

# 6. TOOL SUPPORT FOR TESTING

## A. Test Tools

A test tool is software product that supports one or more test activities, such as planning and control, specification, building initial files and data, test execution and test

### i. Benefits

- Improve the efficiency of test activities
- Automate activities that require significant resources when done manually
- Automate activities that cannot be executed manually.

### ii. Risks

- Unrealistic expectations for the tool
- Underestimating effort for the initial introduction
- Underestimating effort to achieve significant benefits
- Effort to maintain the test assets
- Over-reliance on the tool
- Neglecting interoperability between critical tools
- Poor vendor support
- Neglecting version control
- Risk of suspension of open-source / free tool project

## B. Effective use of tools

### i. The main principles of tool selection

- Organisational maturity
- Clear requirements and objective criteria
- Vendor support
- Coaching and mentoring internal requirements
- Training needs
- Cost-benefit ratio
- A proof-of-concept

### ii. Pilot projects for Introducing a tool into an organisation

- Learn more detail about the tool
- Evaluate how the tool fits with existing processes
- Decide on standard ways of using the tool
- Asset cost vs benefits

### iii. Success factors for tools:

- Rolling out tool incrementally
- Adapting and improving processes
- Providing training, coaching and mentoring
- Defining usage guidelines
- Gather usage information
- Monitoring tool use and benefits
- Providing support

ISTQB Classification	Test Tool Type	Test process where it is most beneficial	Brief Description	Use by who?	Example
Tool support for management of testing and testware	Test management and application life cycle management (ALM)				
	Defect Management				
	Requirements Management				
	Configuration Management				
	Continuous Integration				
Tool support for static testing	Tools that support reviews				

	Static Analysis				
Tool support for test design and implementation	Test design				
	Model-based testing				
	Test data preparation				
	Test-driven development				
	Acceptance test-driven development (ATDD) and behaviour-driven development (BDD)				

Tool support for execution and logging	Test Execution (to run regression tests)				
	Test Harness				
	Unit test framework				
	Coverage				