



Certified Soft skilled Test Consultant (CSTC) Syllabus

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The rationale of this course

With the launch of the CPAT 2.0 (Certified Practitioner in Agile Testing), two essential things were achieved regarding software testing in an agile environment. First, we made our Agile Test Model (ATM) public. Secondly, we developed a comprehensive testing approach based on that model.

The result of this is that as agile software testers we no longer have to struggle with explanations concerning our activities and value in a software development environment.

There's one element of the model that we barely touched in CPAT 2.0, and that element lies at the very heart of the model: how to deal with the most flexible, changeable, and incomprehensible part of any development process: our fellow human being? How to deal with team members, colleagues, clients? In short, with all people in all those roles who all influence a testing and development process and thus ultimately the quality of the product to be delivered. In the ATM, we called dealing with those fellow human beings "soft skills & knowledge" and in this CSTC (Certified Soft skilled Test Consultant), we've done our best to provide both answers and exercises to the above question that closely align with the daily practice of a software test consultant in an (agile) development environment.

Business Outcomes

Business outcomes (BOs) are brief statements of what you are expected to have learned after the training.

BO-0	Remember all the used keywords
BO-1	Understand how to present yourself with "my user manual"
BO-2	Understand the strength of the Gameception game
BO-3	Understand the principles of excellent teams
BO-4	Use leadership qualities to improve your team's behavior and outcomes
BO-5	Use the power of visualization
BO-6	Understand the limitations of models
BO-7	Be able to reproduce the Agile Test Model
BO-8	Be able to tell a good story
BO-9	Be able to choose which story to tell under different circumstances
BO-10	Understand the basics of critical thinking
BO-11	Be able to correct yourself and others on biases
BO-12	Be able to execute motivational, activating, evaluating and corrective feedback
BO-13	Be able to apply negotiation skills in your daily work routine
BO-14	Use different negotiation approaches in different situations

Learning Objectives/Cognitive Levels of Knowledge

Learning objectives (LOs) are brief statements that describe what you are expected to know after studying each chapter. The LOs are defined based on Bloom's modified taxonomy as follows:

Definitions	K1 Remembering	K2 Understanding	K3 Applying
Bloom's definition	Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers.	Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas.	Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way.
Verbs (examples)	Remember Recall Choose Define Find Match Relate Select	Summarize Generalize Classify Understand Compare Contrast Demonstrate Interpret Rephrase	Implement Execute Use Apply Plan Select

For more details of Bloom's taxonomy, please refer to **[BT1]** and **[BT2]**.

Hands-on Objectives

Hands-on Objectives (HOs) are brief statements that describe what you are expected to perform or execute to understand the practical aspect of learning. The HOs are defined as follows:

- HO-0: Live view of an exercise or recorded video.
- HO-1: Guided exercise. The trainees follow the sequence of steps performed by the trainer.
- HO-2: Exercise with hints. Exercise to be solved by the trainee, utilizing hints provided by the trainer.
- HO-3: Unguided exercises without hints.

Prerequisites

Mandatory

- Working experience in the role of software tester

Recommended

- Having at least 3 years of working experience in testing.
- Having studied a book about testing, such as *Agile Testing [IN1]* and *More Agile Testing [IN2]*.

Reading instructions

This syllabus should be approached in the following manner:

- This syllabus describes the Business outcomes and learning objectives for a test consultant in agile testing. Please be aware that studying this syllabus alone will not allow you to pass the exam.
- In this document, the term ‘tester’ refers to any member of your agile team involved in testing/quality. This does not just apply to the person working in a tester’s role, but also to developers, scrum masters, product owners or anybody else involved in creating a qualitative better product for your customer.

Chapter 1 – Self-awareness and team dynamics

Learning objectives

LO-1.1	K1	Reproduce the nine categories of the “My user manual” model.
LO-1.2	K1	Remember the workings of the serious game “Gameception”
LO-1.3	K2	Explain the value of Gameception for a team
HO-1.1	HO-1	Fill in the template “My user manual”

My user manual

Who are you, and how do you behave in a team? The first question will be answered by filling in and presenting the “My user manual” [ID1].

These are the things that I love to do.	These are the things that I know of I'm good at.	These are the things I can struggle with.
These are the conditions I like to work in.	These are the things that I need to work well.	These are the things that kill my motivation and joy.
This is the best way to communicate with me.	This is the best way I receive feedback.	These are other things to know about me.

Gameception

To get an impression of how you are behaving in a team, the Gameception **[GC1]** game is introduced. With a few random items, a bag, some paper, and a pen, this game gives insight on how team members interact with each other. It also gives an impression of how the team deals with quality issues in relation to success experiences. In addition to these reasons, Gameception can be valuable when team dynamics are not functioning optimally, when the quality of deliverables falls below expectations, or when challenges arise related to product quality, collaboration, accountability, or psychological safety.

Rules of the game

The game is played in several rounds till the end goal is reached.

Each round has the following phases:

1. Each player randomly picks an item from the bag till you have in total 6 items
2. Draw a quest card from the deck
3. Play the quest!

