

### 3 Theoretical Background

*In this Chapter you should*

- *demonstrate that you have a broad knowledge of area of investigation,*
- *introduce, describe and explain the theories to the reader,*
- *identify and describe relevant challenges in the area of investigation and describe related work to these challenges.*
- *formulate a research gap and discuss, argue and motivate your it as a research problem*

This section is not about solving a problem, but it may answer one or two of your research questions. If you use a multimethod research approach, this Chapter may provide a partial answer, outlining the state-of-practice and state-of research, and by identifying a gap. In design science, this chapter can be one source of information to the problem and motivation, and maybe also to the objectives for a solution.

The basis for the theoretical background chapter is most often some lightweight literature survey. Think of it as a focused textbook that introduces and explains slices of theoretical areas. Cover theories that are required for both the problem and solution, and sometimes also for the evaluation. It should be textbook like with figures and examples. This is the chapter where your reference list grows fast!

Create a Chapter outline and then take a critical stance where you put yourself in the reader's position.

- Do you provide a sufficient but not too detailed level?
- Are all areas important and less important areas covered?
- Do you discuss why related work is insufficient with respect to your problem?