

Compatibility of agile software development methods and CMMI

Abstract

Agile software development methods by focusing on the different values, have established a new approach for software development compare to the traditional methods. While traditional methods emphasizes on the following disciplined processes and rigid practices, agile methods focused on individuals and their collaborations. Previously, CMMI was introduced as process improvement model in the traditional methods and now it is known as symbol of those methods. Nevertheless, compatibility of these two different approaches has been a serious question and there are several conflicting reports about their compatibility. The main purpose of this study was scrutinizing this issue. Generic practices and specific practices in CMMI were selected as criteria for checking compatibility of CMMI and agile methods. The results showed that CMMI and agile are compatible in several process areas. However, there are serious incompatibilities in the others. In level 3 and level 4 of CMMI, two and one incompatible process areas have been seen respectively. Also, agile does not support most of the generic practices in CMMI level 4 and 5. The results also showed that these incompatibilities return to the notion of organization and its role in software development.

Keyword: Agile methods; CMMI; Agile software development; Traditional software development