

Software Engineering Essentials



Software Configuration Management 2

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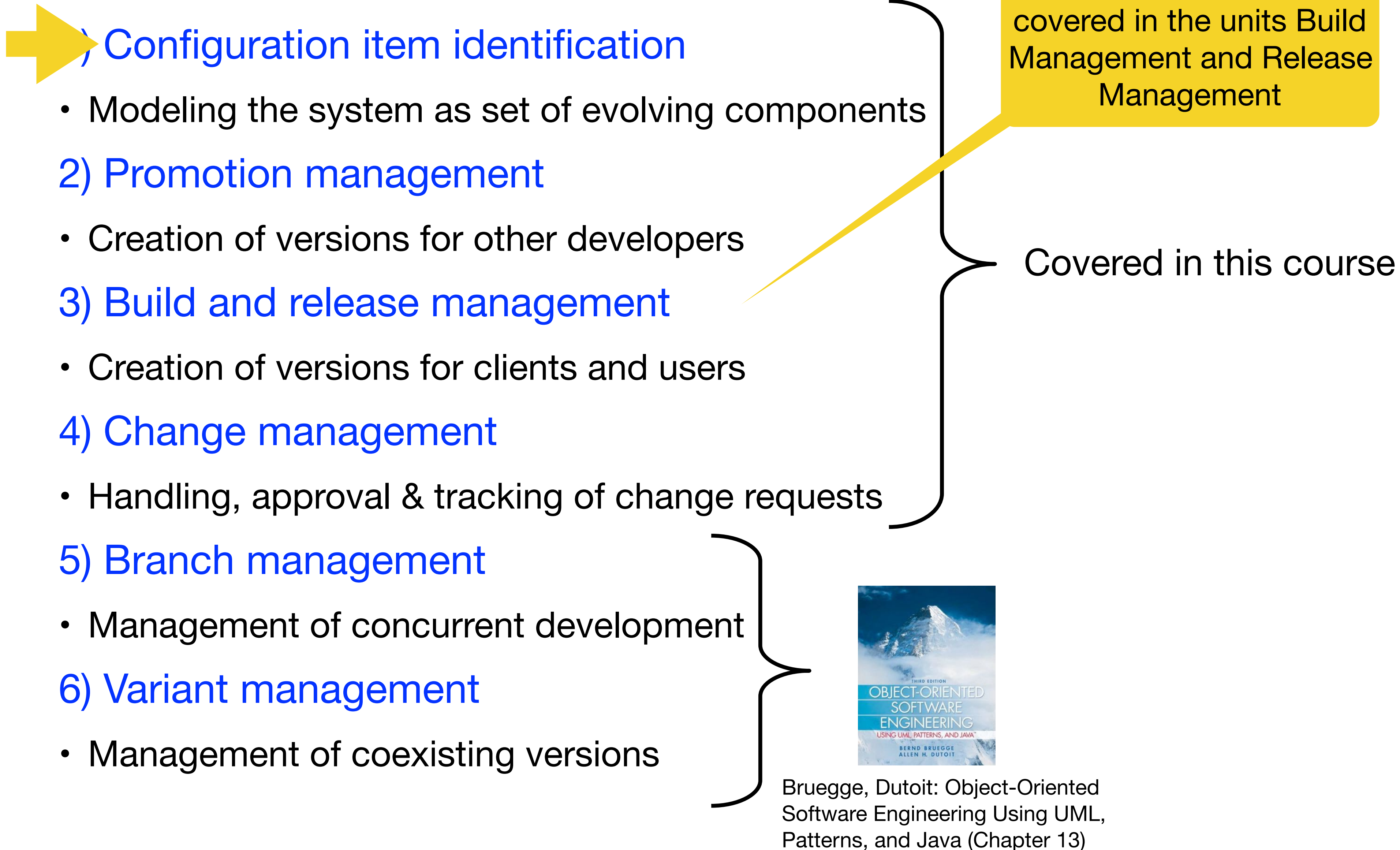


Learning goals



- 1) Understand the difference between internal promotions and external releases
- 2) Describe a typical workflow how to handle change requests

Six main activities



1) Configuration item identification

Configuration Item: An aggregation of software, hardware, or both, treated as controlled item in the software project

Example:

- All types of code files
- Drivers for tests
- Analysis or design documents
- User or developer manuals
- System configurations
(e.g. version of compiler used)

1) Configuration item identification

Not every entity needs to be under control all the time

2 Issues:

1) What: Selection of configuration items

- What should be under configuration control?

2) When: When do you start to place entities under configuration control?

- In early days, it was an activity
- Nowadays it is a **project function** (from beginning to end of the project)

2) Promotion management

Promotion: a version that is made available to other developers

- Example: every commit in a version control system that is pushed to the remote repository is as **promotion**