4. Determine together if you win or lose the quest

- Did you win?
 - The next round you have one item less to play a quest (Example: you've played this round with 6 items in total. You won! The next round you play with 5)
- b. Did you lose?
 - The next round you have one item extra to play a quest

Repeat these steps until you either meet the win or lose goal.

- Win: After you won a quest in the round where you picked 3 items in total.
- Lose: After you lost a quest in the round where you picked 7 items in total.

Material: a bag, a collection of miscellaneous objects that fit inside the bag, a set of assignment cards describing tasks the team must complete using the available objects and blank cards and a pen.

Chapter 2 – Building excellent teams

Learning objectives

LO-2.1	K1	Recall the four basic psychological needs.
LO-2.2	K2	Explain how the psychological needs determine a good (or bad) life.
LO-2.3	K2	Explain how accountability and psychological safety relate to basic psychological needs.
LO-2.4	K2	Relate Apathy zone, Anxiety zone, Comfort zone, and Learning zone to psychological safety and accountability.
LO-2.5	K2	Explain the meaning of the PERFECT values in the context of promoting accountability.
LO-2.6	K1	Recall the three pillars of trust (compassion, logic, authenticity).
LO-2.7	K2	Explain how the three pillars of trust influence the quality of that trust.
LO-2.8	K2	Explain how to improve your compassion, logic, and authenticity.
LO-2.9	K2	Explain the meaning of the LEADING values in the context of promoting psychological safety.
LO-2.10	K1	Recall what HROs are.
LO-2.11	K1	Recall the HROs main strategies creating excellent teams with the use of the acronym BARE.
LO-2.12	K1	Recall the HROs main mindset with the use of the acronym SPACE.
LO-2.13	K2	Explain how agile organizations can benefit from the HROs strategies and mindset.
HO-2.1	HO-2	Explore how you can improve your current team.

Introduction

Why do some teams consistently achieve outstanding results while others struggle to do so? Drawing on the research of Harvard professor Amy Edmondson, several key factors distinguish high-performing teams from those that merely function. These elements help transform an ordinary team into an exceptional one. These key elements will be presented and explained as embedded in the self-determination theory. Next to that, tools are presented to make your team psychologically safer and more accountable, and by doing so, more productive. Finally, High Reliability Organizations (HROs) and the science on trust are introduced to maximize options to improve your own team.

Self-determination theory

Human behavior is driven by a range of needs. Beyond their biological needs, people also have fundamental psychological needs [ET1]:

1. Autonomy (self-related need to act in alignment with one's values and sense of self).
2. Competence (self-related need to experience challenge, control, and success).
3. Connectedness (social-related need to interact with, belong to, and build meaningful relationships with others).
4. Justice (social-related need to be treated fairly.) [ET2].

When these four needs are fulfilled, individuals are more likely to experience well-being, engagement, and personal growth. When they are consistently unmet, frustration can arise, often leading people to disengage, undermine their own efforts, or negatively affect the environment and relationships around them.

Accountability and psychological safety

The four psychological basic needs are a good conceptual basis for the findings of Amy Edmondson on excellent teams [ET3]. She found that excellent teams thrive through high levels of accountability (which can be viewed as a combination of justice and competence) and psychological safety (which can be seen as a combination of connectedness and autonomy).

Accountability means being responsible for the outcomes of one's actions and being subject to the consequences that follow. It creates a sense of urgency because the consequences of unmet expectations or poor results are determined not by the individual or team, but by an external stakeholder – typically the client or another party with a vested interest in the result.

Psychological safety can be defined as one's ability to show oneself, and behave without fear, nor feeling any negative repercussions on one's self-image, status and career. It creates a work climate where people are comfortable being themselves.

Low levels of one or both factors create cultures that produce suboptimal teams. Team members may find themselves operating in fearful (high accountability, low psychological safety), disengaged (low accountability and low psychological safety), or overly comfortable (low accountability, high psychological safety) environments. By contrast, the most effective teams operate in the so-called *learning zone* (high psychological safety and high accountability), where teams thrive, feeling safe to learn, contribute, and challenge one another while remaining committed to achieving results.

The following section explores the actions that can help teams move toward the learning zone.

Improving the team

The acronyms PERFECT [ET4] and LEADING [ET5] sum up ways to improve the accountability and psychological safety of a team.

PERFECT

- P. Measure the **Progress**: a nice example is the burndown chart.
- E. Search for clear **Expectations**: what is the vision and mission?
- R. Align with the **Role**: make clear what everybody is contributing.
- F. Provide and ask for **Feedback**: create an environment where both giving and receiving feedback are valued.
- E. Evaluate **Effectiveness**: reflect on outcomes, identify what worked well, and determine what can be improved.
- C. Look at & link to **Consequences**: what will happen if the team succeeds, or fails?
- T. Personalize **Tasks**: make sure that every task has a personal owner.

