

Software Testing Process



Software Testing – is a **process** of software analysis and defect detecting. Actions of defect detecting are directed to defining as many as possible defects, which should be fixed

Process? Why do we care about it?

For Any Company

- Customer satisfaction critical
- Projects should end successfully all the time
- Projects: complex NEW DIFFERENT software products
- Different size, different teams, different locations, distributed development

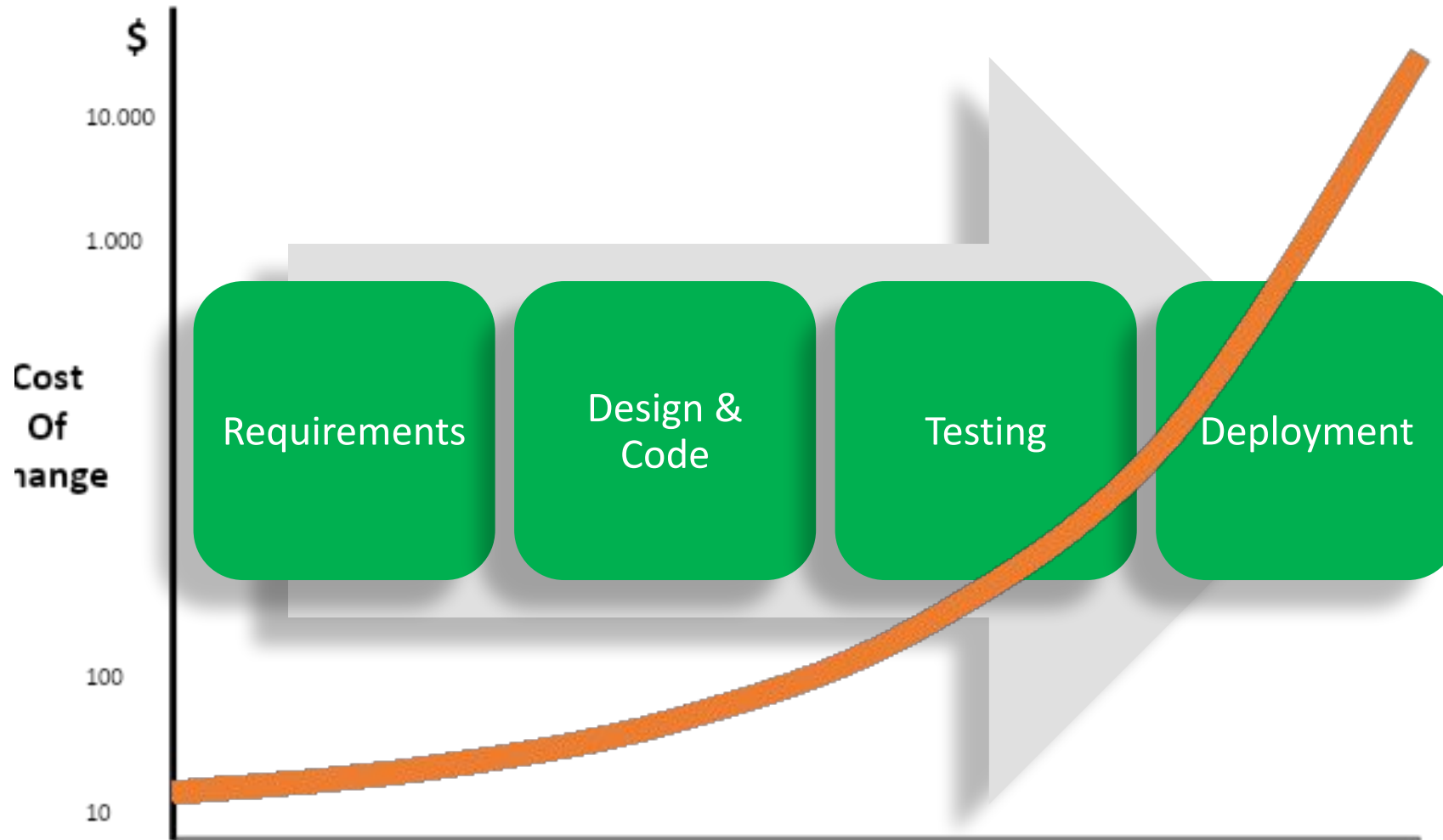
Software Development Lifecycle

- Waterfall
- Iterative
- RUP
- Agile
- XP
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Software development models and methodologies



Traditional Approach



What is **Agility**?

