Preparation Guide

Edition 201804

Content

1. Overview

EXIN Agile Scrum Master [ASM.EN]

Scope

The Scrum Master is responsible for ensuring Scrum is understood and enacted. Scrum Masters do this by facilitating the Scrum Team in adhering to Scrum theory, practices, and rules.

In order to do this, the Scrum Master role struggles with the apparent contradiction of the Scrum Master as both a servant-leader to the team and also someone with no authority. The Scrum Master is responsible for maximizing the throughput of the team and for assisting team members in adopting and using Scrum. A successful Scrum Master influences others, both on the team and outside it. The Scrum Master helps those outside the Scrum Team understand which interactions with the Scrum Team are helpful and which aren't.

Summary

EXIN Agile Scrum Master is a certification that looks to confirm both skills and knowledge of the Agile framework and Scrum methodology.

Agile Scrum is about working together to successfully reach a goal. Agile methodologies are popular approaches in software development and are increasingly being used in other areas. Scrum practices include establishing cross-functional and self-managed teams, producing a working deliverable at the end of each iteration or Sprint. This certification focuses on adopting Agile or Scrum in the workplace and taking on the role of Scrum Master.

Context

The exam EXIN Agile Scrum Master is part of the EXIN Agile Scrum qualification program.

Target group

The Agile way of thinking is best known in the field of software development but the principles are increasingly being applied in other types of projects. Scrum is the most used Agile methodology and is suitable for all professionals looking to keep their knowledge up to date with the latest developments in the fields of IT and Project Management, particularly those leading or participating in projects. In particular, the certification is suitable for professionals working in an Agile context and who have the ambition to facilitate a Scrum team by assuming the role of a Scrum Master.

Requirements for certification

- Successful completion of the EXIN Agile Scrum Master exam.
- Successful completion of an EXIN Accredited EXIN Agile Scrum Master Training including Practical Assignments.

Knowledge of Scrum terminology, for instance through the EXIN Agile Scrum Foundation exam, is strongly recommended.

Examination details

Examination type:	Multiple-choice questions
Number of questions:	40 questions
Pass mark:	65%
Open book/notes:	No
Electronic equipment/aides permitted:	No
Time allotted for examination:	90 minutes

The Rules and Regulations for EXIN's examinations apply to this exam.

Bloom level

The EXIN Agile Scrum Master certification tests candidates at Bloom Level 2, 3 and 4 according to Bloom's Revised Taxonomy:

- Bloom Level 2: Understanding – a step beyond remembering (Level 1). Understanding shows that candidates can comprehend what is presented and can evaluate how the learning material may be applied in their own environment.
  This type of questions aims to demonstrate that the candidate is able to organize, compare, interpret and choose the correct description of facts and ideas.
- Bloom Level 3: Applying – shows that candidates have the ability to make use of information in a context different from the one in which it was learned.
  This type of questions aims to demonstrate that the candidate is able to solve problems in new situations by applying acquired knowledge, facts, techniques and rules in a different, or new way. The question usually contains a short scenario.
- Bloom level 4: Analyzing – shows that candidates have the ability to break learned information into its parts to understand it. This Bloom level is mainly tested in the Practical Assignments. The Practical Assignments aim to demonstrate that the candidate is able to examine and break information into parts by identifying motives or causes, make inferences and find evidence to support generalizations.

Training

Contact hours

The recommended number of contact hours for this training course is 16. This number includes group assignments, exam preparation, and short coffee breaks. Not included are: homework, practical assignments, the exam session and lunch breaks. The recommended number of hours for the Practical Assignments is a maximum of 8. The Practical Assignments can be completed outside of the training. They may also be included in the training if the training duration is extended.

Indication study effort

120 hours, depending on existing knowledge. The literature matrix in chapter *4. Literature* in this Preparation Guide references the body of knowledge that is tested in the exam.

Training organization

You can find a list of our accredited training organizations at www.exin.com.

2. Exam requirements

The exam requirements are specified in the exam specifications. The following table lists the topics of the module (exam requirements) and the subtopics (exam specifications).

