

Comparing Requirements Management: Prescriptive versus XP and Scrum

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1 Executive Summary

The following sections contrast how developers manage requirements in the context of predictive methods in general and two adaptive methods specifically: XP and Scrum. In addition, Scrum is split into two perspectives: outside a Sprint (Scrum/O) and inside a Sprint (Scrum/I).

In order to highlight the differences, a simplified set of requirements management activities are assumed:

- Identification - identify and name a requirement.
- Elaboration - elaborate the details associated with the requirement.
- Estimation - estimate how long it will take to implement the requirement.
- Allocation - allocate the requirement to a software release.

1.1 Who manages requirements?

Predictive Customers, Requirements Analysts, Designers.

XP Customers and Designers.

Scrum/O The Product Owner, the Team, and Anybody.

Scrum/I The Scrum Master and the Team.

1.2 How do they manage requirements?

Predictive Customers and Requirements Analysts identify and elaborate them. Requirements Analysts and Designers estimate them. Customers allocate them to a release.

XP Customers identify them. Designers estimate them. Customers and designers allocate them. Customers and designers elaborate them.

Scrum/O Anybody identifies them. The Team estimates them. The Product Owner allocates them.

Scrum/I The Scrum Master and the Team elaborate them.

1.3 What do they manage?

Predictive A set of persistent requirement elaborations (document, use cases, database).

XP A set of transient requirement placeholders (cards) and a set of persistent acceptance tests (code).

Scrum/O A set of persistent requirement placeholders (spreadsheet).

Scrum/I A set of persistent tasks (spreadsheet).

1.4 When do they elaborate requirements?

Predictive After allocation and prior to design, as a group.

XP During design, when it's time to implement an individual requirement.

Scrum/O Never.

Scrum/I Whenever makes sense.

1.5 Where do the requirements come from?

Predictive From Users to Requirements Analysts to Designers.

XP From Customers to Designers.

Scrum/O From Anybody to the Product Owner.

Scrum/I From the Team.

1.6 Why use this method?

Predictive Reduce costs by specifying a release and removing the most costly type of defects (assuming exponential defect removal model).

XP Reduce costs by deferring elaboration and specifying requirements in a reusable format, automated acceptance tests (assuming linear defect removal model).

Scrum Reduce costs by deferring elaboration of requirements. Reduce costs by doing only what is necessary for each Sprint (assuming a complex process which is undefined).