



Chapter XII

ADPD and SW-CMM

ADPD has been discussed in the previous chapter and introduced as an Agile methodology, but focused on reaching the Level 3 of SW-CMM (Paulk, Curtis, Chrissis, & Weber, 1993; Paulk, Weber, Garcia, Chrissis, & Bush, 1993).

In this chapter, all the relationships between ADPD and SW-CMM at Level 3 will be discussed in order to verify how it is possible to adopt an Agile methodology and at the same time be compliant with standard methods such as the SW-CMM.

In the chapter not related to Agile methodologies, a short introduction to SW-CMM has been reported, but in order to have clear detail of the matching between SW-CMM Level 3 and ADPD, it is necessary to describe in more detail the CMM Key Process Areas (KPAs) related to Levels 2 and 3.

In Table 1, the KPAs for the target maturity levels are reported.

KPA 2.4 will not be addressed in this discussion, since the target environment discussed in Chapter VII does not include the case in which subcontracting exists and since subcontracting requires a development method that is more structured; therefore, it is difficult to achieve by the ADPD or Agile methodologies, in general. Subcontracting can be considered for the sake of simplicity as COTS (*components off the shelf*); all the other KPAs must be addressed and satisfied. Paulk (2001) examines the relationships between XP and SW-CMM, evidencing if the KPAs are addressed totally, partially, or not at all.

Table 1. Key process areas for maturity Levels 2 and 3

Maturity Level	Key Process Area
2: Repeatable	KPA 2.1 Requirement management
2: Repeatable	KPA 2.2 Software project planning
2: Repeatable	KPA 2.3 Software project tracking and oversight
2: Repeatable	KPA 2.4 Software subcontract management
2: Repeatable	KPA 2.5 Software quality assurance
2: Repeatable	KPA 2.6 Software configuration management
3: Defined	KPA 3.1 Organization process focus
3: Defined	KPA 3.2 Organization process definition
3: Defined	KPA 3.3 Training program
3: Defined	KPA 3.4 Integrated software management
3: Defined	KPA 3.5 Software product engineering
3: Defined	KPA 3.6 Intergroup coordination
3: Defined	KPA 3.7 Peer reviews

Table 2. XP addressing of CMM Levels 2 and 3 according to Paulk (2001)

Maturity Level	Key Process Area	XP Addressing Level
2: Repeatable	KPA 2.1 Requirement management	Addressed
2: Repeatable	KPA 2.2 Software project planning	Addressed
2: Repeatable	KPA 2.3 Software project tracking and oversight	Addressed
2: Repeatable	KPA 2.4 Software subcontract management	Not addressed but not necessary
2: Repeatable	KPA 2.5 Software quality assurance	Partially addressed
2: Repeatable	KPA 2.6 Software configuration management	Partially addressed
3: Defined	KPA 3.1 Organization process focus	Partially addressed
3: Defined	KPA 3.2 Organization process definition	Partially addressed
3: Defined	KPA 3.3 Training program	Not addressed
3: Defined	KPA 3.4 Integrated software management	Not addressed
3: Defined	KPA 3.5 Software product engineering	Addressed
3: Defined	KPA 3.6 Intergroup coordination	Addressed
3: Defined	KPA 3.7 Peer reviews	Addressed

According to his analysis, the activities to be enforced in order to comply with Level 3 are reported in Table 2.

In the rest of the chapter, each KPA with the related goals will be discussed in order to verify if the improvement to XP inserted in ADPD has successfully exploited the target of obtaining Level 3 compliance to SW-CMM.

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