Exam requirement	Exam specification	Weight
1. Agile way of thinking		**15%**
	1.1 Agile concepts	5%
	1.2 Continuously improving the process	2.5%
	1.3 Other frameworks and other Agile frameworks	5%
	1.4 Applying Agile principles to IT Service Management	2.5%
2. Scrum Master role		**22.5%**
	2.1 Responsibilities and commitment	7.5%
	2.2 Coaching the team and mediating	7.5%
	2.3 Other roles (Product Owner, Development Team)	7.5%
3. Agile Estimating, Planning, Monitoring and Control		**32.5%**
	3.1 Writing and maintaining the Product and Sprint Backlog	7.5%
	3.2 Agile Planning	5%
	3.3 Agile Estimation	10%
	3.4 Tracking and communicating progress	7.5%
	3.5 Staying in control	2.5%
4. Complex projects		**12.5%**
	4.1 Scaling Agile projects	5%
	4.2 Suitability of Agile for different types of projects	5%
	4.3 Agile administration in tooling and tool integration	2.5%
5. Adopting Agile		**17.5%**
	5.1 Introducing Agile	7.5%
	5.2 Self-organization	5%
	5.3 Agile requirements and proper environment	5%
	Total	100%

Exam specifications

1. Agile way of thinking

1.1. Agile concepts

The candidate can…

1.1.1 explain the Agile way of thinking

1.1.2 explain how Agility brings predictability and flexibility

1.2 Continuously improving the process

The candidate can…

1.2.1 explain how to use continuous improvement

1.3 Other frameworks and other Agile frameworks

The candidate can…

1.3.1 recognize other frameworks and methodologies: Waterfall, Crystal, Lean, XP, DSDM, DevOps.

1.4 Applying Agile principles in IT Service Management

The candidate can…

1.4.1 explain how to apply Agile principles within IT Service Management

2. Scrum Master role

2.1 Responsibilities and commitment

The candidate can…

2.1.1 explain which tasks and responsibilities belong to the Scrum Master role

2.1.2 explain which solutions are suitable for solving problems

2.1.3 explain which tools to use to facilitate the team

2.2 Coaching the team and mediating

The candidate can…

2.2.1 explain when and how to mediate through conflict

2.2.2 explain how to coach and challenge the team

2.2.3 explain the importance of training

2.3 Other roles (Product Owner, Development Team)

The candidate can…

2.3.1 explain all roles within the Scrum framework

3. Agile Estimating, Planning, Monitoring and Control

3.1 Writing and maintaining the Product and Sprint Backlog

The candidate can…

3.1.1 explain why a good Definition of Done is so important

3.1.2 create and recognize good User Stories

3.1.3 explain how to maintain the Product Backlog and how to add Product Backlog Items

3.2 Agile Planning

The candidate can…

3.2.1 explain iterative planning in all the planning moments: Roadmap, Release and Sprint Planning

3.2.2 explain the role of the Scrum Master in all the planning moments: Roadmap, Release and Sprint Planning

3.3 Agile Estimation

The candidate can…

3.3.1 explain when and how to estimate using Story Points, Ideal Hours and Ideal Days

3.3.2 explain how to guide a planning session, with and without Planning Poker

3.3.3 recognize errors in estimation

3.3.4 explain how to calculate the ROI (Return on Investment)

3.4 Tracking and communicating progress
The candidate can…
3.4.1 identify impediments, deviations, roadblocks and other obstacles that influence the progress positively and negatively
3.4.2 explain how to create Information Radiators, how to interpret them and how to act on the results
3.4.3 explain commonly used tracking methods (Burn-Down Chart, Velocity…)
3.5 Staying in control
The candidate can…
3.5.1 explain how to manage issues, bugs and informing people outside of the team

4. Complex projects
4.1 Scaling Agile projects
The candidate can…
4.1.1 explain how to use the Product Backlog in a scaled environment
4.1.2 explain how to scale to larger teams using Scrum-of-Scrums
4.2 Suitability of Agile for different types of projects
The candidate can…
4.2.1 explain in which cases it is not possible to use Agile
4.2.2 identify the limits of a Scrum Team
4.3 Agile administration in tooling and tool integration
The candidate can…
4.3.1 explain which tools can help a team to use or adopt Agile and thereby increase the quality of the development process

