



-
- V Creating World Class products
 - IV Creating capable processes
 - III Creating stable & efficient processes
 - II Creating a Continuous Improvement culture
 - I Creating a solid foundation

LEAN GREEN BELT SKILL SET

A GUIDELINE FOR LEAN GREEN BELT
TRAINING AND CERTIFICATION

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VERSION 1.2

Lean Six Sigma Academy®

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The structure of this document is based on the 'Continuous Improvement Maturity Model' - CIMM™. You have the permission to share and distribute this model in its original form by referencing the publisher and author, (LSSA®, Theisens et. al., 2014).

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INTRODUCTION

Within the domain of Lean individuals can be trained and certified at three different levels. These levels are called Lean Yellow Belt (Foundation), Lean Green Belt (Practitioner) and Lean Black Belt (Expert).

Table 1. *Overview of Lean Belt levels*

Belt level	Level
Yellow Belt	Foundation
Green Belt	Practitioner
Black Belt	Expert

The LSSA - Lean Six Sigma Academy® was established in September 2009 with the objective to develop an international recognized certification scheme for all Lean and Lean Six Sigma Belt levels.

Training is provided through 'Accredited Training Organizations' (ATOs). It is recommended that candidates receive training through an ATO to prepare for certification. Alternatively, candidates who wish to self-study have the option to apply directly for certification.

The Lean Green Belt certification consists of a theoretical and a practical part. You will receive a partial certificate for both elements. The full Lean Green Belt certificate requires a sufficient for both the theoretical and the practical part.

THEORETICAL ASSESSMENT CRITERIA

The assessment criteria for the theoretical exam are as follows:

- The theoretical exam consists of 40 multiple choice questions.
- The pass mark for the exams is set at 63% (25 marks or more required to pass).
- The duration of the exams is 120 minutes.
- The exams are Open book exams, where a maximum of 2 books are allowed. (eBook or Pdf's are not allowed)
- A calculator is allowed.
- You must be able to identify yourself with photographic ID.

If you pass you will receive a 'Partial certificate' from the LSSA that states you passed the theoretical exam. You will receive the 'Full certificate' if you pass the practical assessment within a maximum period of three years after passing the theoretical exam.

PRACTICAL ASSESSMENT CRITERIA

This section describes the assessment criteria for the practical part of Lean Green Belt certification. It is necessary to submit one practical projects that meets the following criteria:

- One large Kaizen or Lean project must be submitted per person. (A 5S implementation or a small Kaizen project is not adequate).
- The project must be submitted within three years after the theoretical exam.
- Each project has a financial impact of at least € 10,000 on an annual basis.
- The project must follow the VSM, PDCA or DMAIC roadmap (about 25 Powerpoint slides).
- Projects are signed off by the Champion and / or Financial controller. They hereby declare that the project has been carried out professionally and that improvements are guaranteed.
- The language of the submitted project is English, Dutch or German.
- Projects must be submitted no later than three years after theoretical examination.

The project will be assessed by Master Black Belts assigned by the LSSA. It is strongly advised that the submission is also checked by an internal Lean Black Belt or Master Black Belt.

The result of the practical assessment will be either Pass or Fail. No score will be given. In the event of a 'Fail' result, brief guidance will be given on those criteria that are deemed 'Missing' or 'Incorrect'. Subsequently, a single retake resubmission is allowable.

Some people may want to use this project later on to apply for Lean Six Sigma Green Belt certification. This is allowed in case the project meets the concerning Lean Six Sigma criteria, which are more stringent than the criteria for Lean certification. Please check the Lean Six Sigma Green Belt skill set at www.lssa.eu.

CONTINUOUS IMPROVEMENT MATURITY MODEL (CIMM)

The LSSA skill sets are based on the 'Continuous Improvement Maturity Model' (CIMM). This is a framework that guides an evolutionary staged approach for process improvement from a very early stage till delivering world class products. CIMM summarizes all best practices elements of many different improvement methods in one framework, along two axes.

