BQF Academy

Lean
Body of Knowledge

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Introduction

This document contains the Lean Body of Knowledge for all four levels of certification.

- Lean Associate Practitioner
- Lean Practitioner
- Lean Advanced Practitioner
- Lean Master Practitioner

Each section contains

- A description of the audience
- An overview of the certification process
- Expectations for the practical assessment

This document should be used as a basis when preparing for certification

We appreciate that every implementation is different and not all tools are applicable to all situations.
We do expect to see a clear rationale for which tools were selected in each situation.
Our certifications are assessed by a range of licensed associates, each of whom will have variations on the outlined process, so please discuss specifics with your provider before your certification.

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Please get in touch with bqfacademy@bqf.org.uk if you have any questions

Lean Associate Practitioner

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Lean Associate Practitioner Certification Criteria

Certification Audience

A Lean Associate is a participant in structured continuous improvement initiatives at a front line team level. They can demonstrate facilitation of a range of basic lean tools, bringing about benefits at a local level. Approximately 6 months' relevant experience

Certification Process

1. Exam passed as set by licenced organisation

2. Leading on the application of three different basic Lean tools in 3 different contexts with clear documentation of the impact achieved or Involvement in a structured improvement project or kaizen event; leadership demonstrated on some aspects (e.g. process mapping, brainstorming, data analysis) with clear documentation of the impact achieved and feedback from the project lead on contribution

3. 30 minute review of project portfolio with Q&A by a licenced organisation - portfolio to be submitted in advance

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Lean Associate Practitioner Certification Criteria

The key areas assessed are as follows:

- How problems/opportunities were identified and selected
- Use of Lean tools and techniques – selection of appropriate tools and approaches, how well each was applied
- How the work was planned and managed
- How the voice of the customer was obtained and taken into account
- How change management aspects were undertaken and any particular challenges which were overcome
- How the team worked together
- What the effect on the process/process output was, what benefits ensued and what broader impact it had
- Confirmation that the work is complete and handed over to the process owner
- What learnings and recommendations were captured and how were they acted upon
- Quality and succinctness of the write-up and presentation

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Lean Associate Practitioner Certification Criteria

1. Expected Base Knowledge

A range of basic Continuous Improvement concepts such as:
· The importance of listening to and understanding the Voice of the Customer
· The importance of Gemba and experiencing the work first hand
· The importance of regular operational reviews to manage performance and prioritise problem solving
· Concept of improving flow by identifying and eliminating of waste using concepts such as the lean wastes and value add/non value add analysis
· Awareness of the fundamental 5 lean principles and associated concepts
· Workplace organisation and standardisation using concepts such as 5S and Visual Management
· The fundamentals of quality, the cost of poor quality and the importance of defect reduction and mistake proofing (Poka Yoke)
· The importance of working with teams up and downstream of your process
· Awareness of change management and what drives behaviours

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Lean Associate Practitioner Certification Criteria

2. Key Knowledge & Tools (industry dependent):

· Spaghetti diagrams, 5S and workplace organisation
· Standard Operating Procedures (SOPs)
· Waste identification (TIMWOODS)
· Visual management tools (e.g. simple dashboards, andon, visual mistake proofing, check sheets)
· Basic process mapping
· Creating and interpreting basic charts (pareto, run chart)
· Defect identification and reporting
· Basic problem solving tools and frameworks; PDCA thinking, problem statements, fishbone analysis, 5 Why
· Spaghetti diagrams, 5S and workplace organisation
· Standard Operating Procedures (SOPs)

3. Expected Behaviours

· Volunteers to support/ lead improvement initiatives, challenging the status quo
· Reviews and improves standardised work and processes, constructively challenging the status quo
· Identifies and highlights wastes, defects and areas for improvement

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Lean Practitioner

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Lean Practitioner
Certification Criteria

Certification Audience

A Lean Practitioner is a leader in structured continuous improvement initiatives. They can demonstrate leadership in implementing lean culture and setting up improvement projects using of a range of lean tools, bringing about benefits at a local level. Approximately 6 months' relevant experience

Certification Process

1. Exam passed as set by licenced organisation

2. Leading or co-facilitating on the application of 3 Lean methodologies in 3 different contexts with clear documentation of the impact achieved: e.g. A rapid improvement project or kaizen event on a small local problem with incorporating a range of relevant lean tools A sustained cultural deployment of visual management/ 5S/ standardisation at a local level with clear explanation of how it was deployed and sustained Use of process mapping to capture the current state/ wastes, identify problems/opportunities leading to process flow/quality improvements Implementation of regular action-driven team operational reviews using visual dashboards

3. 60 minute review of project portfolio with Q&A by a licenced organisation - portfolio to be submitted in advance

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Lean Practitioner Certification Criteria

The key areas assessed are as follows:

