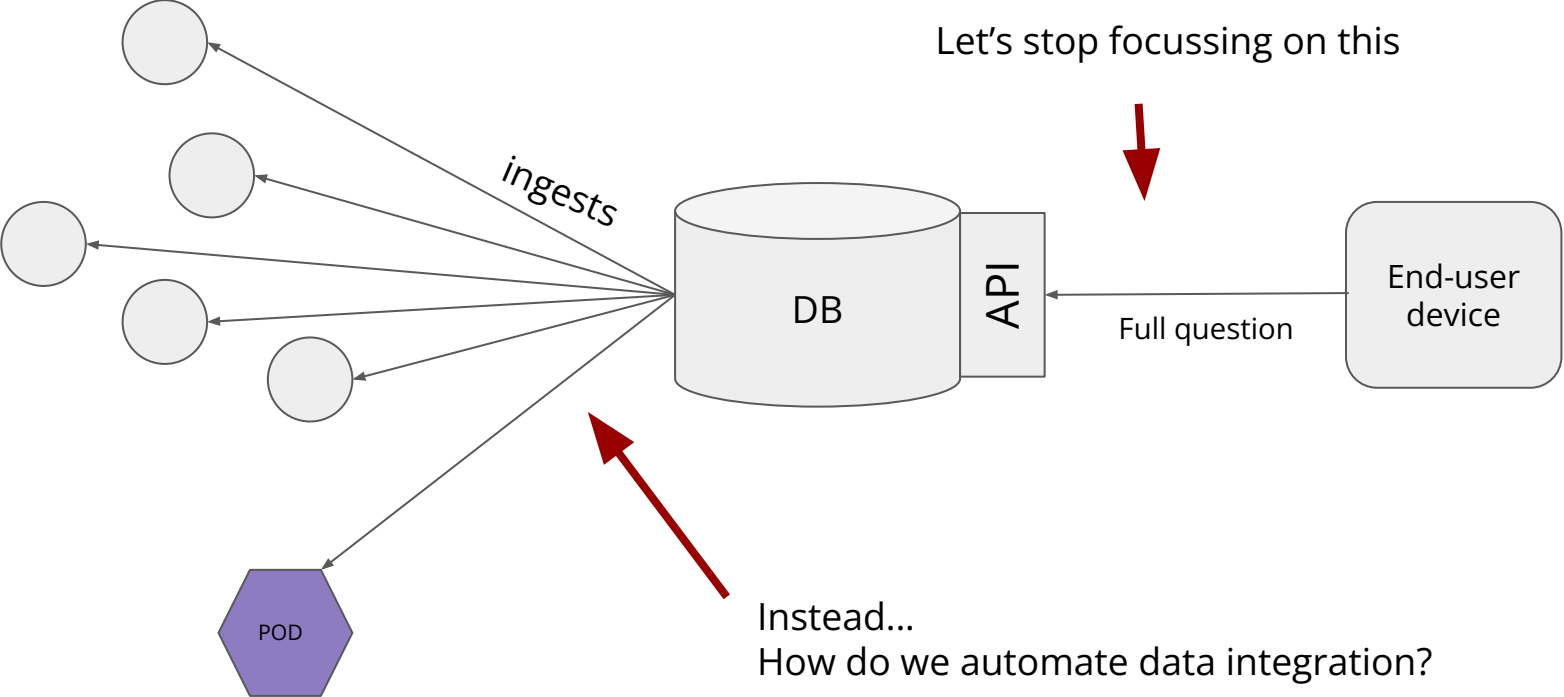


Interoperability across data spaces with Linked Data Event Streams



<https://pietercolpaert.be>

Querying data spaces

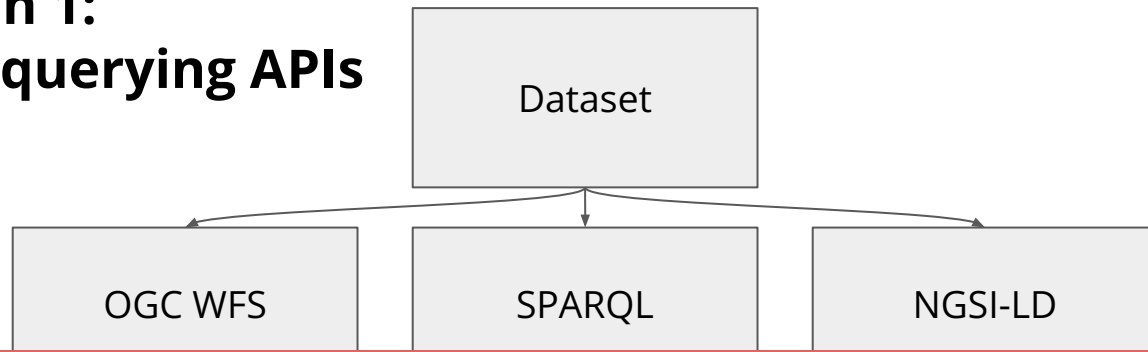


Given we have automated contractual agreements through GAIA-X...

And we use Linked Data with standardized vocabularies

What's the best API to share a dataset?

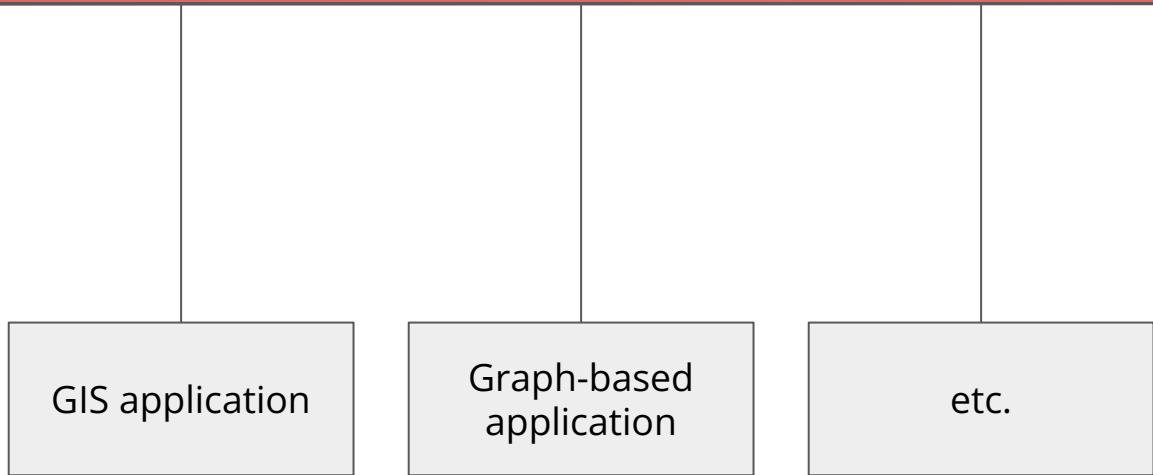