LEADING

- L. Welcome curiosity: embrace the **Learning culture**: promote the concept of ‘return on experience’ instead of ROI (return on investment): what can you ‘learn by doing’, instead of ‘produce by delivering’?
- E. See **Employees** as the goal: organizations that choose to see money as a resource to help the growth of their employees, are more successful than those that see people as a resource to produce more money.
- A. Provide channels to **Authority**: find ways to push your ideas to people who have the authority to decide on it.
- D. Promote **Discussion**: here critical thinking comes into play: postpone judgment while accelerating information: (for example) “I don’t understand this idea, and it doesn’t feel right for me. Can you elaborate?”
- I. Infuse **Ingenuity**: embrace half fabricates and don’t promote perfection. Every dead end is to be seen as a way that will eventually lead to successful products.
- N. Apply a **No tolerance** policy: make sure that mental or emotional attacks on what people do, say, or wear, are not accepted nor tolerated.
- G. Forge the **Group**: organize teambuilding events, eat together, use the “This is my manual” template. People who know each other better have a greater chance of trusting and accepting each other.

On trust

When people trust each other, they need less time and energy to focus on what others are doing and can devote more attention to what needs to be accomplished. This makes trustworthiness an important factor to evaluate. Everyone’s trustworthiness is based on three elements [ET6]: compassion, authenticity and logic, and people all have different/unequal strengths and weaknesses in these areas.

Compassion

A lack of compassion (that is, the ability to be able to step in one’s shoes and then help them) is common among people who are analytical and driven. They often get impatient with those who aren’t similarly motivated or who take longer than they do to understand something. If this is your weakest link, then this is the solution: instead of focusing on what you need, radically work to ensure that everyone else gets what they need.

Logic

A lack of logic in your proposals or ideas can be the reason why people don’t trust what you are saying. Solution: learn to tell a story in a good way.

Authenticity

Authenticity is, in short, showing who you are to your fellow human beings. Being socially too careful or calculating drives you to do and say things what you think the other wants you to do and say, or just the opposite: you oppose everything. The solution? You need to flip the focus from the other, to yourself: what do *you* need, and want to say and do?

High Reliability Organizations (HROs)

When improving collaboration to excellent levels, High Reliability Organizations [ET7, ET8], like parts of the military, air traffic control and firefighters, are experts. The main reason for building exceptional teams is that, if harm occurs, the consequences are often substantial and cannot easily be reversed. What can agile testers learn from HROs?

HRO strategies

HROs have developed several strategies to address uncertainty and unforeseen threats. Together, these strategies (summarized by the acronym *BARE*) are designed to help teams achieve exceptional levels of performance.

BARE

- B. Continuously communicate the **B**ig picture (mission, vision and how the teams fit in)
- A. Foster **A**ccountability and Psychological Safety and adjust this balance as needed.
- R. Organize **R**edundancy, preventing any organization (like a team) to stop, when parts fail.
- E. **E**volve aggressively: seek to know what is not known and create an informed culture.

HRO mindset

HROs have a set of rules (the acronym for them is “SPACE”), that keeps their members on high alert.

SPACE

- **S**ituational awareness: people have an intuition that is built through experience. The rule is to always act on it.
- **P**reoccupation with failure: all members should be at a constant *unease*: “What did we miss?”
- **A**dd enough depth: noticed irregularities should trigger critical thinking. Easy assumptions are *always* inadequate.
- **C**ommit to resilience: train mind, body and heart to take a blow and recuperate fast.
- **E**steem for Experts: change the command structure when the situation calls for it: a team leader on the floor is more equipped to assess an unforeseen and critical situation and act, than a general manager is.

What can this do for a tester?

Five important lessons can be derived from the BARE SPACE acronym:

1. Have a clear picture of the goal of the project, and what all team members are contributing and accountable for.
2. Promote active exchange of information.
3. Redundancy is crucial: have a clear picture on what can fail and realize available alternatives that will mitigate potential negative consequences.
4. Intuition is vital: if things feel wrong, they usually are.
5. Team values drive excellence: they are the basis for the psychological safety and accountability of the team.

Chapter 3 – Visualization techniques

Learning objectives

LO-3.1	K2	Explain the value of visualization
HO-3.1	HO-3	Practice your basic visualization skills with visualizing a system
LO-3.2	K2	Demonstrate when visualization can be used
LO-3.3	K1	Recall the visualizations used for client, concept and product outlines
LO-3.4	K2	Demonstrate PopcornFlow© as a visual process tool
LO-3.5	K2	Demonstrate subway maps as a visual progress tool

Introduction

Most people tend to create large chunks of text to make a specific point. In a scrum team, people create user stories, test strategies, test cases, risk lists, improvement lists, etc. However, these documents are not always read or fully understood. In many situations, visual representations can communicate information more effectively and efficiently.

Why use visualization as a tester?

Visualization can help you, as an agile tester, for a number of reasons:

- It improves collaboration
- Makes complex systems understandable
- Makes information easier to analyze
- Enhances creativity
- Supports decision making

When do testers need visualization?