5. Adopting Agile
5.1 Introducing Agile
The candidate can…
5.1.1 explain which project management activities are important to include in the transition plan
5.1.2 explain which milestones are important in the transition
5.1.3 explain how to deal with resistance to change
5.2 Self-organization
The candidate can…
5.2.1 explain what self-organization means and how project management is shared
5.2.2 explain what it means to have a cross-functional team
5.3 Agile requirements and proper environment
The candidate can…
5.3.1 explain what changes in culture need to be made before adopting Agile
5.3.2 explain what physical changes need to be made before adopting Agile

3. List of Basic Concepts

This chapter contains the terms and abbreviations with which candidates should be familiar.

Please note that knowledge of these terms alone does not suffice for the exam; the candidate must understand the concepts and be able to provide examples

Affinity estimation
ADAPT (Awareness, Desire, Ability, Promote and Transfer)
Agile Manifesto

Burn-down (bar) chart
Champion skeptic
CMM Key Practice Area (KPA)
Coach
Commitment
Conserver
Continuous integration
Crystal
Customer
Customer Relationship Management System (CRM)
Customer Service Management System
Daily Scrum / stand-up
Definition of Done (Done)
DevOps
Diehard
Distributed team
DSDM
Elapsed time
Enterprise Transition Community (ETC)
Epics
Escaped defect
Estimation
Extreme programming (XP)
Follower
Gantt Chart
Ideal hours/ Ideal days
Improvement Community (IC)
Increment
Information radiator
Internal coaching
Net Present Value (NPV)
Originator

Pair programming
Planning
Planning onion
Planning poker
Pragmatist
Product Backlog
Product Backlog Item (PBI)
Product Owner
Refactoring
Release Burn Up
Release Burn-Down (bar) chart
Release planning

Resistance
Return on Investment (ROI)
Saboteur
Scrum
Scrum Master
Scrum-of-Scrums
Skeptic
Splitting teams
Sprint
Sprint Backlog
Sprint Backlog Item (SBI)
Sprint Planning
Sprint Retrospective
Sprint Review
Story point
Task Board
Team
Test-driven (software) development
Time-box/Time-boxing
Triangulation

Internal Rate of Return (IRR)
IT Service Management (ITSM)
ITIL
Lean
MoSCoW
User Story
Velocity of the team
Waste
Waterfall
Workspace

4. Literature

Exam literature

The knowledge required for the Agile Scrum Master exam is covered in the following literature:

A. Cohn, Mike
Succeeding with Agile: Software Development Using Scrum
Pearson Education (2009)
http://www.amazon.com/Succeeding-Agile-Software-Development-Using/dp/0321579364

B. Cohn, Mike
Agile Estimating and Planning
Prentice Hall (2005)
http://www.amazon.com/Agile-Estimating-Planning-Mike-Cohn/dp/0131479415

C. Schwaber, Ken & Sutherland, Jeff
The Scrum Guide™ - The definitive guide to Scrum: The Rules of the Game
Scrum.Org and ScrumInc. (latest version)
http://www.scrumguides.org/docs/scrumguide/v1/Scrum-Guide-US.pdf

D. http://www.scaledagileframework.com/

E. Peter Measey
Agile and ITIL and how they integrate
British Computer Society
http://bit.ly/agile_and_itil

Additional literature

F. Schwaber, Ken
Agile Project Management with Scrum (Developer Best Practices)
Microsoft Press (2004)
http://www.amazon.com/Agile-Project-Management-Developer-Practices/dp/073561993X

Comment

Additional literature is for reference and depth of knowledge only.