Approach 1: Hosting querying APIs



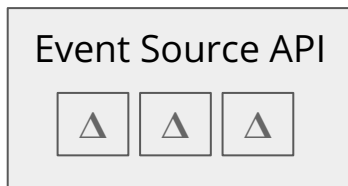
Maintenance hell

Publisher

3d parties



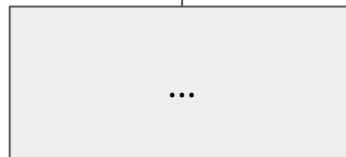
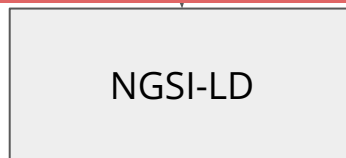
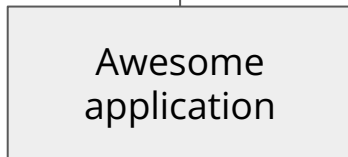
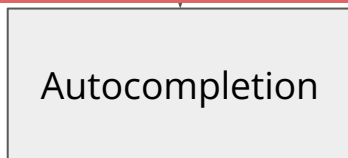
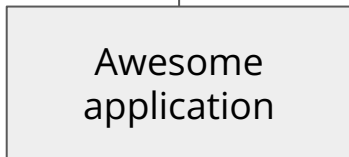
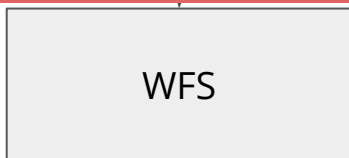
Approach 2: Replication and synchronisation