Visualization can be useful in several situations:

- To get an overview in architecture of the environment or application
- When improving insights in processes
- When improving collaboration with other team members
- During retrospectives, use for example the Agile Test Model (ATM)
- When an issue is encountered during testing, visualize both the issue itself and the steps that led to its discovery.
- When creating your test strategy by means of the client, concept and product outline
- When explaining your test strategy to the team or stakeholders

Different visualizations you can use as an agile tester

Visualizing a system

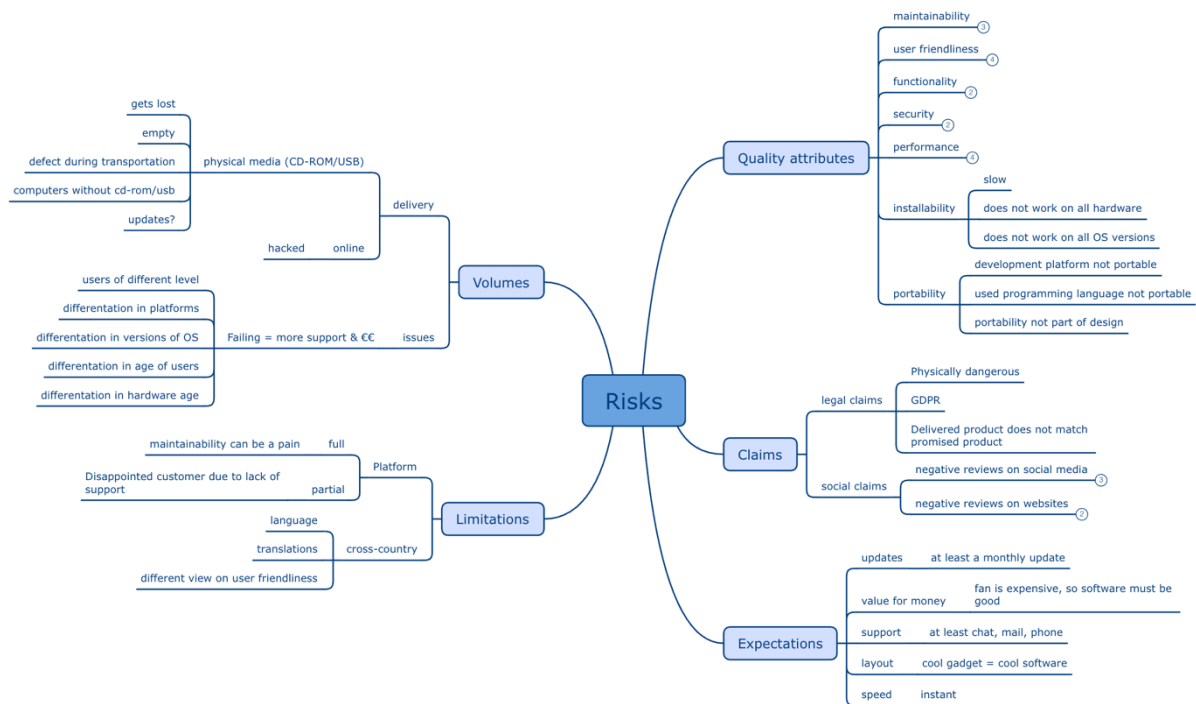
Imagine creating a visualization that explains how to make toast. When people are asked to visualize this process, they often produce very different diagrams, each reflecting a different perspective. Some focus on the toast itself, others on the toaster, the internal mechanics of the toaster, or even the entire supply chain involved in producing toast.

Despite these differences, all of these visualizations share two fundamental elements that are used to represent a system:

- Nodes (the objects or entities in the system, such as the toast, toaster, or people)
- Links between the nodes (often represented by arrows) that show how the nodes are connected or interact

Visualizing *static* information with a mind map

The mind map is a visualization that holds static information.



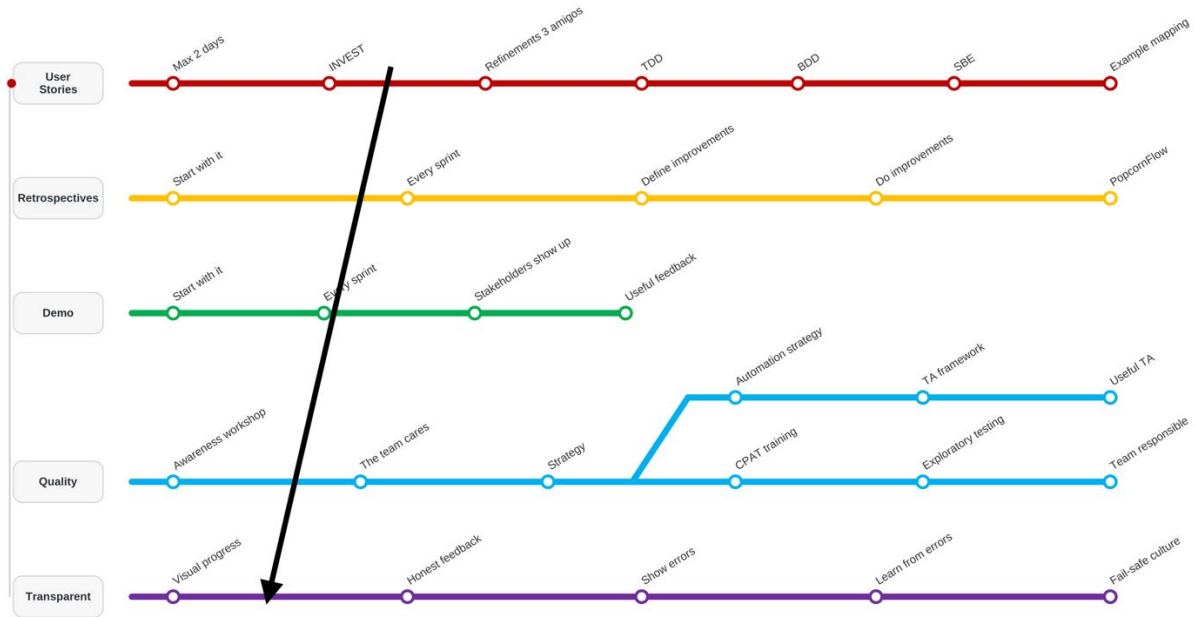
Visualizing *process* information with a PopcornFlow©

