Chapter 17 Conclusion



Kazem Haki 💿, Bas van Gils 💿, and Henderik A. Proper 💿

The constituent chapters of this part seek to make advances in prescriptive EA.

As outlined in the introduction of this part, to contribute and give direction to the discussion of whether and how enterprise architecture (EA) can be employed to deal with digital transformation's associated challenges, we first need a thorough understanding of EA's theoretical foundations. While the notion of EA comprises both descriptive and prescriptive aspects (Haki & Legner, 2021), existing research predominantly focuses on descriptive EA and leaves the prescriptive aspect somewhat underserved. The set of chapters in this part seek to make advances in prescriptive EA (i.e., architecture *principles*), with a specific focus on EA in the era of digitalization and digital transformation.

Chapter 14 makes us aware of the fact that immaturity in understanding and in the establishment of architecture principles is not only reflected in research. But also, in practice, organizations employ diverging approaches to architecture principles and disregard the criticality of explicitly specifying architecture principles' rationales and implications. Chapter 15 discusses the necessity of a new approach to EA due to digitization and the exposure of contemporary organizations to new drivers such as *customer centricity*, *data-driven service innovation*, and *collaborative value generation*. To this end, this chapter raises the need for new architecture principles in organizations as well as new ways through which architecture principles are

K. Haki

B. van Gils

H. A. Proper (⊠) Institute of Information Systems Engineering, TU Wien, Vienna, Austria e-mail: henderik.proper@tuwien.ac.at

Campus Battelle, Bâtiment B, Haute Ecole de Gestion de Genéve, Geneva, Switzerland e-mail: kazem.haki@hesge.ch

Strategy Alliance, Amersfoort, the Netherlands e-mail: bas.vangils@strategy-alliance.com

[©] The Author(s), under exclusive license to Springer Nature Switzerland AG 2023 H. A. Proper et al. (eds.), *Digital Enterprises*, The Enterprise Engineering Series, https://doi.org/10.1007/978-3-031-30214-5_17

applied. Finally, in elaborating on how architecture principles help in addressing the associated challenges of digital transformation, Chap. 16 employs a set of architecture principles (categorized in *internal analysis, economic analysis,* and *integrative analysis*) to derive a framework for mobile technology-enabled digital transformation.

To conclude, our argumentation for EA to address digital transformation's challenges is as follows. In dealing with hyper-turbulent and dynamic environments, EA needs to be sufficiently *agile* to constantly adapt IT landscapes to ever-changing organizational and technological requirements. While such an adaptation process is required to survive and thrive in the environment, it also bears the risk of making architecture's evolution inherently emergent and its outcomes inevitably unpredictable (Haki et al., 2020). As such, besides architecture requiring a *plastic core* (*descriptive EA*) to evolve dynamically with environmental changes, it requires a set of principles as a *robust core* (*prescriptive EA*), in order to purposefully guide its evolution (Haki & Legner, 2021). Thus, architecture principles are crucial to ensure the *guided*, instead of entirely emergent, architecture evolution to obtain EA's predefined value and outcomes.