Preparation Guide

Edition 202307

Content

1. Overview

EXIN Kanban Foundation (KANBANF.EN)

Scope

The EXIN Kanban Foundation certification validates a candidate's knowledge on:

- the benefits of Kanban
- continuous improvement
- implementing Kanban
- scaling Kanban

Summary

The Japanese word 'kanban', means 'visual board' or 'sign'. Kanban was developed after World War II by Taiichi Ohno and applied at Toyota as a system for just-in-time manufacturing.

In the years after 2000, Kanban method was no longer just applied to manufacturing, but also to software development, product and service development, IT operation, human resources, marketing, sales, and anywhere else where processes can be improved.

Kanban has six core practices:

- visualize the flow of work
- limit work-in-progress (WIP)
- manage the flow
- make process policies explicit
- implement feedback loops
- improve collaboratively, evolve experimentally

This certification focuses on understanding the principles of Kanban and applying them in practice with the help of Kanban tools.

Context

The EXIN Kanban Foundation certification is part of the EXIN Kanban qualification program.

Target group

The EXIN Kanban Foundation certification is tailored to the needs of:

- Developers, Scrum Masters and Product Owners
- project and process professionals
- managers and teams using Kanban to manage daily operational activities, e.g. DevOps team members
- business professionals, for example in HR, finance, marketing, production, and support
- anyone who wants to optimize workflow

Requirements for certification

- Successful completion of the EXIN Kanban Foundation exam.

Examination details

Examination type:	Multiple-choice questions
Number of questions:	40
Pass mark:	65% (26/40 questions)
Open book:	No
Notes:	No
Electronic equipment/aides permitted:	No
Exam duration:	60 minutes

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

Bloom level

The EXIN Kanban Foundation certification tests candidates at Bloom level 2 and 3 according to Bloom's Revised Taxonomy:

- Bloom level 2: Understanding – a step beyond remembering. Understanding shows that candidates 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: Application – 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. These questions usually contain a short scenario.

Training

Contact hours

The recommended number of contact hours for this training course is 14. This includes group assignments, exam preparation and short breaks. This number of hours does not include lunch breaks, homework and the exam.

Trainers are expected to train candidates in how to use a Kanban tool in the training.

Indication study effort

56 hours (2 ECTS), depending on existing knowledge.

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 requirements	Exam specifications	Weight
1. Benefits of Kanban		**12.5%**
	1.1 Adaptability of Kanban	7.5%
	1.2 Kanban culture	5%
2. Continuous improvement		**32.5%**
	2.1 Introducing kaizen	12.5%
	2.2 Visualizing and improving the process	12.5%
	2.3 Requirements for change	7.5%
3. Implementing Kanban		**50%**
	3.1 Visualizing the work	10%
	3.2 Creating work item cards	10%
	3.3 Limiting work-in-progress (WIP)	5%
	3.4 Managing flow and cadence	7.5%
	3.5 Prioritization	10%
	3.6 Reducing variability	7.5%
4. Scaling Kanban		**5%**
	4.1 Kanban with distributed teams	2.5%
	4.2 Kanban in large projects	2.5%
	Total	**100%**

Exam specifications

1 Benefits of Kanban

1.1 Adaptability of Kanban

The candidate can…

1.1.1 explain how Kanban can be adapted to fit many situations.

1.1.2 explain why no two Kanban systems are the same.

1.1.3 explain how kaizen culture increases business value more than any individual practice.

1.2 Kanban culture

The candidate can…

1.2.1 recognize a high-trust culture in a scenario.

1.2.2 explain why Kanban cannot exist without cultural change.

2 Continuous improvement

2.1 Introducing kaizen

The candidate can…

2.1.1 explain why the essence of starting with Kanban is to change as little as possible.

2.1.2 explain the concept of kaizen culture as a fundament for continuous improvement.

2.1.3 explain how Kanban is used as an incremental method of change to reach continuous improvement in the organization.

2.1.4 explain why it is difficult to achieve a true kaizen culture.

2.1.5 identify if an organization has implemented all elements of kaizen culture in a scenario.

2.2 Visualizing and improving the process

The candidate can…

2.2.1 explain how mapping the workflow works.

2.2.2 explain why it is important to map the actual process followed and not the process that was agreed.

2.2.3 explain why it is important to make policies explicit.

2.2.4 explain which metrics can be used to show performance and improvement.

2.2.5 explain the benefit of thinking of any process as a set of policies.

2.3 Requirements for change

The candidate can…

2.3.1 explain the relationship between slack and continuous improvement.

2.3.2 identify opportunities for continuous improvement in a scenario.

2.3.3 discuss the usefulness of daily stand-up meetings, after meetings, and operations reviews.

3 Implementing Kanban

3.1 Visualizing the work

The candidate can…

3.1.1 explain why it is important to track the workflow visually.

3.1.2 explain how to manage and track issues.

3.1.3 explain the process of drawing a card wall.

3.1.4 explain the use of swim lanes on a task board.

3.2 Creating work item cards

The candidate can…

3.2.1 explain which information must be present on or with a work item card.