“Values, principles and practices that foster **team communication** and **feedback** to **regularly deliver** customer **value** through **working software.**”

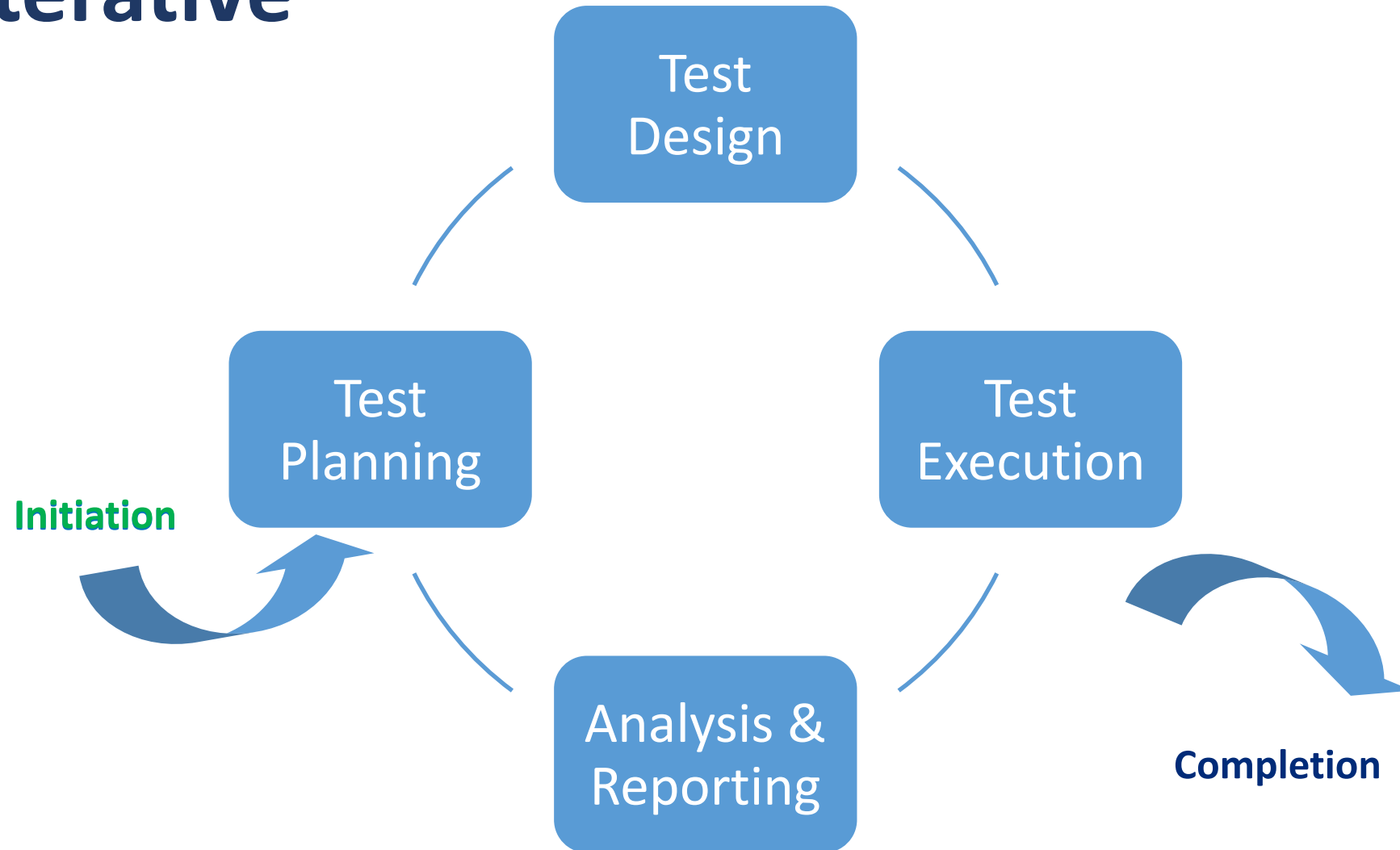
Why it works?

