

Preface

Enterprises, from small to large, evolve continuously. As a result, their structures are transformed and extended continuously. Without some means of deliberate control, such changes are bound to lead to an overly complex, uncoordinated and heterogeneous environment that is hard to manage, while at the same time resisting future changes in *desired* directions. Enterprise architecture aims to provide such controls.

Key concepts in enterprise architecture include stakeholders and their concerns, architecture principles, models, views and frameworks. While most of these concepts have obtained ample attention in research, the concept of architecture principles has not been studied much yet. More specifically, architecture principles provide a means to direct transformations of enterprises. As a consequence, it can be argued that architecture principles form the cornerstones of any architecture. In this book, we therefore specifically focus on the role of architecture principles. It provides both a theoretical and a practical perspective on architecture principles. As such it is targeted at students and researchers, as well as practitioners who have the desire to understand the foundations underlying their practical work.

The theoretical perspective involves a brief survey of the general concept of *principle* as well as an analysis of different flavors of principles. A key distinction is made between *scientific principles* and *normative principles*. *Scientific principles* are laws or facts of nature and form the fundamental truths that one can build upon. *Normative principles* are rules of conduct that guide/restrict behavior. While scientific principles hold “naturally”, normative principles need explicit “enforcement”. Architecture principles, being the core topic of this book, are regarded as a specific class of normative principles that influence/direct the design of an enterprise (from the definition of its business to its supporting IT).

The practical perspective on architecture principles is concerned with an approach for the formulation of architecture principles, as well as their actual use in organizations. To illustrate their use in practice, several real life cases are discussed. Furthermore, the book includes an appendix, which provides a discussion on how to use the suggested approach for the formulation and application of architecture principles in the context of The Open Group’s TOGAF, as well as a catalogue of example architecture principles.

Architecture Principles

The Cornerstones of Enterprise Architecture

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