Technical Update EMODnet Geology

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The European Marine Observation and Data Network (EMODnet) is financed by the European Union under Regulation (EU) 2021/1139 of the European Parliament and of the Council of 7 July 2021 establishing the European Maritime, Fisheries and Aquaculture Fund.

Review of the usability of our products

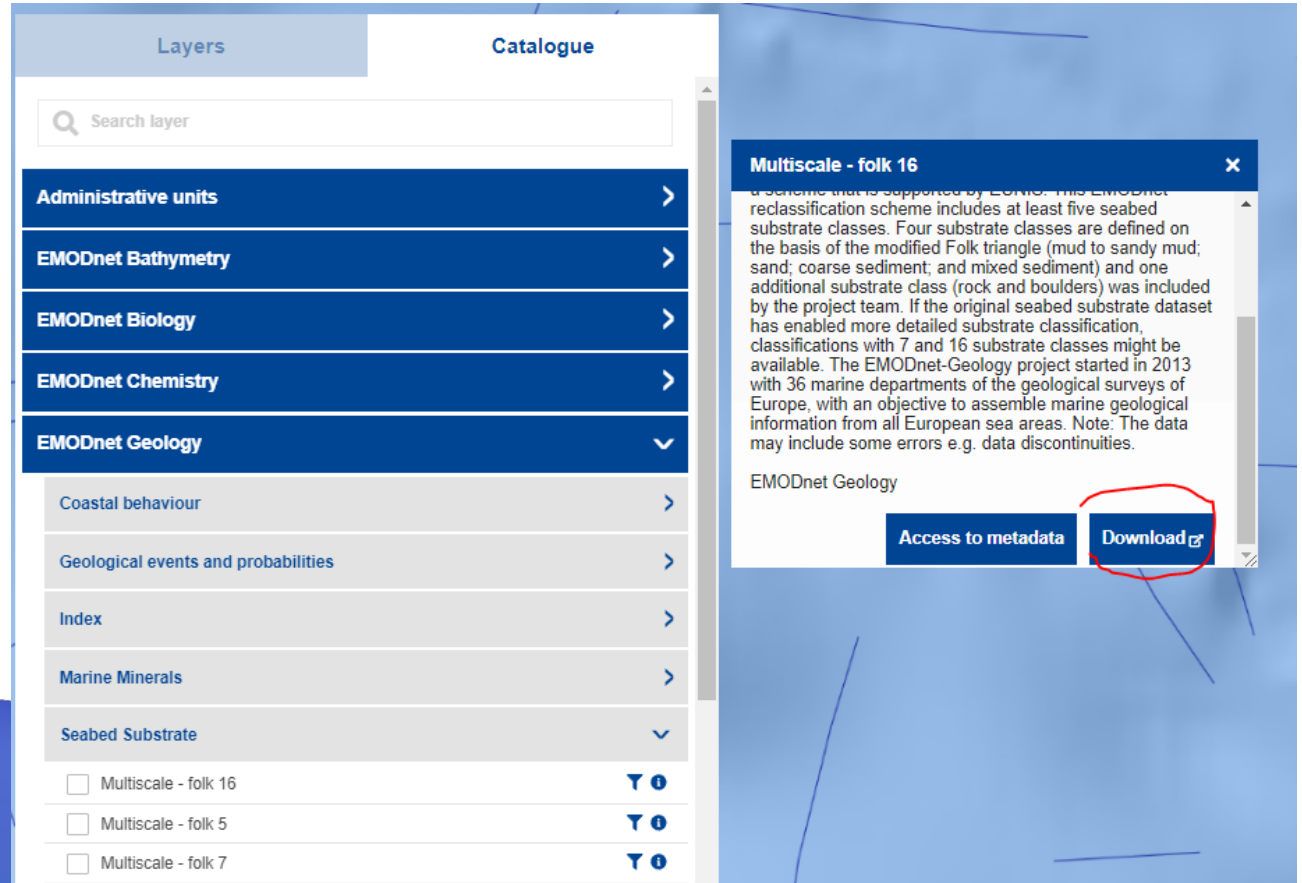
Based on the tickets we have received from the help desk the last year

- **Problems with download (EMODNET-1699, -1706, -1736, -1798)**
- **Problems with understanding data (EMODNET-1776, EMODNET-1837)**: Questions about the classification of substrate and data gaps
- **How to use WMS from QGIS (EMODNET-1746)**
- **Problems with Metadata (EMODNET-1643 - Coordinate axis order in your metadata)**

Problems with download (EMODNET-1699, -1706, -1736, -1798)

- The download problems were primarily due to our server being overloaded (high CPU and memory usage). It turned out that the overload was caused by the GeoServer struggling to handle the borehole layer after an update. The problems were resolved after trimming the geometries and reconfiguring the layer.
- We have since acquired a new server, which should also help alleviate performance issues (more on that later)

- Users generally had difficulty finding the download button that does not use WFS. Perhaps this download button should be more visible in the menu – or at the top of the box with the layer description, as it sometimes requires scrolling to see it.



