

VA ENTERPRISE DESIGN PATTERNS INTEROPERABILITY AND DATA SHARING DATA INTEGRATION WITH SWT



Office of Technology Strategies (TS)
Office of Information and Technology (OI&T)

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EXECUTIVE SUMMARY

Scope

This Enterprise Design Pattern (EDP) provides an enterprise-level view of the “As-Is” and “To-Be” capabilities relevant to Semantic Web Technologies (SWT) used in Department of Veterans Affairs (VA) applications and standard processes. The document will refer to, rather than duplicate, lower-level solution guidance associated with these capabilities. This EDP provides guiding principles and best practices that support the adaptation of SWT standards for VA systems and services. These standards enable dynamic integration of data – located in varied sources – by leveraging explicit, standardized, machine-readable linkages among entities.

Business Need

Adoption of SWT standards will improve interoperability among VA’s different systems supporting diverse business needs. Semantic linkage of datasets and machine-readable data processing may secure flexible and dynamic data integration for VA. Office of Information & Technology (OI&T) supports business needs by establishing official standards for interoperable data exchanges to overcome the following organizational barriers: the patchwork of data capabilities, including legacy data management systems, do not adequately meet emerging data needs; analysts must resort to ad-hoc, labor-intensive processes for emerging data needs; and the “little data” capabilities within VA offices are not plugged into enterprise-level “big data” capabilities.

Approach

This EDP supports SWT-driven data integration and interoperability that can be applied throughout VA, including: promoting application of SWT across all Lines of Business (LOB); aligning SWT applications with organizational goals and needs; reviewing existing VA data sources; selecting data processing strategies; aligning semantic implementations with data sources; and implementing pilot SWT projects followed by extension of capacity to meet needs.

Enterprise Design Patterns (EDPs) are developed by TS in coordination with internal and external subject matter experts and stakeholders. An EDP is a reusable capability guidance document that identifies best practice approaches and resources for achieving VA IT strategic objectives. The EDP Team uses industry trends and innovations; enterprise architectural standards; and guiding principles for capabilities and constraints to improve efficiency and effectiveness and define solutions to reoccurring technical problems. The EDP helps guide the design of IT systems and services by VA project teams.