- Less Functional on Iteration, less risks and wrong estimates
- Fast Ramp-up (no need in deep review of docs)
- Often Releases – Real progress

Customer Happy



Functional Testing Process: Iterative



Test Planning

Activities

- ✓ Understand the operational and the organizational context of the testing to be performed
- ✓ Define and prioritize the risks and create a test plan
- ✓ Requirements analysis
- ✓ Define a testing scope, including automation
- ✓ Select automation testing tools
- ✓ Estimate testing efforts
- ✓ Create, confirm, and publish **Test Plan**

- Test Design
- Test Execution
- Analysis & Reporting
- **Test Planning**

Artifacts

- ✓ **Test Plan**
- ✓ Configuration Matrix (it may be included into Test Plan)
- ✓ Test Hardware requests

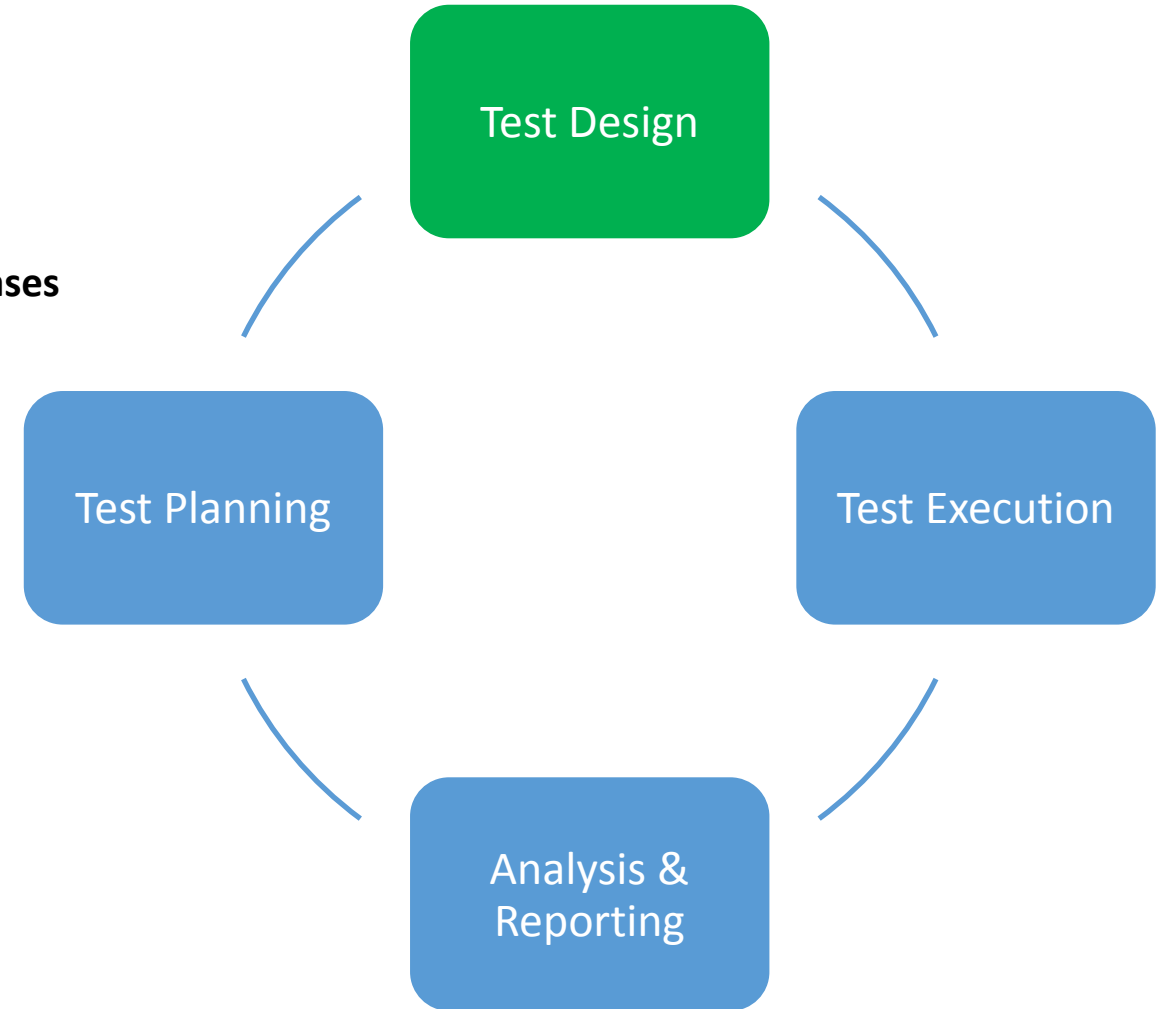
Test Design

Activities

- ✓ Select **test methods** in order to cover risks
- ✓ Create, confirm and publish Test Designs and **Test Cases**
- ✓ Define automation testing framework architecture
- ✓ Detailed requirements analysis, peer reviews
- ✓ Establish test environment

Artifacts

- ✓ Test Scenarios, Test Designs and **Test Cases**
- ✓ Automated Test Framework
- ✓ Peer Review Records