Problems with understanding data (EMODNET-1776, EMODNET-1837)

These were questions regarding the classification of substrate and data gaps.
In the zip file that can be downloaded, there is a document that describes this.

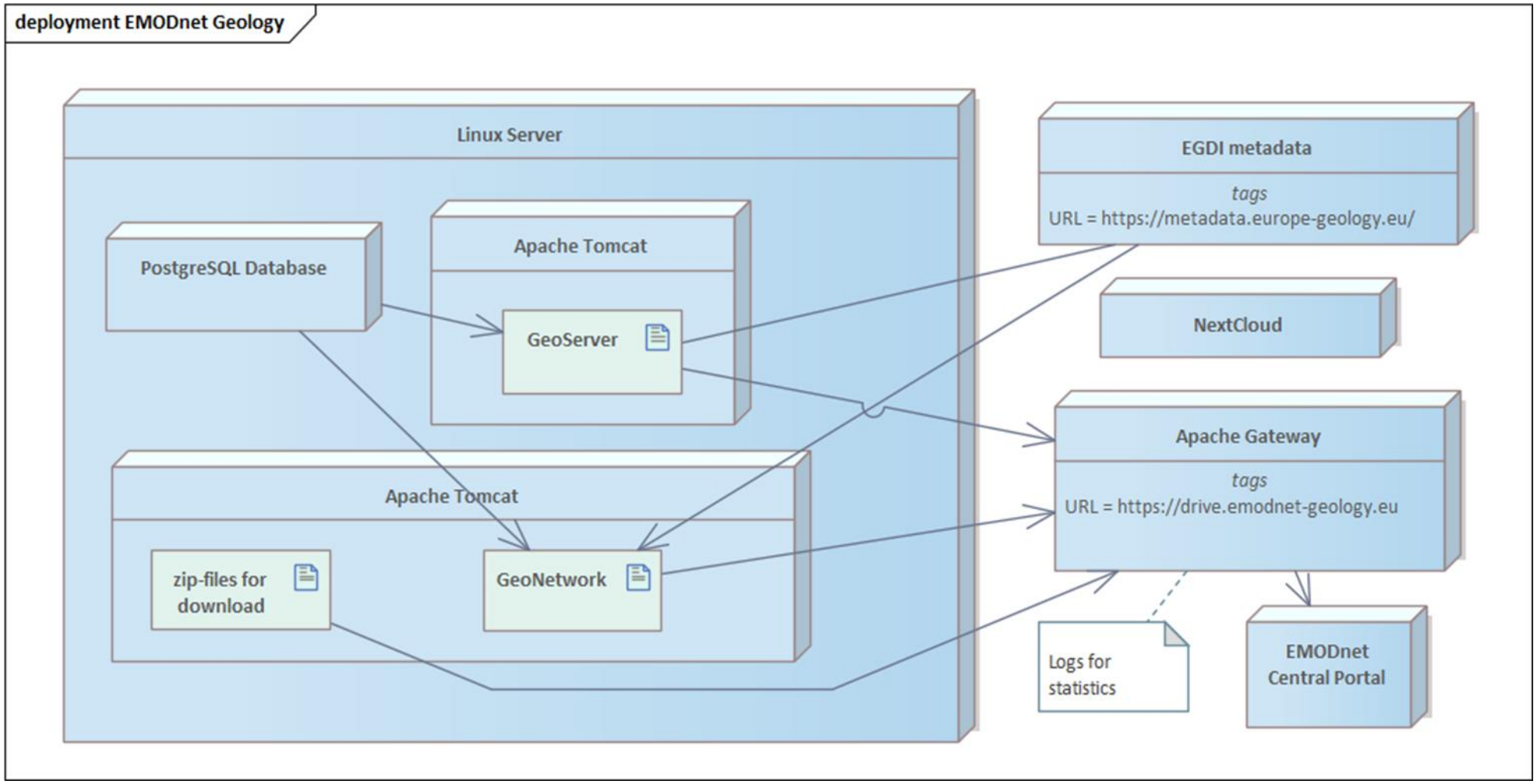
Not sure exactly how to solve this in a more user-friendly way

Maybe the metadata description should be more comprehensive – maybe the document should be made more visible – maybe it should be handled as it is now via the help desk.