PopcornFlow© [VZ1] is a visualization method/tool to help your team move fast, learn faster and thrive via ultra-rapid experimentation. It consists of 7 stages:

Nr	Stage	Description
1	Problems & observations	What is the problem, which challenges do you have?
2	Options	What options could there be to solve a specific problem?
3	Possible experiments	What experiments could be performed based on the options?
4	Committed	Which experiments are chosen & what expectations are there?
5	Ongoing	Which experiments are currently in progress?
6	Review	How did the experiment go?
7	Next	Is the problem solved? Can the team continue with the next one? Should the team pick up another experiment? Should the team consider another option to solve the problem?

Visualizing *progress* information with a subway map

The metro route is the way to map improvements (from starting station to the end station) and each station on the way is a next step in the improvement [VZ2]. The line marks where you stand today and will gradually move to the right while you improve.



Chapter 4 – Implementation of models

Learning objectives

LO-4.1	K2	Explain what a model is
HO-4.1	HO-2	Practice modelling with words
LO-4.2	K2	Explain the limitations of models
LO-4.3	K2	Explain the value of Magritte's famous quote: "Ceci n'est pas une pipe."

On models

With a model, you try to capture the essentials of one's own mental world to communicate with others.

A model captures the essential elements of one's mental world, so that it can be communicated to others. Models can be created for almost anything. They may represent a product, such as a car or a house, but also an activity or event, such as a birthday party. Models are useful because thoughts and ideas are often personal and difficult to express, while the real world contains too much detail to fully grasp. By focusing on what matters most, models make it easier to understand, discuss, and share complex subjects.

René Magritte

As in everyday life, it is impossible to deal with software complexity without using models to bring order to the chaos. Nevertheless, it is important to remember that a model is not reality itself. René Magritte, the famous Belgian painter, illustrated this idea with his well-known quote "*Ceci n'est pas une pipe*": a picture (or model) is fundamentally different from the reality it represents [MA1], [MA2].

Chapter 5 – The Agile Test Model (ATM)

Please note: This is a shortened version of the ATM explanation as published in the AU-CPAT 2.0 syllabus.

Learning objectives

LO-5.1	K2	Recall the elements of the Agile Test Model (ATM)
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Three worlds

1. The client's needs are the starting point for any testing activity.
2. Concept world. It serves as a blueprint for realizing the client's complex software needs. These can be wireframes or prototype versions of software, user stories, system drawings, etc.
3. The actual software product. This is either a completely new, standalone product (for example, the release of a new app in an app store), or a partial product that forms part of a new system in development.

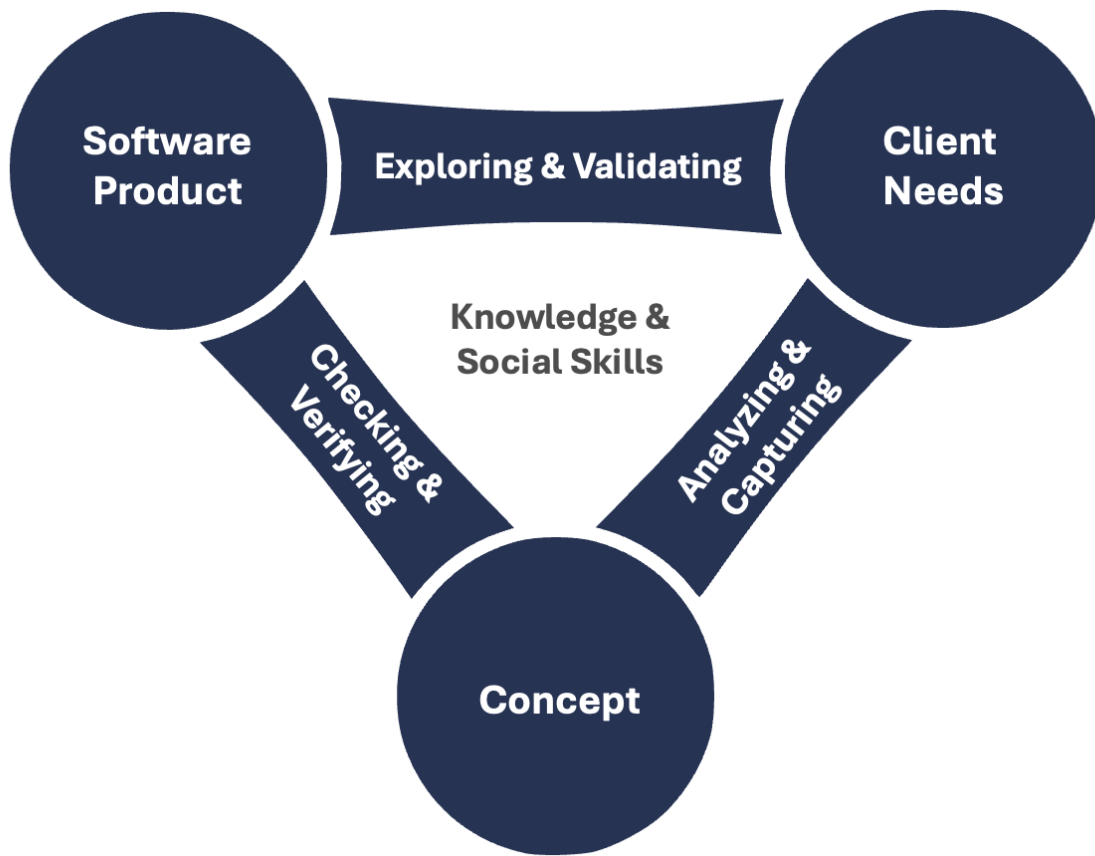
Three bridges and their application to software testing

