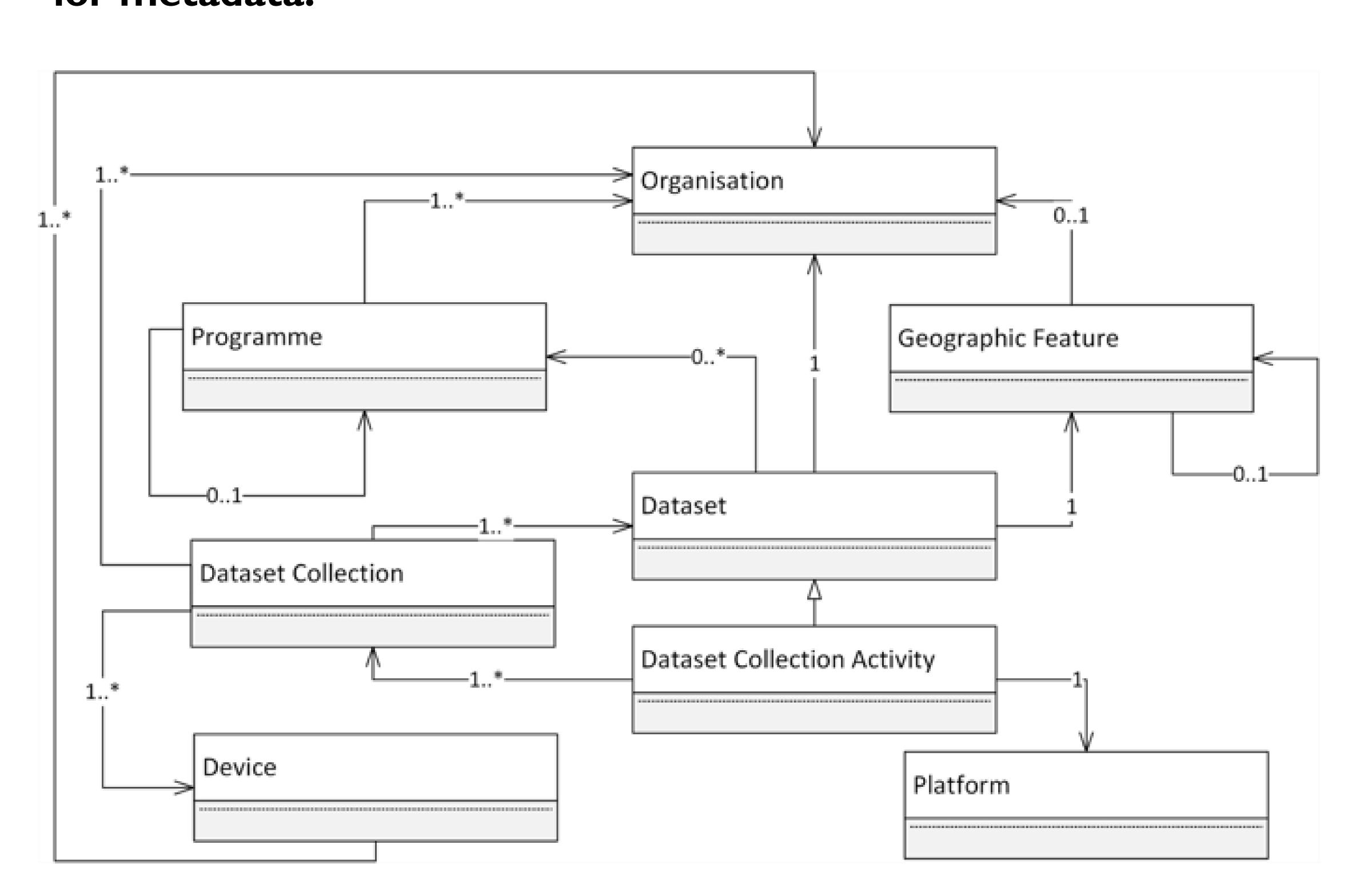
A Modular Approach to Cataloguing Oceanographic Data

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The ability to access and search metadata for marine science data is a key requirement for answering fundamental principles of data management (making data Findable, Accessible, Interoperable and Reusable) and also in meeting domain-specific, community defined standards and legislative requirements placed on data publishers. Therefore, in the sphere of oceanographic data management, the need for a modular approach to data cataloguing which is designed to meet a number of requirements can be clearly seen.