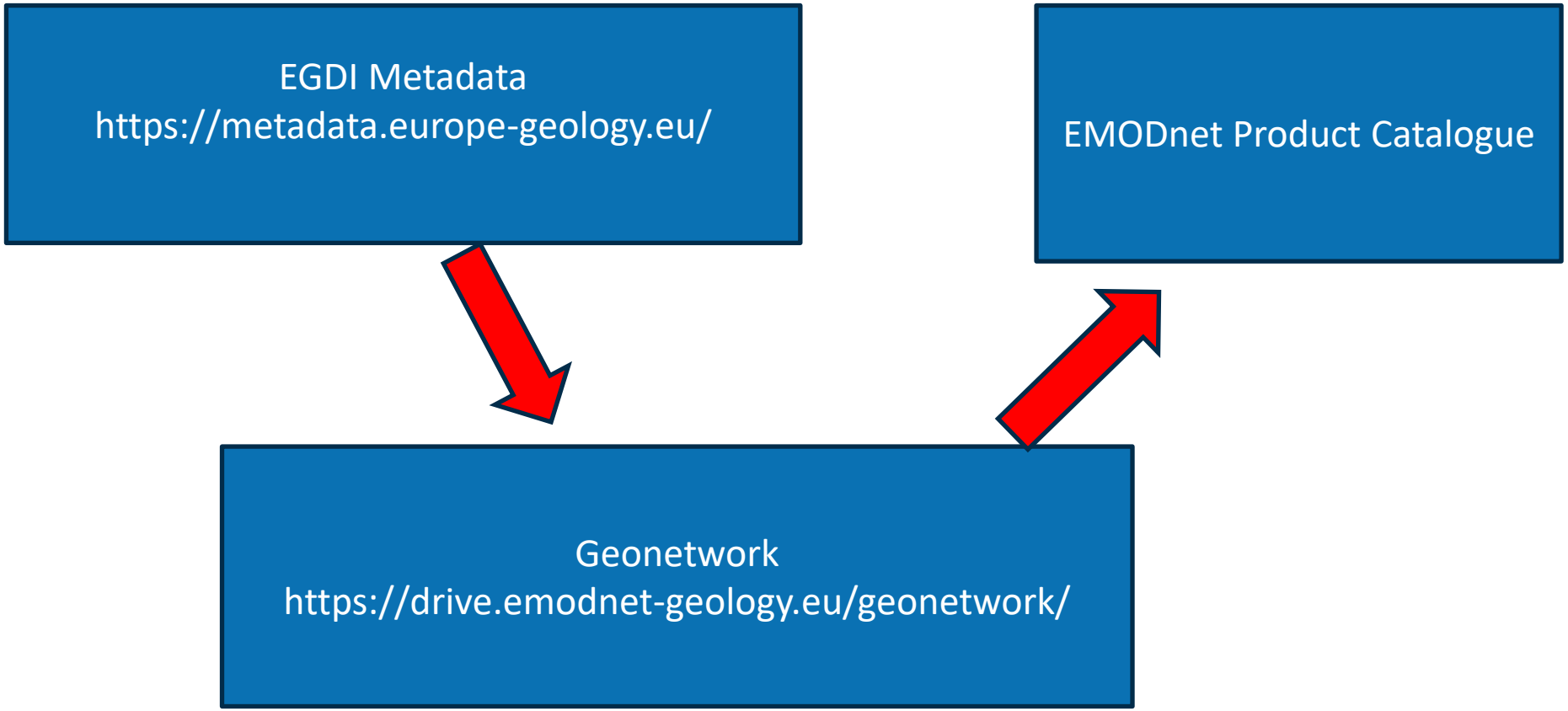
Problems with Metadata (EMODNET-1643 - Coordinate axis order in your metadata)

- According to the standard for SRID 4326, the first ordinate should be the y-axis. GeoServer swaps this around, and since we have been harvesting metadata from GeoServer, the axis order in our metadata is incorrect. As mentioned at the last TWG meeting, there are also other issues with our metadata flow, such as some information like “use condition” not being transferred.
- We are solving this by changing the data flow. We have done this in connection with being required to use a new server environment.