All testing activities take place on the three bridges between these worlds:

1. The bridge between client needs and concept can be summarized by the terms “capture” (client-focused) or “analysis” (test-focused). Client requirements must be captured and translated into clear, objective concepts. All testing activities that help the team analyze client needs and concerns and reduce them to clear and unambiguous requirements apply to this bridge. Typical testing activities on this bridge include ‘three amigos’ sessions, risk analyses, and reviewing the concept documentation (focusing on omissions, ambiguities, and contradictions).
2. On the bridge between the concept and the software product, the software tester “verifies” (client-focused) or “checks” (test-focused) the software product based on the agreed-upon concept. Typical activities on this bridge include applying verification testing techniques and executing tests, whether manually or through automation.
3. The third bridge focuses primarily on how the realized software product relates to the real-world context within which it must function. On the one hand, only now can we search for hazards (exploration: identifying causes of potential product value depreciation) that were not anticipated during the analysis. On the other hand, new insights emerge from the client's real-life experience with the actual product (validation) and new client needs emerge based on these insights. Typical testing activities on this bridge include user acceptance testing, exploratory testing, bug hunts, and penetration testing.

Knowledge and social skills

The social skills and knowledge that software testers need to achieve their objectives within the dynamic social environment of agile teams. These competencies must be applied across all three bridges.



Chapter 6 – Storytelling

Learning objectives

LO-6.1	K1	Remember the four elements our brains are hardwired for
LO-6.2	K1	Recall the three basic elements that structure almost any traditional story
LO-6.3	K2	Explain how this structure relates to our day-to-day lives
LO-6.4	K1	Recall the six questions that relate to the heartbeat of a good story
LO-6.5	K2	Explain how you can apply the theory concerning storytelling on a test story
LO-6.6	K2	Explain what dopamine, oxytocin and endorphin do for people
LO-6.7	K2	Explain what story you must tell to trigger dopamine, oxytocin and endorphin
HO-6.1	HO-2	Tell a one-minute story that addresses dopamine, oxytocin or endorphin

On stories

In an agile environment, software testers need to communicate frequently. They must connect with team members, encourage quality-focused behavior, educate stakeholders about testing and quality, and influence decisions related to requirements and product direction. Effective storytelling supports all of these activities.

Humans are naturally drawn to stories because they strengthen connection, information gathering, support learning, and facilitate decision-making. However, people respond best to well-structured stories, which tend to follow a common pattern [ST1]: a call to adventure, one or more challenges, and a takeaway. These elements align closely with the way the human brain processes experiences on a daily basis [ST2]. By following the rhythm of a well-crafted story, six key questions are answered, each contributing to one of the three pillars of effective storytelling.

- What is the context?
- What happens?
- What is the (moral) conflict?
- What actions are taken?
- What is the outcome?
- What is the takeaway?

Now what about telling a test story?

Three questions derived from the theory on storytelling are of importance:

- What and why? – What part of the product is being investigated, and why is it being tested?
- How did it go? – What actions were taken, and what challenges were encountered?
- What was found? – What were the results and takeaways?

Extra

To provide additional insight into the social objectives of storytelling, neuroscience [ST3] offers a useful perspective on the ways stories can be used:

- Dopamine (use a cliffhanger): makes people more motivated and improves memory retention.
- Oxytocin (tell an emotional story): makes people more generous and triggers the need to connect.
- Endorphins (tell a joke): makes people more creative and relaxed.