Literature matrix

Exam requirement and specification			Literature
1. Agile way of thinking			
	1.1	Agile concepts	
	1.1.1	Explain the Agile way of thinking	A, Chapter 2
	1.1.2	Explain how Agility brings predictability and flexibility	A, Chapter 5, 14, 15, C
	1.2	Continuously improving the process	
	1.2.1	Explain how to use continuous improvement	A, Chapter 4, 7, C.
	1.3	Other frameworks and other Agile frameworks	
	1.3.1	Recognize other frameworks and methodologies: Waterfall, Crystal, Lean, XP, DSDM, DevOps.	B, Chapter 17 and EXIN Basic Training Material
	1.4	Applying Agile principles to IT Service Management	
	1.4.1	Explain how to apply Agile principles within IT Service Management	A, Chapter 14, E
2. Scrum Master role			
	2.1	Responsibilities and commitment	
	2.1.1	Explain which tasks and responsibilities belong to the Scrum Master role	A, Chapter 7
	2.1.2	Explain which solutions are suitable for solving problems	A, Chapter 6, 7, 17
	2.1.3	Explain which tools to use to facilitate the team	A, Chapter 7, 20
	2.2	Coaching the team and mediating	
	2.2.1	Explain when and how to mediate through conflict	A, Chapter 18
	2.2.2	Explain how to coach and challenge the team	A, Chapter 3, 18
	2.2.3	Explain the importance of training	A, Chapter 6, 7, 11
	2.3	Other roles (Product Owner, Development Team)	
	2.3.1	Explain all roles within the Scrum framework	A, Chapter 7, 10, 11, C
3. Agile Estimating, Planning, Monitoring and Control			
	3.1	Writing and maintaining the Product and Sprint Backlog	
	3.1.1	Explain why a good Definition of Done is so important	A, Chapter 14, C
	3.1.2	Create and recognize good User Stories	A, Chapter 12, 13, B, Chapter 12
	3.1.3	Explain how to maintain the Product Backlog and how to add Product Backlog Items	A, Chapter 13
	3.2	Agile Planning	
	3.2.1	Explain iterative planning in all the planning moments: Roadmap, Release and Sprint Planning	B, Chapter 3, 13, 17
	3.2.2	Explain the role of the Scrum Master in all the planning moments: Roadmap, Release and Sprint Planning	B, Chapter 15, C

	3.3	Agile Estimation	
	3.3.1	Explain when and how to estimate using Story Points, Ideal Hours and Ideal Days	B, Chapter 4, 5, 8 ,14
	3.3.2	Explain how to guide a planning session, with and without Planning Poker	B, Chapter 6, 14, C
	3.3.3	Recognize errors in estimation	B, Chapter 1, 7 and 16
	3.3.4	Explain how to calculate the ROI (Return on Investment)	B, Chapter 10
	3.4	Tracking and communicating progress	
	3.4.1	Identify impediments, deviations, roadblocks and other obstacles that influence the progress positively and negatively	B, Chapter 19
	3.4.2	Explain how to create Information Radiators, how to interpret them and how to act on the results	B, Chapter 19, 20
	3.4.3	Explain commonly used tracking methods (Burn-Down Chart, Velocity, …)	B, Chapter 19
	3.5	Staying in control	
	3.5.1	Explain how to manage issues, bugs and informing people outside of the team	B, Chapter 14, 20
4. Complex projects			
	4.1	Scaling Agile projects	
	4.1.1	Explain how to use the Product Backlog in a scaled environment	A, Chapter 17
	4.1.2	Explain how to scale to larger teams using Scrum-of-Scrums	A, Chapter 17
	4.2	Suitability of Agile for different types of projects	
	4.2.1	Explain in which cases it is not possible to use Agile	A, Chapter 15, 17, C
	4.2.2	Identify the limits of a Scrum Team	A, Chapter 10, 17, C
	4.3	Agile administration in tooling and tool integration	
	4.3.1	Explain which tools can help a team to use or adopt Agile and thereby increase the quality of the development process	A, Chapter 2, 3, 18
5. Adopting Agile			
	5.1	Introducing Agile	
	5.1.1	Explain which project management activities are important to include in the transition plan	A, Chapter 2, 5, 8
	5.1.2	Explain which milestones are important in the transition	A, Chapter 2, 3
	5.1.3	Explain how to deal with resistance to change	A, Chapter 6
	5.2	Self-organization	
	5.2.1	Explain what self-organization means and how project management is shared	A, Chapter 10
	5.2.2	Explain what it means to have a cross-functional team	A, Chapter 10, 11, B, Chapter 6

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