VAMDC Note

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The VAMDC keeps a permanent trace of all the data extracted from its infrastructure through its Query Store (<https://cite.vamdc.eu>). This component implements the “RDA data-citation recommendation” and, for each query processed by the infrastructure, stores:

* A PID for the query (DOI and an internal uuid)
* The query used for extracting the data, with its processing timestamp,
* The PID of the repository producing the data by answering the query,
* The set of bibliographic references used for compiling the result data,
* The output data, formatted using the XSAMS standard.

Thus, a VAMDC query extraction may be assimilated to a digital object (PID + underlying metadata + state metadata). For this reason, the Query Store may constitute the basis technical element for implementing DOIP standards and capabilities over VAMDC.

Our experience on research data and FAIR principles shown the crucial need for assessment of data-provenance, data-authenticity and scientific quality. These issues may be addressed within a DO ecosystem with a generic scientific data evaluation platform built using DO interoperability facilities: a dedicated AI may monitor all the DO artefacts and suggest human intervention for those who present a potential problematic profile.

Also, based on DO facilities, we may consider tools for certifying DO provenance and prevent plagiarism.

Finally, by linking together these two last suggestions, we may foresee a system where an error tracker system will automatically (and recursively) generate warning addressed to all the entities which re-used the “error-DO” for producing new DOs.