Chapter 7 – Critical thinking

Learning objectives

LO-7.1	K1	Recall the three pillars of critical thinking
LO-7.2	K1	Recall the key skills associated with each pillar.
HO-7.1	HO-3	Recognize a logical fallacy
LO-7.3	K2	Explain the difference between heuristic and critical thinking
LO-7.4	K1	Remember the definition of critical thinking
HO-7.2	HO-3	Learn how to debate on a statement

Definition

Critical thinking is the analysis of available claims and arguments by the application of rational and unbiased thinking and evaluation in order to form a judgment. [CT1]

Three pillars

Critical thinking relies on three pillars

1. Information gathering (facts, intentions and getting a total picture)
2. Argumentation assessing (investigation of claims and assessing the quality and type (probability or deductive) of the associated conclusions)
3. Self-regulation (assess your own assumptions and limitations and correct logical errors)

Critical thinking versus heuristic thinking

Although heuristic thinking (fast judgment and estimation) [CT2] is often sufficient, and critical thinking can be socially challenging or even uncomfortable because it may challenge deeply held beliefs, critical thinking remains an essential skill for software testers. The main reason is that heuristic thinking can easily lead to product and process issues, for example through logical fallacies and cognitive biases. Critical thinking helps avoid these pitfalls by encouraging a careful examination of challenges, the creation of a clear overview, the analysis of claims and arguments, and the critical evaluation of assumptions, beliefs, and reasoning.

Debate

Debating is a practical way to experience the value of critical thinking. To conduct a debate, one team develops arguments (claims and conclusions) supporting a randomly selected statement, while a second team develops arguments opposing it. Each team is given an agreed amount of time to present their case. A moderator facilitates the discussion, and a jury determines the winner of the debate.

Chapter 8 – Recognizing and mitigating biases

Learning objectives

LO-8.1	K1	Remember the definition of ‘bias’
LO-8.2	K2	Understand the Anchoring bias
LO-8.3	K2	Understand the Happy path bias
LO-8.4	K2	Understand the Authority bias
LO-8.5	K1	Remember HALT (Hungry, Angry, Lonely, Tired) as a mnemonic
LO-8.6	K2	Understand how thinking of the relational impact triggers System 2
LO-8.7	K2	Understand how the outsider perspective triggers System 2
LO-8.8	K1	Remember to explicitly state assumption triggers System 2
LO-8.9	K2	Understand how asking “what if we are wrong?” triggers system 2
LO-8.10	K1	Recall that pair testing, peer review, and exploratory testing can help mitigate the effects of cognitive biases.

Definition

A bias is a systematic thinking error that influences how we interpret information and make decisions. Daniel Kahneman describes two modes of thinking [CT2]: System 1 is fast, automatic, and intuitive, while System 2 is slow, deliberate, and effortful. Biases tend to arise when we rely on System 1 in moments that call for the careful reasoning of System 2, so the techniques below are ways to deliberately trigger System 2.

Three biases are of importance for a tester:

Anchoring bias: the tendency to depend too heavily on the initial piece of information received (the anchor) when making decisions. This anchor then serves as a reference point for all subsequent judgments [BS2].

Happy path bias: the tendency to focus on scenarios in which everything works as expected while underestimating real-world complexity.

Authority bias: the tendency to give greater weight to a statement or opinion because it comes from a perceived authority figure, rather than evaluating the evidence itself [BS3].

How to overcome biases

- Are you hungry, angry, lonely, or tired? Avoid making important decisions when experiencing any of these conditions, as heuristic thinking is more likely to dominate.
- Think of the relational impact when making decisions: who is affected by your decision?
- Rational analysis: when a situation becomes complex, deliberately switch to system two (critical thinking).
- Outsider perspective: ask a knowledgeable person for a well-informed second opinion.
- Reflect on the past: have you ever been in a situation like this one? What did you decide and what happened?
- State assumptions explicitly: making assumptions visible makes it easier to challenge and validate them.
- Asking “What if we are wrong?”: this question automatically interrupts heuristic thinking.

- When focusing on software testing: think of pair testing, peer reviews, exploratory testing (structured with a charter).

Chapter 9 – Giving and receiving feedback

Learning objectives

LO-9.1	K1	Recall the definition of feedback
LO-9.2	K1	Recall the structure of activating feedback (Hamburger)
LO-9.3	K2	Explain the evaluating feedback method (Pendleton)
LO-9.4	K2	Explain why people have trouble giving or receiving corrective feedback
LO-9.5	K1	Recall what SCORE stands for in the corrective feedback method
LO-9.6	K1	Recall the ground rules concerning effective feedback
HO-9.1	HO-2	Practice the SCORE corrective feedback method

Definition

Feedback is defined as: “Information as a reaction to a product, a process, or a person’s performance of a task, which is used as a basis for improvement” [FB1].

Four methods for giving feedback

1. Motivational feedback: give a compliment
2. Activating feedback: the hamburger (give a compliment, state the point of improvement, close with a compliment. The three elements need to have a logical relation)
3. Evaluating feedback: Pendleton (what went well, what can be done better? It is crucial that the evaluated person answers these questions before the evaluator does, creating a psychologically safe environment for feedback)
4. Correcting feedback: humans often are resistant to giving and receiving feedback. This is because humans are normally empathy-oriented and preoccupied with short term goal orientation and due to fight, flight, or freeze responses when receiving feedback [FB2].

The SCORE method [FB3, FB4] addresses these mental errors:

S. **Start** with a request for time. Ask whether this is a good moment for feedback. This gives the receiver a heads-up and makes the upcoming feedback feel less threatening.

