Management support is crucial for starting and conducting architecture evaluations, and even more important for exploiting the results to improve the software system. This chapter presents data, numbers, and insights gained from our project retrospective on points that are typically important to management: effort, duration, benefits, scaling factors, and improvement actions.

11.1 What Is the Point?

**Q.100. Why Does Management Need to Be Engaged in Architecture Evaluation?**

Architecture evaluation is an activity whose objective is to identify (potential) risks. However, architecture evaluation does not come for free:

- It requires investments to hire the auditor party (external or internal) to perform the architecture evaluation (see Chap. 4).
- It requires time and availability of relevant stakeholders of the software system under evaluation. Typically, these people are busy, under high workload, and have tight time constraints.
- It requires access to confidential and business-critical information about software systems under evaluation, and to (parts of) the overall business strategy of the development organization owning the software system.
- It may require budget for acquiring tools (and training regarding their usage) for architecture compliance checking and code quality checking.
- It requires attention to the revealed findings. The results of an architecture evaluation support informed decision-making and tracking of the realization of decisions made. Findings may include design flaws, open issues, or unpleasant surprises for the development organization.
- It requires making decisions on follow-up activities (see also Question Q.106). Some findings may reveal an urgent need for action, while other improvement items may be deferred.

For all these points above, it is imperative to have the support of management, with the ability and the power to promote and push first the architecture evaluation project and then the improvement actions.

Q.101. How to Convince Management of the Need for Architecture Evaluation?

Among a lot of other aspects, making management decisions means reasoning about how to spend the available budget on software development projects or migration projects or maintenance. To convince management, architects have to play the numbers game. For managers with a strong software engineering background, we can expect the game can be easily won because these people usually have enough awareness and experience to know when to call for an architecture evaluation, or more generally speaking, when risk management is expedient. For managers with a non-technical background, the numbers game will be more difficult: The investments and their potential return (i.e., the benefits) have to be sketched and estimated to provide a sound basis for informed decision-making.

In our projects, we experienced different situations where architecture evaluation became an instrument to support decision-making (see Fig. 11.1). We distinguish

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**Fig. 11.1** Situations calling for architecture evaluation. © Fraunhofer IESE (2014)