- How problems/opportunities were identified and selected
- Use of Lean tools and techniques – selection of appropriate tools and approaches, how well each was applied
- How the work was planned and managed
- How the voice of the customer was obtained and taken into account
- How change management aspects were undertaken and any particular challenges which were overcome
- How the team worked together
- What the effect on the process/process output was, what benefits ensued and what broader impact it had
- Confirmation that the work is complete and handed over to the process owner
- What learnings and recommendations were captured and how were they acted upon
- Quality and succinctness of the write-up and presentation

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Lean Practitioner Certification Criteria

1. Expected Base Knowledge

A range of basic Continuous Improvement concepts such as:
· The importance of listening to and understanding the Voice of the Customer and customer value
· The importance of Gemba and experiencing the work first hand
· The importance of regular operational reviews to manage performance and prioritise problem solving
· Concept of improving flow by identifying and eliminating waste using concepts such as the lean wastes; value demand/ failure demand and value add/non value add analysis
· Awareness of the fundamental 5 lean principles and associated concepts
· Workplace organisation and standardisation using concepts such as 5S and Visual Management
· An awareness of the different types of work and ways of managing this work; just in time, batch size reduction and single piece flow, runners, repeaters and strangers, product families, bottlenecks, work distribution and levelling, autonomous working
· Understanding customer demand and takt time
· An awareness of Lean management systems and leadership standard work
· The fundamentals of quality, the cost of poor quality and the importance of defect reduction and mistake proofing (Poka Yoke)
· The importance of working with teams up and downstream of your process to solve problems and promote flow
· Awareness of change management and what drives behaviours

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Lean Practitioner Certification Criteria

2. Key Knowledge & Tools (industry dependent):

· Basic problem solving tools and structured problem solving frameworks; PDCA thinking and A3, problem statements, fishbone analysis, 5 Why, and the available methods for running these e.g. Kaizen Event

· Voice of the Customer and how to translate these into CTQs

· Kano analysis and moments of truth

· Data collection, analysis and presentation using basic charts (pareto, histograms, run charts, summary statistics)

· Use of appropriate balanced metrics to understand performance

· Visual management tools (e.g. short interval control, simple dashboards, andon, visual mistake proofing, check sheets)

· Kanban, Spaghetti diagrams, 5S, SMED, waste walks and workplace organisation

· Standard Operating Procedures (SOPs)

· Waste identification (TIMWOODS)

· Basic process mapping

· Defect identification and reporting

· How to prioritise and select the best solutions and sustain improvements using tools such as visual management, FMEA and control plans

· OEE

· Basic problem solving tools and structured problem solving frameworks; PDCA thinking and A3, problem statements, fishbone analysis, 5 Why, and the available methods for running these e.g. Kaizen Event

· Voice of the Customer and how to translate these into CTQs

· Kano analysis and moments of truth

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Lean Practitioner Certification Criteria

3. Expected Behaviours

· Leads improvement initiatives
· Reviews, improves and standardises work and processes, identifying waste and defects and constructively challenging the status quo
· Facilitates and improves daily huddles and visual boards
· Coaches colleagues in Lean basics and problem solving
· Begins identifying cultural barriers to flow

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Lean Advanced Practitioner

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Lean Advanced Practitioner Certification Criteria

Certification Audience

A Lean Advanced Practitioner is a leader in structured continuous improvement initiatives. They can demonstrate leadership in implementing lean culture and setting up improvement projects using of a range of lean tools, bringing about benefits at a value stream level. They are able to support and coach lean practitioners with their projects. Approximately 2-4 years' relevant experience

Certification Process

1. Exam passed as set by licenced organisation

2. Leading on the application of a value stream project with clear documentation of the impact (current state v future state) or Leading on a cultural implementation of Lean tools and techniques across multiple functions with clear documentation on the people, customer and business impact and a separate implementation of three Lean methodologies* in three different contexts with clear documentation of the impact achieved: e.g. A rapid improvement project or kaizen event incorporating a range of relevant lean tools A sustained cultural deployment of visual management/ 5S/ standardisation at a local level with clear explanation of how it was deployed and sustained Use of process mapping to capture the current state/ wastes, identify problems/opportunities leading to process flow/quality improvements Implementation of regular action-driven team operational reviews using visual dashboards

3. 2-hour review of project portfolio with Q&A by a licenced organisation (see link) - portfolio to be submitted in advance

* Note: existing Lean Practitioners need only demonstrate the value stream project

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Lean Advanced Practitioner Certification Criteria

The key areas assessed are as follows:

- How problems/opportunities were identified with clear understanding of the business context
- Use of Lean tools and techniques – selection of appropriate tools and approaches, how well each was applied
- How the work was targeted, planned and managed
- How the voice of the customer was obtained and taken into account
- How change management aspects were undertaken and any particular challenges which were overcome
- How stakeholders were identified, engaged and managed
- How the team was selected and worked together and developed
- What the effect on the process/process output was, what benefits ensued and what broader impact it had
- What the broader cultural impact of the work has been and the benefits on the wider business' understanding and adoption of Lean
- Confirmation that the work is complete and handed over to the process owner
- What learnings and recommendations were captured and how were they acted upon
- Quality and succinctness of the write-up and presentation