3.2.2 explain why it is useful to define work item types.

3.2.3 explain the importance of distinguishing different work item types.

3.3 Limiting work-in-progress (WIP)
The candidate can…
3.3.1 explain how limiting work-in-progress (WIP) shortens lead times in a scenario.
3.3.2 explain how to set work-in-progress limits (WIP-limits).
3.4 Managing flow and cadence
The candidate can…
3.4.1 explain the meaning of the concept of cadence.
3.4.2 explain when it makes sense to make on-demand or ad hoc deliveries.
3.4.3 explain what allocating capacity according to demand means.
3.4.4 identify a bottleneck and the best solution to the problem using the five focusing steps from the theory of constraints (ToC) in a scenario.
3.5 Prioritization
The candidate can…
3.5.1 explain the cadence and usefulness of queue replenishment meetings and release planning meetings.
3.5.2 identify the usefulness of backlog purge policies and an input cadence in a scenario.
3.5.3 explain how to use service level agreements (SLAs) with the help of classes of service.
3.6 Reducing variability
The candidate can…
3.6.1 explain why to establish a delivery cadence.
3.6.2 identify internal sources of variability in a scenario.
3.6.3 identify external sources of variability in a scenario.

4 Scaling Kanban

4.1 Kanban with distributed teams
The candidate can…
4.1.1 explain how to deal with working from home and geographically distributed teams.
4.2 Kanban in large projects
The candidate can…
4.2.1 explain how to scale Kanban to larger projects.

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.

ad hoc deliveries
after meeting
Agile
ambiguity
ante meeting
backlog triage
blocking issue
bottleneck
buffer
bug
capacity allocation
capacity constrained
capacity-constrained resources
change management principles
- start with what you do now
- agree to pursue improvement through evolutionary change
- encourage acts of leadership at every level

change request
classes of service
class-of-service mix
complex adaptive system
coordination costs
cumulative flow diagram
daily stand-up
defect
delivery cadence
demand analysis
Deming cycle
due date performance
elevation actions
exploitation/protection actions
feature
five focusing steps of the theory of constraints (ToC)
- identify the bottleneck
- exploit/honor the bottleneck
- subordinate the rest of the processes to the bottleneck
- elevate the bottleneck
- restart the process, re-check the bottleneck

flow
flow efficiency
improvement opportunity
improvement suggestion
input and output boundaries
input cadence
irregular flow
issue reporting
issue tracking
kaizen
Kanban practices
- visualize (the work, workflow and business risks)
- limit work-in-progress (WIP)
- manage flow
- make policies explicit
- implement feedback loops
- improve collaboratively, evolve experimentally

lead time
Lean
maintenance
muda
mura
non-instant availability
on-demand deliveries
operations review
prioritization
production defect
pull system
queue
queue replenishment meeting
reduction of variability
refactoring
release planning
release planning meeting
requirement
retrospective meeting
rework
service delivery principles
- focus on the customer
- manage the work; let people self-organize around it
- evolve policies to improve customer and business outcomes

shared resources
Six Sigma
slack
sticky notes
subordination actions
sustainable pace

swim lanes
tacit knowledge
theory of constraints (ToC)
throughput
Toyota Production System (TPS)
transaction costs
use case
user story
value
variability
waste elimination
waste reduction
work item
work item card
work item type
workflow
work-in-progress (WIP)
work-in-progress limit (WIP-limit)

4. Literature

Exam literature

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

A. David J. Anderson
Kanban: Successful Evolutionary Change for Your Technology Business
Blue Hole Press (2010)
ISBN: 9780984521401 (hardcopy)
ISBN: 9780984521429 (eBook)

Additional literature

B. Dominica Degrandis
Making Work Visible, Second Edition: Exposing Time Theft to Optimize Work & Flow
IT Revolution Press (2022)
ISBN: 9781950508498 (hardcopy)
ISBN: 9781950508501 (eBook)

Comment

Additional literature is for reference and depth of knowledge only.

Literature matrix

Exam requirements	Exam specifications	Reference
1. Benefits of Kanban		
	1.1 Adaptability of Kanban	Chapter 1, 2 & 3
	1.2 Kanban culture	Chapter 1 & 15
2. Continuous improvement		
	2.1 Introducing kaizen	Chapter 5, 15 & 16
	2.2 Visualizing and improving the process	Chapter 2, 4, 6 & 12
	2.3 Requirements for change	Chapter 3, 5, 7, 14 & 16
3. Implementing Kanban		
	3.1 Visualizing the work	Chapter 6, 7 & 20
	3.2 Creating work item cards	Chapter 6
	3.3 Limiting work-in-progress (WIP)	Chapter 2, 10, 15
	3.4 Managing flow and cadence	Chapter 2, 4, 6, 8, 9, 16 & 17
	3.5 Prioritization	Chapter 4, 7, 8, 9 & 11
	3.6 Reducing variability	Chapter 8, 18 & 19
4. Scaling Kanban		
	4.1 Kanban with distributed teams	Chapter 6
	4.2 Kanban in large projects	Chapter 13

Contact EXIN

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