CHAPTER 19
Beyond requirements development

Objectives

- Exploring some approaches for bridging the gap between requirements development and a successful product release
- Student should understand the influence of requirements on project plans, designs, code, and test.

Contents

1. The effects of requirements on software development
2. Estimating requirements effort
3. From requirements to project plans
4. From requirements to designs and code
5. From requirements to tests
6. From requirements to success

The effects of requirements on software development

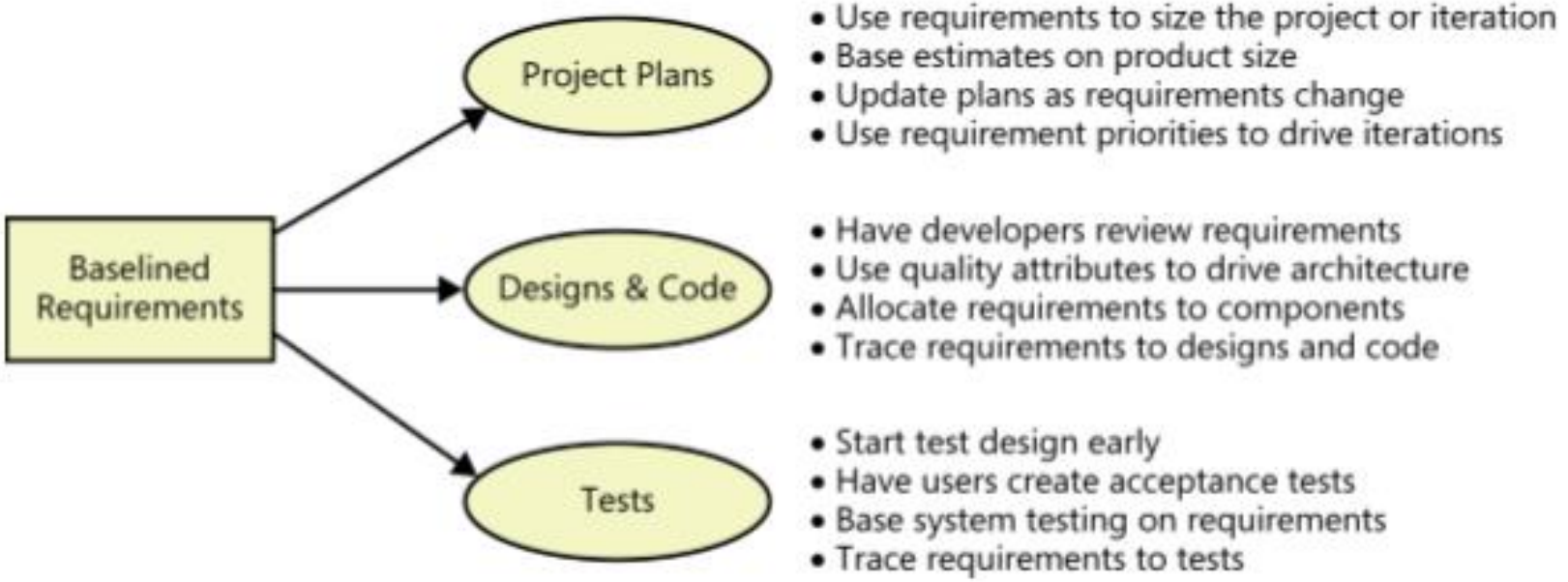

FIGURE 19-1 Requirements drive project planning, design, coding, and testing activities.

Estimating requirements effort

- Requirements engineering activity is distributed throughout the project in different ways, depending on whether the project is following a sequential (waterfall), iterative, or incremental development life cycle

From requirements to project plans

- **Estimating project size and effort from requirements**
  - The number of individually testable requirements (Wilson 1995)
  - Function points (Jones 1996b; IFPUG 2010)
  - Story points (Cohn 2005; McConnell 2006) or use case points (Wiegers 2006)
  - The number, type, and complexity of user interface elements
  - Estimated lines of code needed to implement specific requirements
- **Requirements and scheduling**
  - Estimated product size
  - Known productivity of the development team, based on historical performance
  - A list of the tasks needed to completely implement and verify a feature or use case
  - Reasonably stable requirements, at least for the forthcoming development iteration
  - Experience, which helps the project manager adjust for intangible factors and the unique aspects of each project

From requirements to designs and code

- Architecture and allocation
- Software design
- User interface design
- **From requirements to tests**
- **From requirements to success**