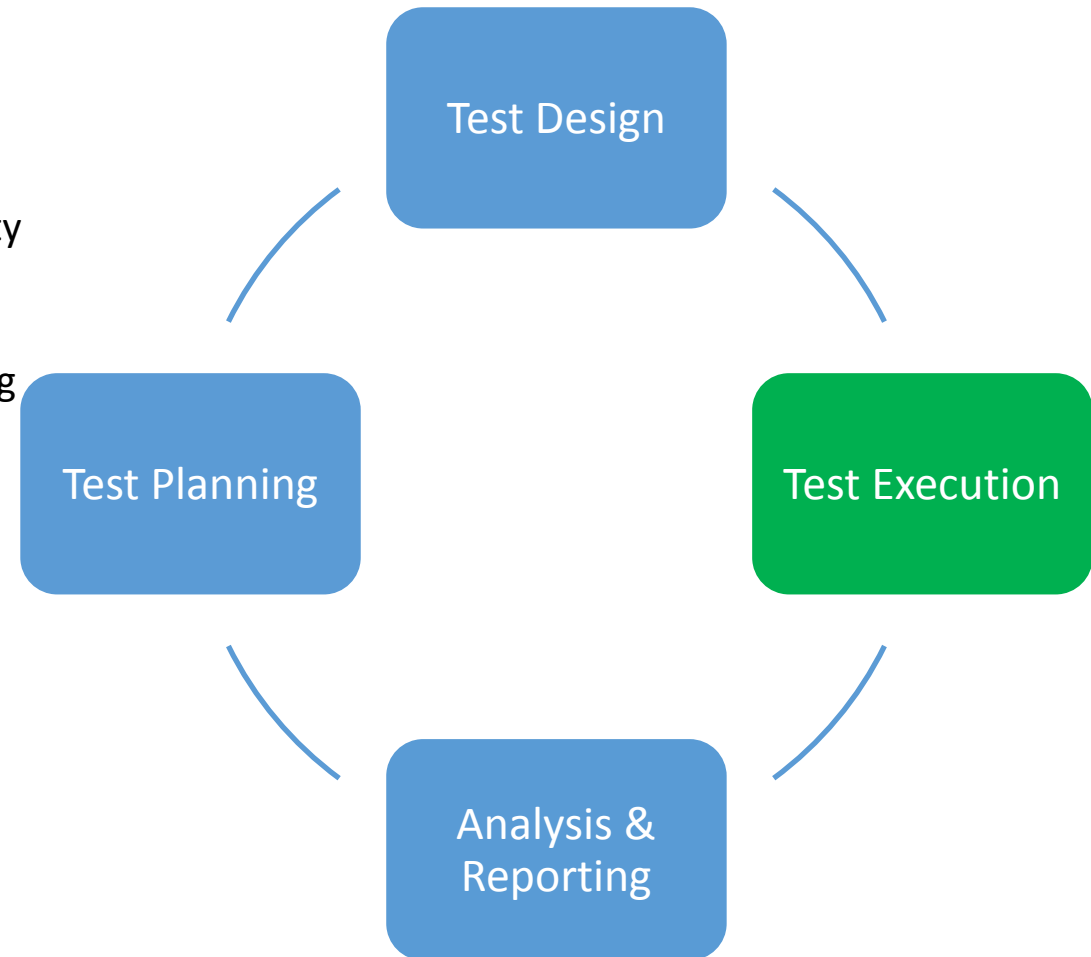
Test Executing

Activities

- ✓ Build release notification
- ✓ Checking required configuration and build package integrity
- ✓ Installation, Smoke Test execution
- ✓ Thorough testing: test cases and automated scripts running
- ✓ **Defects** reporting
- ✓ Test cases / automated scripts update

Artifacts

- ✓ Notification – Installation passed/failed
- ✓ Notification – Smoke Test passed/failed
- ✓ Defect Reports
- ✓ Automated Test Scripts