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Lean Advanced Practitioner Certification Criteria

1. Expected Base Knowledge

A range of basic Continuous Improvement concepts such as:
· The importance of listening to and understanding the Voice of the Customer and customer value
· The importance of Gemba and experiencing the work first hand
· The importance of regular operational reviews to manage performance and prioritise problem solving
· Concept of improving flow by identifying and eliminating waste using concepts such as the lean wastes; value demand/ failure demand and value add/non value add analysis
· The fundamental 5 lean principles and associated concepts
· Workplace organisation and standardisation using concepts such as 5S and Visual Management
· Practical knowledge of different types of work and ways of managing this work; just in time, batch size reduction and single piece flow, runners, repeaters and strangers, product families, bottlenecks, work distribution and levelling, autonomous working, cell design
· Understanding of basic queueing theory
· Understanding customer demand and takt time
· Lean management systems and leadership standard work
· The fundamentals of quality, the cost of poor quality and the importance of defect reduction and mistake proofing (Poka Yoke)
· The importance of working with teams up and downstream of your process to solve problems and promote flow
· Change management and what drives behaviours
· Six stages of check to understand the current condition
· Experience of applying the Toyota Kata concepts

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Lean Advanced Practitioner Certification Criteria

2. Key Knowledge & Tools (industry dependent):

· Problem solving tools and structured problem solving frameworks; PDCA thinking and A3, including data collection, graphical and statistical analysis
· Different methods for most effectively running improvement sessions e.g. Kaizen Events, different brainstorming techniques, virtual and face to face workshops
· Voice of the Customer and how to translate these into CTQs
· Kano analysis and moments of truth
· Data collection, analysis and presentation using a range of graphical and statistical tools (e.g. pareto, histograms, run charts, summary statistics)
· Use of appropriate balanced metrics to understand performance
· Visual management tools (e.g. short interval control, visual dashboards, andon, visual mistake proofing, check sheets)
· Kanban, Spaghetti diagrams, 5S, SMED, waste walks, heijunka and workplace organisation
· Standard Operating Procedures (SOPs) their effective implementation
· Waste identification (TIMWOODS)
· A range of mapping techniques such as Value Stream Mapping, customer journey mapping, four fields mapping, swim lane etc
· Defect identification and reporting
· How to prioritise and select the best solutions and sustain improvements using tools such as visual management, FMEA and control plans
· Application of TPM and the use of OEE

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Lean Advanced Practitioner Certification Criteria

3. Expected Behaviours

· Routinely identifies and leads on improvement activities, coaching colleagues, leaders and practitioners in Lean and problem solving
· Is able to understand how to apply the concepts, tools and techniques effectively in a range of contexts
· Identifies cultural barriers to flow, and is able to bring people on the improvement journey whilst removing blockers
· Practises what they preach and manages their own work with a Lean approach
· Routinely identifies and leads on improvement activities, coaching colleagues, leaders and practitioners in Lean and problem solving

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Lean Master Practitioner

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Lean Master Practitioner
Certification Criteria

Certification Audience

A Lean Master is a Lean Advanced Practitioner who is working in a CI Leadership capacity at a strategic level in their organisation, leading projects and cultural change while supporting and developing Lean Practitioners and Advanced Practitioners. Approximately 4+ years' relevant experience

Certification Process

1. Exam passed as set by licenced organisation
2. A Lean Master must be previously certified as a BQF (or equivalent) Lean Advanced Practitioner or Black Belt
3. 1/2 day review of project portfolio with Q&A by a licenced organisation - portfolio to be submitted in advance

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Lean Master Practitioner Certification Criteria

1. Expected Experience (in addition to previous Lean Advanced Experience)

Note: the role of Lean Master is diverse depending on industry and job role. Listed below are some examples of the type of experience we expect to see.
· Deployment of a CI, Lean or similar cultural transformation across an organisation or part of an organisation
· Coaching, encouraging and supporting the use of the technical Lean tools across multiple levels of the business
· Creation and deployment of Lean and related training materials to support the organisation in its Continuous Improvement journey
· Working with senior stakeholders to build CI into the organisational ways of working
· Use of Advanced Lean techniques in day to day operations to drive improvements

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Lean Master Practitioner Certification Criteria

2. Expected Knowledge and further training

note; the role of Lean Master is diverse depending on industry and job role. Listed below are some examples of the type of further knowledge development we expect to see
· Courses on topics which enhance the Lean Master ability to deliver; more advanced statistical tools and models, advanced change management, leadership, coaching, wider systems and lean thinking, business agility, project management etc
· Further reading and study of relevant literature or other content; keeping up with the latest thinking
· Networking and exposure to other organisations and industry bodies, to understand the different approaches to improvement

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