C. Describe the **Context**: what happened and where? Who were involved?

O. Describe the **Observation**: what was said and done by the feedback receiver?

R. Describe the **Result**: what were the consequences, and what feelings did the situation create for the feedback giver? And finally:

E. **End** with an invitation to describe the situation as experienced by the feedback receiver.

Ground rules

Make feedback about identifiable, concrete, immediate behavior and keep it personal (“I see”, “I feel”), keep it private without public, no ego will be threatened. Focus on behavior (not character) and keep in mind that feedback is to help the other to succeed.

Chapter 10 – Negotiation techniques

Learning objectives

HO-10.1	HO-3	Execute a negotiation called ‘the ultimatum game’.
LO-10.1	K1	Know that people take decisions on an emotional, not a rational basis
LO-10.2	K1	Know the three pillars of negotiating based on the work of Voss & Raz
LO-10.3	K1	Memorize the 18 elements organized under the three pillars
LO-10.4	K2	Explain the concept of a BATNA
LO-10.5	K2	Explain the role of alternatives in negotiation preparation
LO-10.6	K2	Explain the concept of an ‘accusation audit’
LO-10.7	K2	Explain the power of ‘it's not about you’, empathy, and summarizing
LO-10.8	K2	Explain why one should bring emotions to the table when exploring
LO-10.9	K2	Explain the power of adaptation when exploring
LO-10.10	K2	Explain the phrase “do not split the difference”
LO-10.11	K2	Explain why the interlocutor should define the solution
LO-10.12	K2	Explain the concept of ‘the magic how’
LO-10.13	K2	Explain the phrase “go to the balcony”.
LO-10.14	K2	Explain why one should ‘look for a no’
LO-10.15	K2	Explain what is meant with ‘outline the loss’ while negotiating
HO-10.2	HO-1	Execute a negotiation with humans.

Introduction

Negotiation is essentially a way of obtaining what is needed when interacting with other people. Given the unique position of software testers within agile teams, they often need to ensure that their perspectives are understood and that the conditions required to perform their work effectively are in place. Therefore, the ability to negotiate effectively is essential for obtaining what is needed while maintaining healthy relationships with team members and stakeholders. So, how can an effective negotiation be conducted?

Never split the difference

Based on the brain research of Damásio [NE1] and experiments such as the Ultimatum Game [NE2], it has been known since the 1990s that humans need emotions to make decisions and are far from purely logical when justifying their choices.

In the 2010s, FBI negotiator Chris Voss [NE3] developed an approach that combines established negotiation techniques with the often-irrational nature of human behavior. See also [NE4], [NE5]

This approach is built on three pillars:

Preparation

- P1: formulate a goal. What do you want out of the negotiation?
 - P1A: formulate a BATNA. BATNA stands for “Best Alternative To a Negotiated Agreement”. What can you achieve without negotiating at all?
- P2: make a summary. Create a picture on what both parties want, and the elements that dictate or can possibly change that need.
- P3: formulate questions. “What are you trying to achieve? How would you like to do that?”

- P4: are there alternative ways to reach an agreement? For example, if the price is too high, the other party may be able to offer a service instead.
- P5: the accusation audit. A way to create trust is to accuse your own behavior or position. For example: “You might think that, based on what you saw of me until now in other situations, that I’m stubborn. You are right, I really can be. But I only behave that way when I feel misunderstood and trapped in that experience. You can help me then by asking me if I feel misunderstood, and what the reasons are.”

Exploration

- E1: it is not about you. Focusing on the (non-)verbal communication of your interlocutor brings your own mind, needs, sorrows to rest and broaden the channel of information.
- E2: be empathetic. Stand in the shoes of your interlocutor, take the “second person” view.
- E3: summarize. If you summarize what your partner has said, he/she will feel more understood.
- E4: keep asking. To get a clear picture, one should push for the root of the problem.
- E5: bring emotions to the table. Negative emotions tend to undermine the negotiations if they are not put into the open. If you notice resentment, anger, fear, mention them and let your interlocutor elaborate.
- E6: express your accusation audit. Express what you have prepared (P5).
- E7: adapt. Humans trust themselves. If you ‘talk and walk’ like your interlocutor, trust goes up.

Negotiation

- N1: don’t split the difference. In a negotiation, humans tend to go for a compromise to get rid of the nasty tension. Suppress that feeling; you will not realize your goals, or those of your interlocutor.
- N2: let your partner define the solution. Humans need control. If they come up with the solution, they are more empowered to back up that solution than when someone else defines it.
- N3: use the magic “how”? When your partner pushes for a solution that lays a great burden on you (“you must test these 500 cases before the week is over!”), asking “How?” involves her or him. The involvement triggers empathy, so that agreed upon results become more realistic and humane.
- N4: “go to the balcony.” If things heat up, and fierce emotions interfere, interrupt the negotiation. While being alone, remember why a successful outcome of the negotiation is important.
- N5: Allow room for a ‘No’. Giving people the opportunity to say ‘no’ or decline helps them feel safe and in control, creating a better foundation for constructive dialogue.
- N6: outline the loss. Paint the picture of the loss for you and your partner if the negotiation is unsuccessful.

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