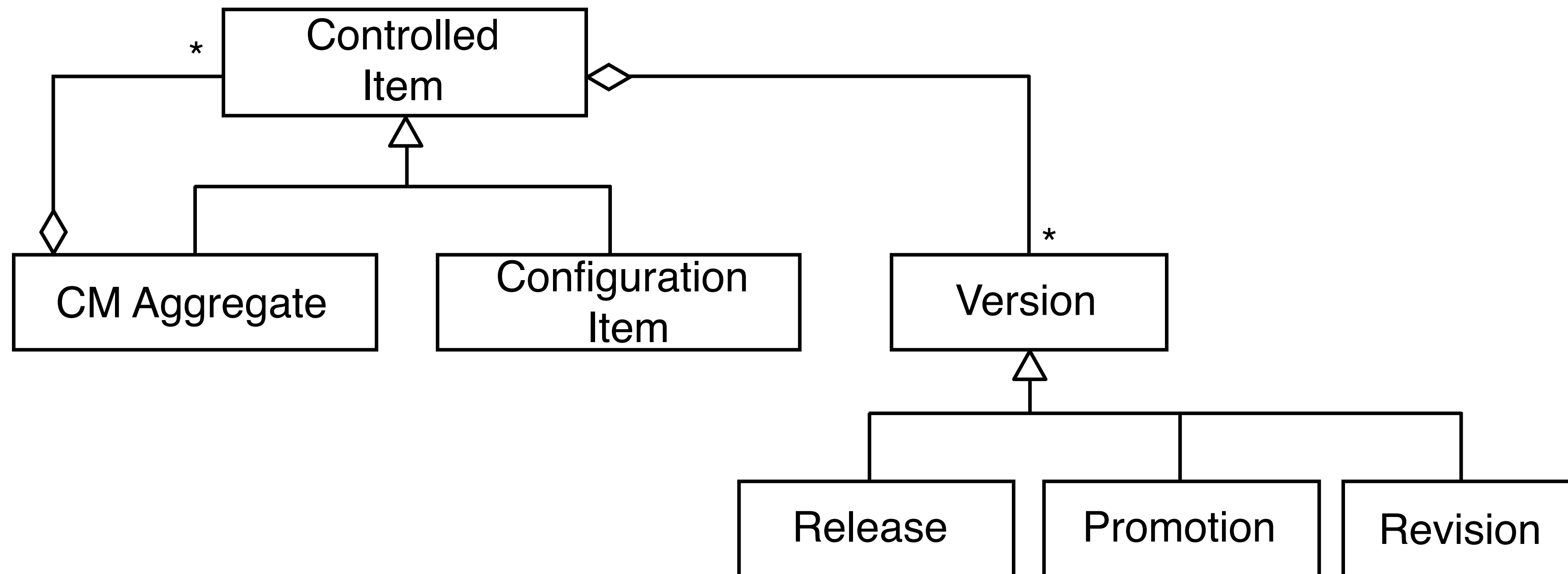
Release: a version that is made available to users

- Example: a potentially shippable product increment at the end of a sprint in Scrum is **released** to the product owner

Promotion management defines workflows, activities and best practices how and when to create promotions

➡ We will cover more in the unit about **distributed version control**

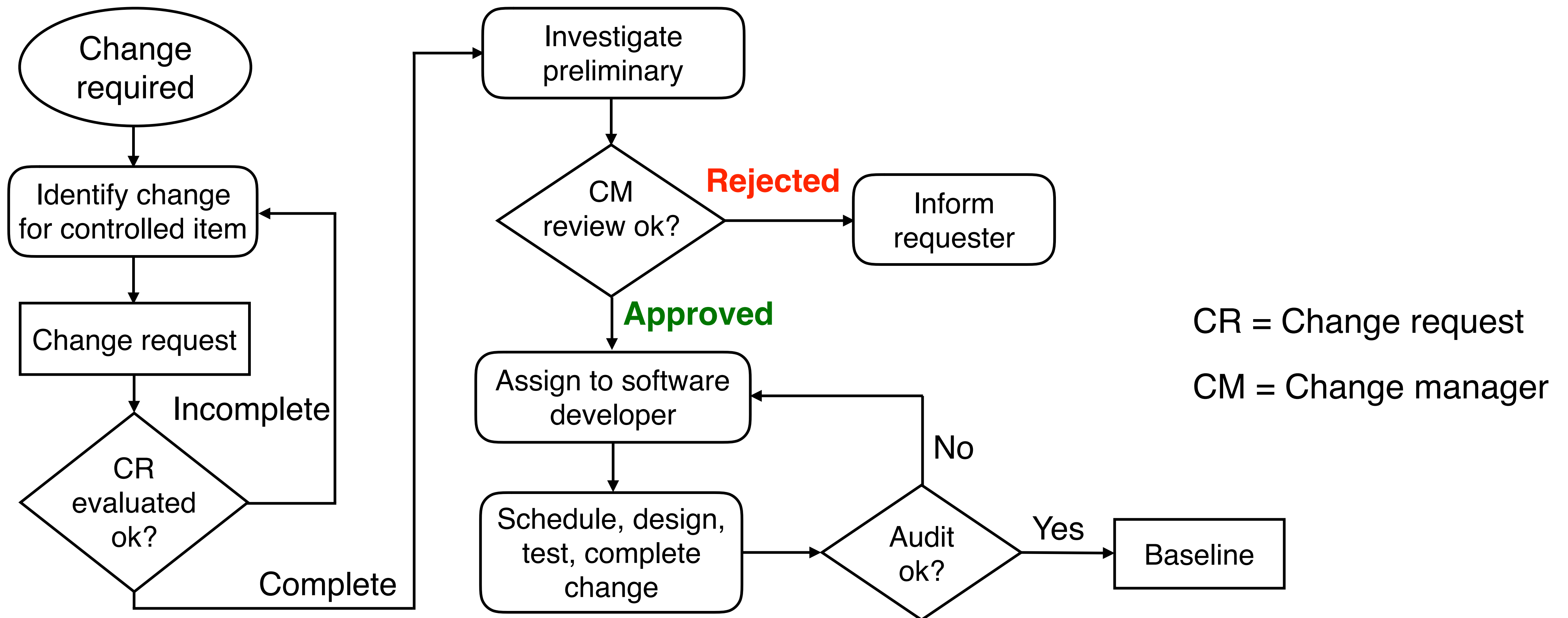
Object model for configuration management



4) Change management

The handling of **change requests**

Example:



Change policies

The purpose of a change policy is to guarantee that each promotion or release conforms to commonly accepted criteria

Examples for change policies:

- No developer is allowed to promote source code that was compiled with errors
- No baseline can be released without being beta-tested by at least 500 external testers