Establishing and maintaining a coherent enterprise architecture is clearly a complex task, because it involves many different people with differing backgrounds using various notations. In order to get to grips with this complexity, researchers have initially focused on the definition of architectural frameworks for classifying and positioning the various architecture descriptions with respect to each other. A problem with looking at enterprise architecture through the lens of an architectural framework is that it categorises and divides architecture descriptions rather than providing insight into their coherence.

To integrate the diverse architecture descriptions, we advocate an approach in which architects and other stakeholders can define their own views of the enterprise architecture. In this approach views are specified by viewpoints. Viewpoints define abstractions on the set of models representing the enterprise architecture, each aimed at a particular type of stakeholder and addressing a particular set of concerns. Viewpoints can be used both to view certain aspects in isolation, and for relating two or more aspects.

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8.1 Architecture Viewpoints

In this section we discuss the notion of views and viewpoints as basic tools in communicating about architectures. In the context of enterprise architectures, a viewpoint is typically used for activities like design, analysis, obtaining commitment, formal decision making, etc. As we argued in Chap. 4, we regard all of these activities to be communicative in nature.

As defined in Sect. 3.2.4, a viewpoint essentially prescribes the concepts, models, analysis techniques, and visualisations that are to be used in the construction of different views of an architecture description. A view is typically geared towards a set of stakeholders and their concerns. Simply put, a view is what you see, and a viewpoint describes from where you are looking.

In discussing the notion of viewpoint, we will first provide a brief overview of the origin of viewpoints. This is followed by a more precise definition of viewpoints, and the concept of viewpoint frameworks.

8.1.1 Origin of Viewpoints

The concept of viewpoint is not new. For example, in the mid 1980s, Multiview (Wood-Harper et al. 1985) already introduced the notion of views. In fact, Multiview identified five viewpoints for the development of (computerised) information systems: Human Activity System, Information Modelling, Socio-Technical System, Human–Computer Interface, and the Technical System. During the same period in which Multiview was developed, the so-called CRIS Task Group of IFIP Working Group 8.1 developed similar notions, where stakeholder views were reconciled via appropriate ‘representations’. Special attention was paid to disagreement about which aspect (or perspective) was to dominate the system design (namely, ‘process’, ‘data’, or ‘behaviour’). As a precursor to the notion of concern, the CRIS Task Group identified several human roles involved in information system development, such as executive responsible, development coordinator, business analyst, business designer (Olle et al. 1988).

The use of viewpoints is not limited to the information systems community; it was also introduced by the software engineering community. In the 1990s, a substantial number of software engineering researchers worked on what was phrased as ‘the multiple perspectives problem’ (Finkelstein et al. 1992; Kotonya and Sommerville 1992; Nuseibeh 1994; Reeves et al. 1995). By this term, the authors referred to the problem of how to organise and guide (software) development in a setting with many actors, using diverse representation schemes, having diverse domain knowledge, and using different development strategies. A general framework has been developed in order to address the diverse issues related to this problem (Finkelstein et al. 1992; Kotonya and Sommerville 1992; Nuseibeh 1994). In this framework, a viewpoint combines the notion of actor, role, or agent in the development process with the idea of a perspective or view which an actor