Abstract

Different software development methodologies exist. Choosing the methodology that best fits a software project depends on several factors. One important factor is how risky the project is. Another factor is the degree to which each methodology supports risk management. Indeed, the literature is rich in such studies that aim at comparing the currently available software development process models from different perspectives. In contrast, little effort has been spent in purpose of comparing the available process models in terms of its support to risk management. In this paper, we investigate the state of risk and risk management in the most popular software development process models (i.e. waterfall, v-model, incremental development, spiral, and agile development). This trend in such studies is expected to serve in several aspects. Technically, it helps project managers adopt the methodology that best suits their projects. From another side, it will make a way for further studies that aim at improving the software development process.

**Index Terms**

Computer Science  
Software Engineering

**Keywords**

Risk  
Risk Management  
Software Development Process Model  
Software Development Methodology  
Spiral  
incremental  
V-model  
agile