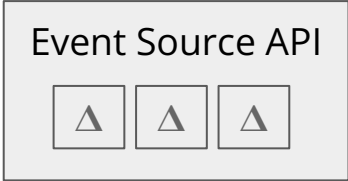
Publisher

It's impossible to replicate all data in the data space

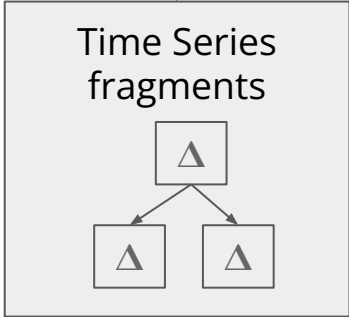
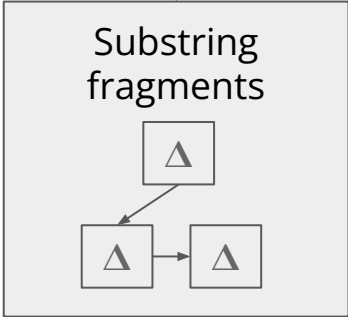
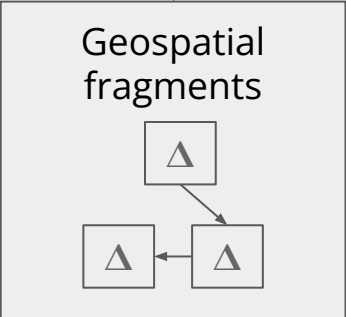
parties



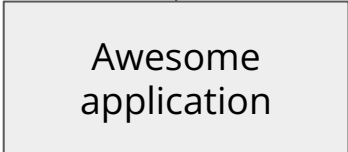
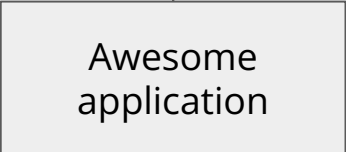
Let's use a layered approach with federated "indexes"