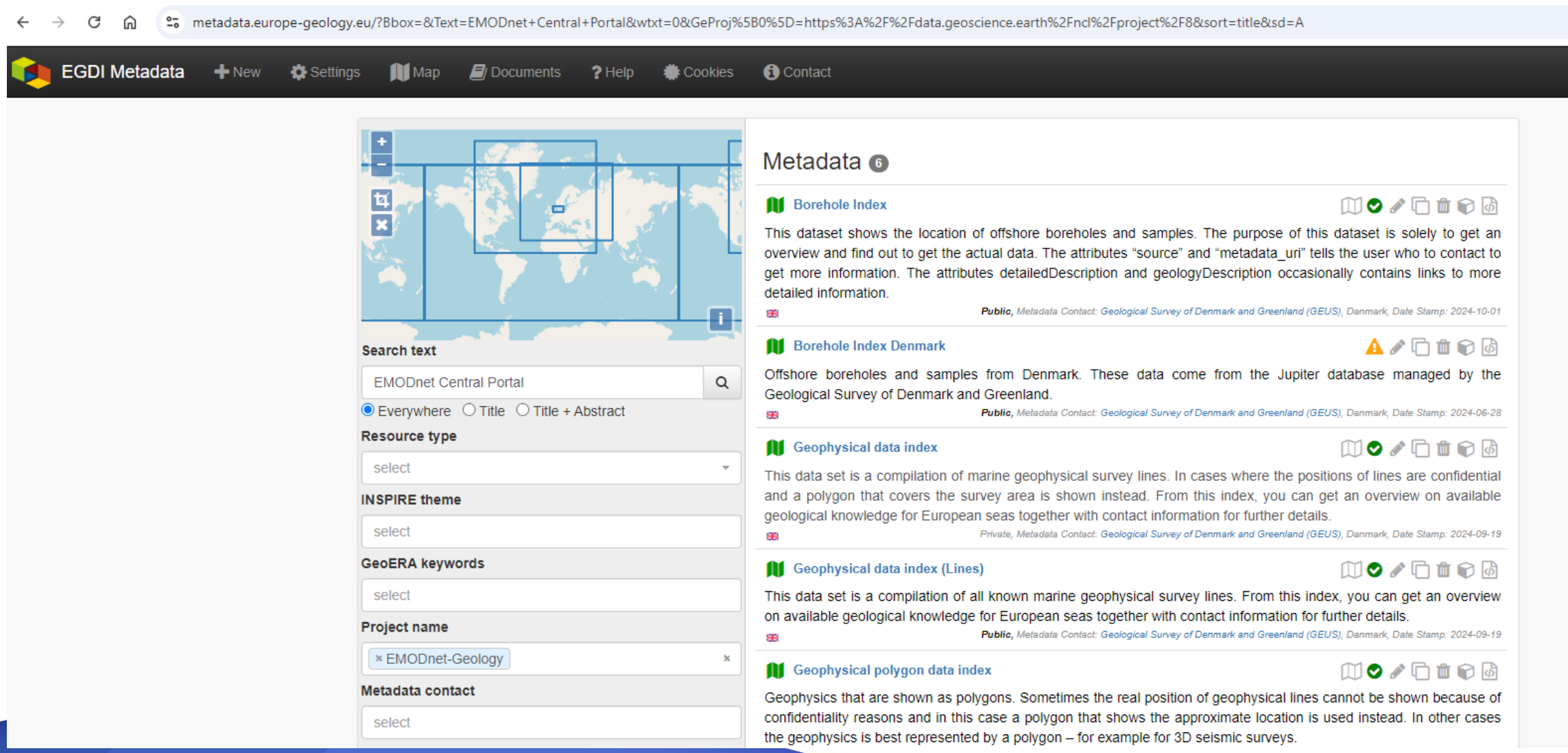
The new architecture



Metadata flow



Screendump EGDI Metadata



Usability Factors

- Usability Factors

- First of all: Fit for use
- Next:

- 1. Ease of learning. The system must be easy to learn for both novices and users with experience from similar systems.
- 2. Task efficiency. The system must be efficient for the frequent user.
- 3. Ease of remembering. The system must be easy to remember for the casual user.
- 4. Understandability: The user must understand what the system does.
- 5. Subjective satisfaction. The user must feel satisfied with the system.

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