This modular approach has been adopted by the Marine Institute Ireland in developing a data cataloguing system to meet the needs of legislative requirements, including the European Spatial Data Infrastructure (INSPIRE) and the Marine Spatial Planning directive. The data catalogue described here makes use of a metadata model focused on oceanographic-domain, which applies extensive use of controlled vocabularies to ensure consistency and interoperability, and comprises a number of key classes (fig. I—see doi:10.1007/s12145-020-00445-w for more details). The Data Catalogue has been developed using a Drupal based User Interface (Drupal is an open source content management system) which exports metadata for datasets and services in ISO 19115/19139 based XML format (fig. 2) in compliance with the INSPIRE implementing rules for metadata.





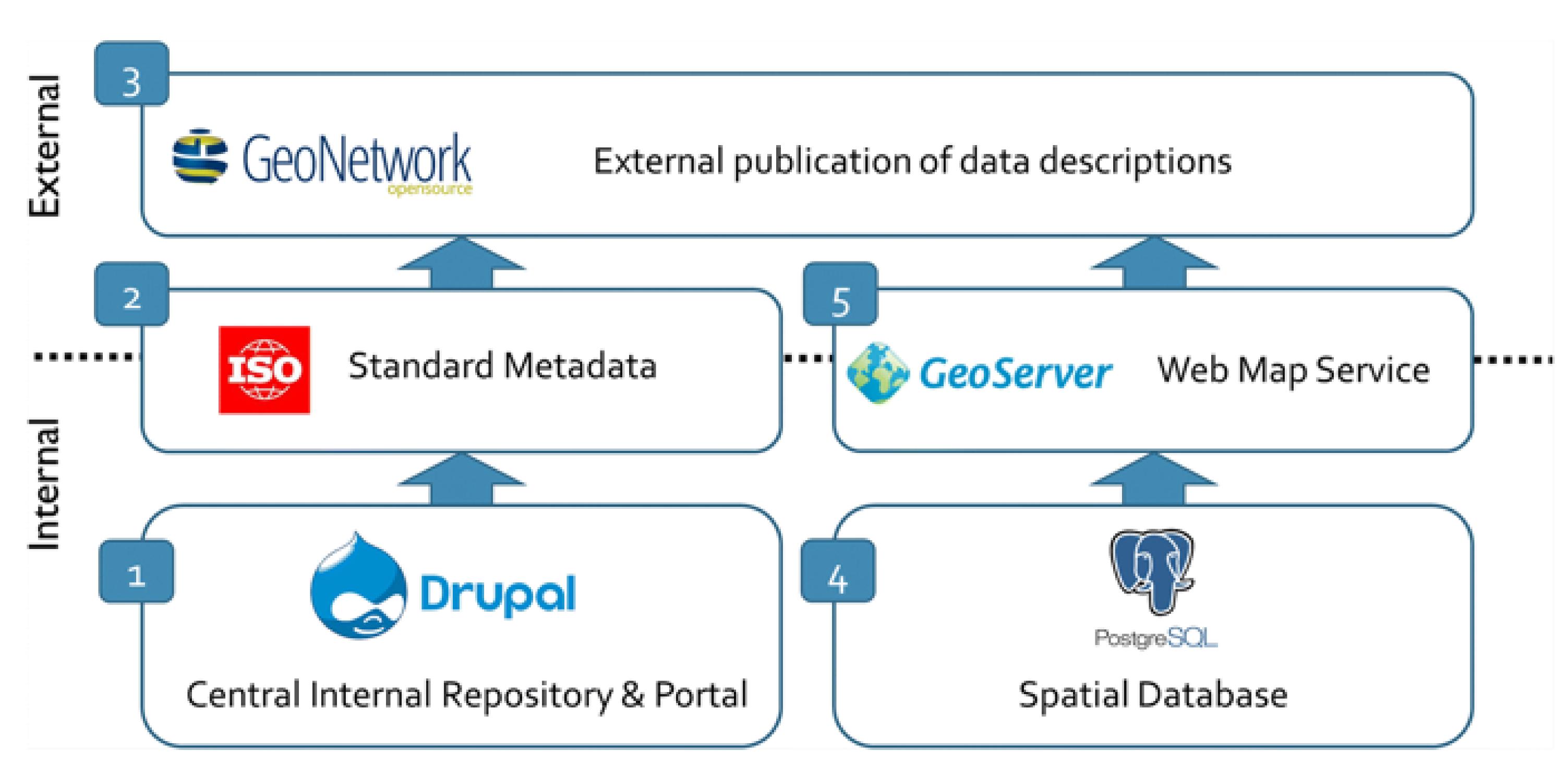


Figure 2:A high-level view of the adopted system architecture

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References

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