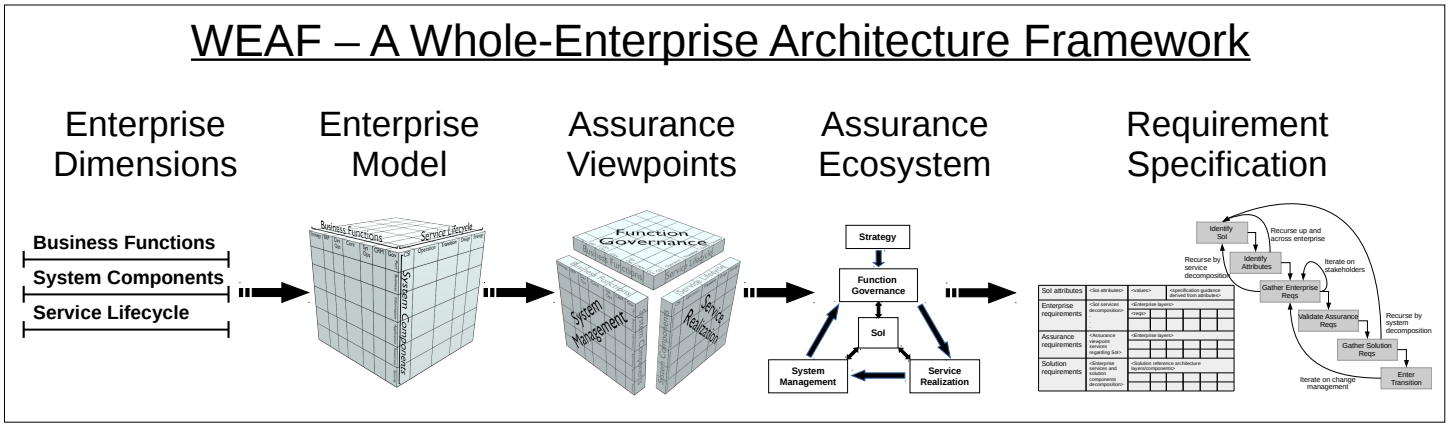
A Whole-Enterprise Architecture Framework: Overview

An enterprise is a complex network of people, processes, and resources that change continuously. The capabilities required to understand, operate, and control an enterprise are a complex intersection of expertise domains. Enterprise architecture (EA) has arisen as a discipline to manage the complexity of representing an enterprise and its parts through well defined viewpoints covering stakeholder concerns. EA methods, artifacts, and domain specific reference architectures are being standardized, but there is no standard for a unified model of the whole enterprise.

Even with a unified enterprise model, assurance in the face of complexity is a key concern for realizing business outcomes. Coverage and traceability of requirements have been identified as major challenges to providing assurance. Assurance methods and artifacts are being standardized, but there is no standard for an assurance ecosystem that covers assurance across an enterprise and supports traceability.

For any business entity of interest (SoI), requirement specification is the basis for defining assurance of SoI outcomes. A requirement specification is the bridge connecting business objectives to concrete instances. Requirement specification methods and artifacts are being standardized, but enforcing coverage and traceability is problematic without a common model of the enterprise.

A unified enterprise model is proposed within a framework (WEAF) providing assurance viewpoints while enforcing coverage and traceability through structured requirement specification.



Enterprise dimensions are defined to provide coverage of “people, processes, technology” and lifecycle. Existing standards are aligned with the dimensions to support an enterprise’s business practices in a modular fashion. The dimensions are assembled into a coordinate system used to construct an enterprise model able to represent all business entities through their life history.

Representation viewpoints are derived via projections and restrictions of the dimensions. Projections along each dimension define canonical assurance viewpoints for the model: function governance, system management, and service realization. Business functions corresponding to the assurance viewpoints are used together with strategy to build an assurance ecosystem encompassing assurance concerns for any business entity.

The framework is completed with a requirement specification template and methodology. These capture SoI attributes and requirements, support coverage of strategic and stakeholder concerns, and enable ubiquitous traceability. From this common basis, automated exchange of requirements is possible.

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