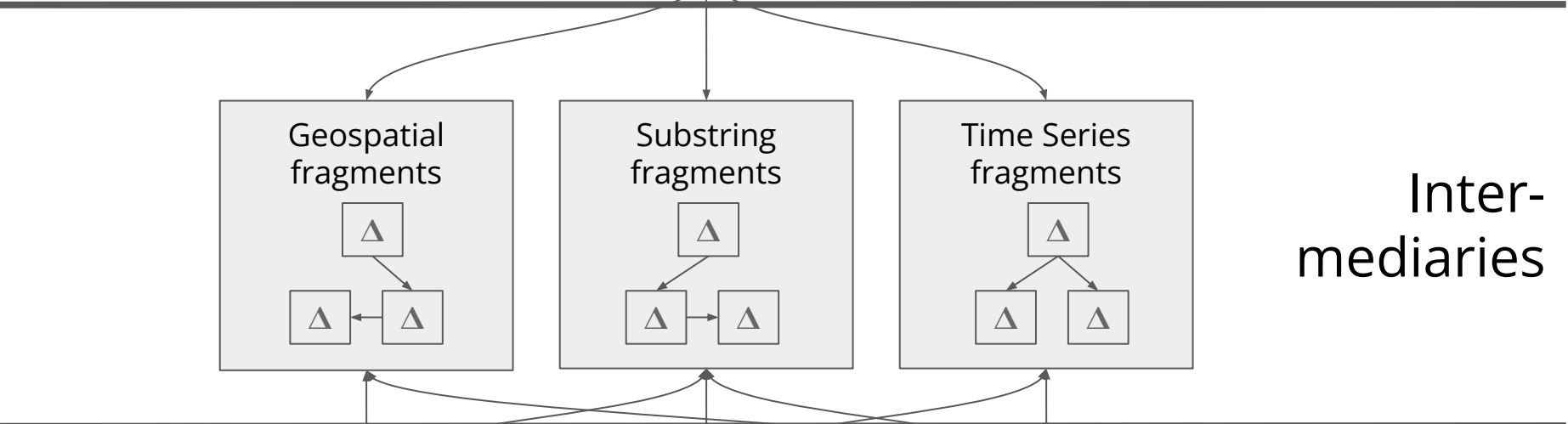
Publisher



Inter-
mediaries



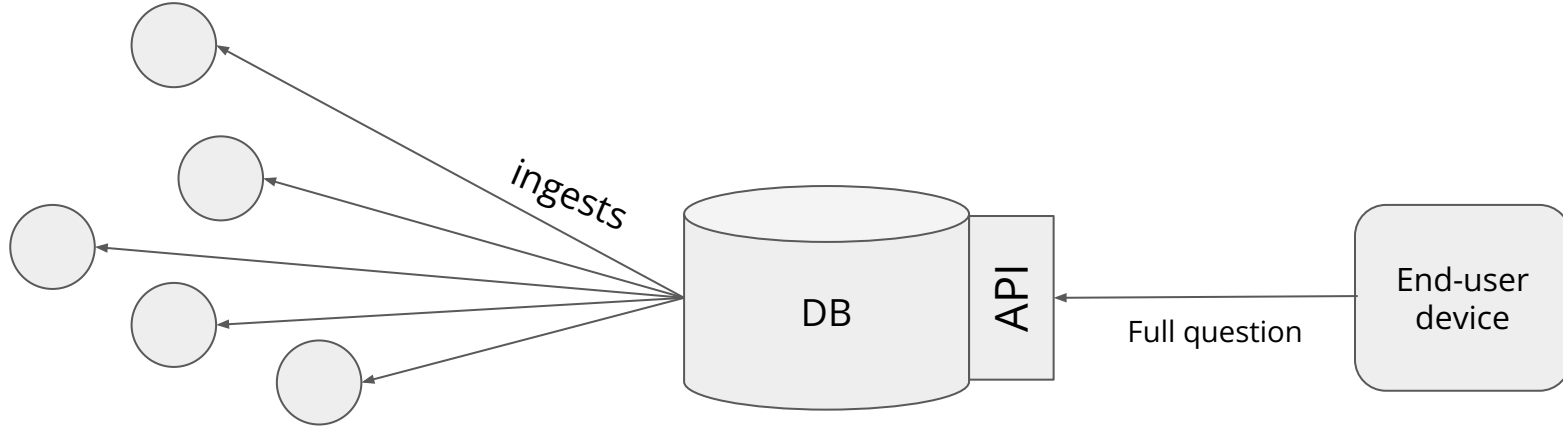
3d parties



Example from yesterday's Interoperable Europe Webinar: federated substring search

The image shows a Zoom meeting interface with five participants. The main content is a web browser displaying the 'interoperable europe' website. The page title is 'Federated address lookup service over official Base Registries'. A search bar is visible with the text 'Choose (or add) Address Base Registry'. A modal window is open, showing a map of 'Ter Platen 6' with the type 'Address'. The map includes a blue location pin and a list of nearby addresses on the right side, such as 'd/address/1018173', 'd/address/1274972', 'd/address/1852457', 'd/address/1702486', 'd/address/1852449', and 'https://data.vlaanderen.be/id/address/222431'. A white number '1' is overlaid on the search bar area.

This cannot be called querying a data space...



Querying data **spaces**: multiple servers and organizations collaborating