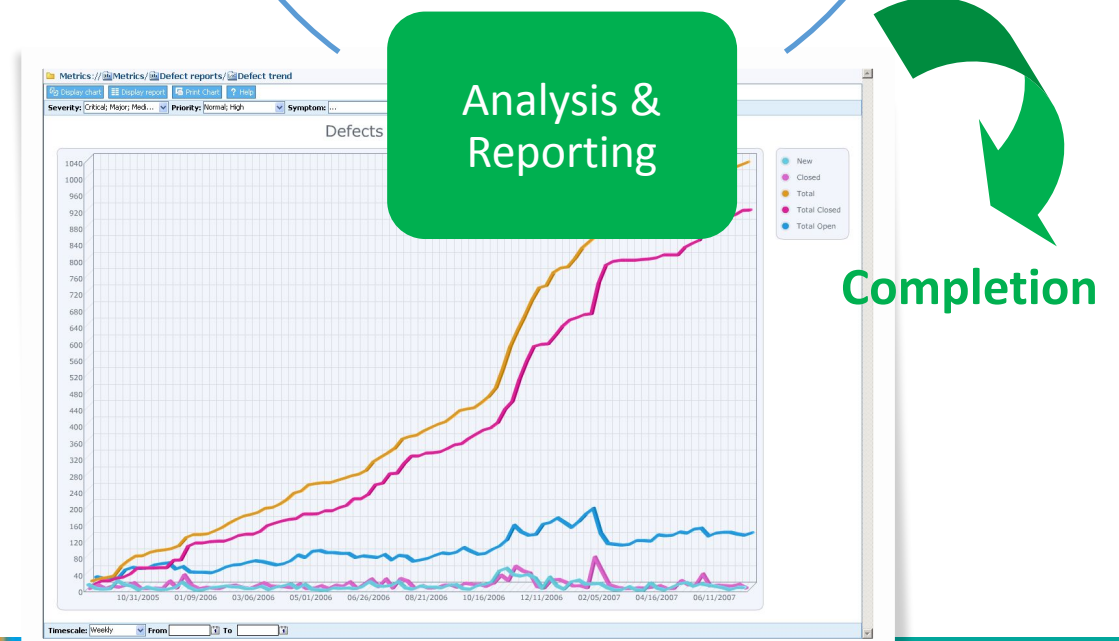
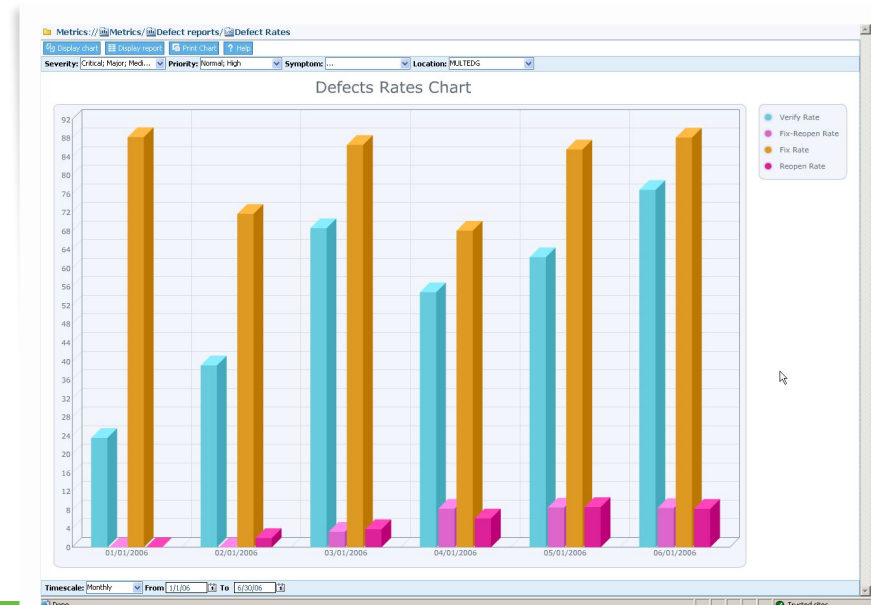
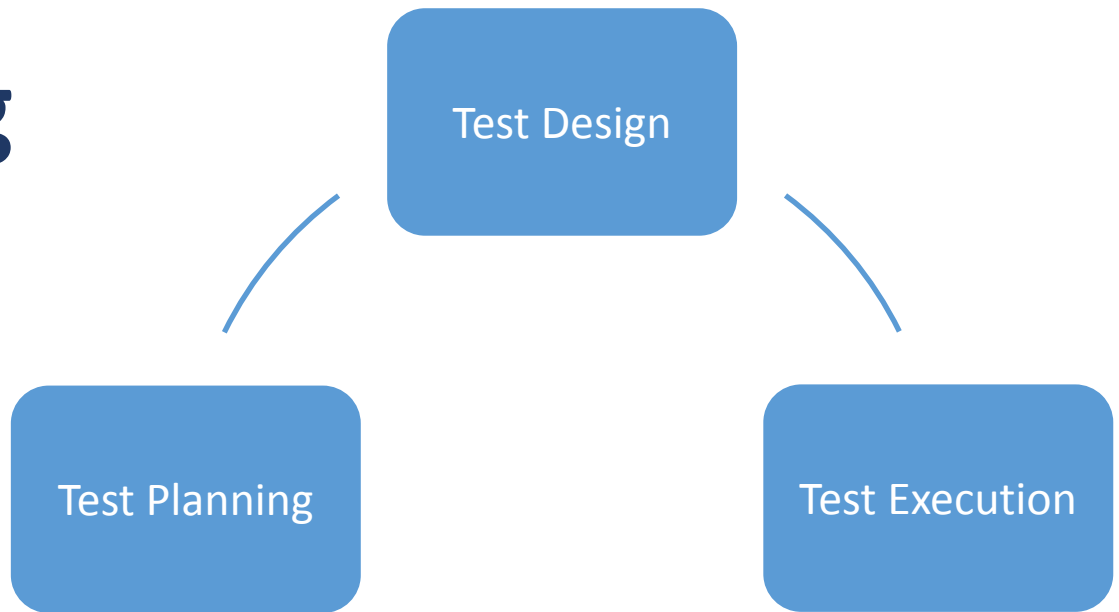
Analysis & Reporting

Activities

- ✓ Defect metrics accounting and analysis
- ✓ Communicating test results to the project members and Customer
- ✓ Weekly test results reporting

Artifacts

- ✓ Test Results Report that includes test status, metrics, results analysis and



Analysis & Reporting

Completion