CIMM Axis 1 - Organization Development

The first axis focuses on the developing the employees and the organization. Organizational development can relate to the development of products and services, improvement of efficiency, market development, and so forth. CIMM describes the development of leadership, the development of employee's competencies, the development of organizational culture and the way in which the organization is managed.



Figure 1 - CIMM Organizational Development (LSSA, 2017)

CIMM Axis 2 - Process Improvement

The second axis focuses on improving processes. In order to implement the strategy, the organization must continuously simplify, align and improve its processes. CIMM describes the creation of a solid foundation, an improvement culture, stable and predictable processes, capable processes and future-proof processes.

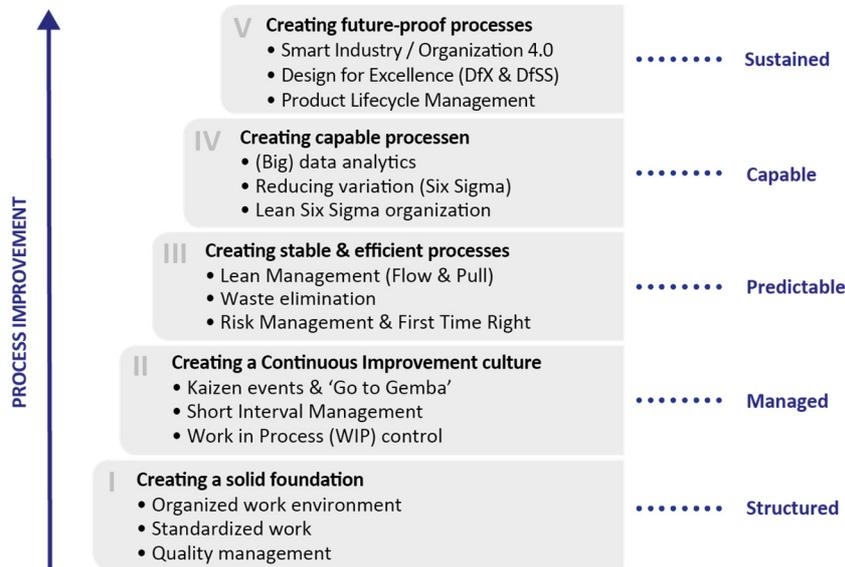


Figure 2 – CIMM Process Improvement (LSSA, 2017)

The following chapters describe the theoretical skill set elements. The structure consists of a number of 'Units', 'Elements' and 'Performance Criteria'.

- **Unit:** The skill set is presented by skill set areas; each called a 'Unit'. The chapters in the book 'Climbing the Mountain' reflect the 'Units' described in this skill set.
- **Element:** Each 'Unit' consists of a number of 'Elements'. The paragraphs in each chapter of the book 'Climbing the Mountain' reflect the 'Elements' in this skill set.
- **Performance Criteria:** Each 'Element' consists of a number of 'Performance Criteria' and each 'Performance Criteria' has an explanation. These describe the tools, techniques and competencies that are required to be achieved by the Green Belt.
- **Level of Cognition:** A 'Cognitive Level' has been assigned to each 'Performance Criteria'-description according to Bloom's Taxonomy [Appendix A]. This defines at which level the Green Belt is expected to apply the respective tool, technique or skill. This is the minimum level the Green Belt must be able to demonstrate in order to be assessed as competent.

U1. WORLD CLASS PERFORMANCE

The Unit 'World Class Performance' reviews the general philosophy of Process Improvement. It discusses the overview of different process improvement methods and the history of the most important methods. It also explains why process improvement is needed.

E1. COMPETITIVE STRATEGIES

The Learning Element 'Competitive strategies' explains Operational Excellence, Customer Intimacy and Product Leadership. It also explains how Operational Excellence can be applied to processes in different types of enterprises.

U1.E1.PC1 **Operational Excellence, Customer Intimacy & Product Leadership** **Understand**
Understand the three competitive strategies. Understand how Operational Excellence can be applied in different types of enterprises e.g. manufacturing, service, transactional, product and process design and innovation.

U1.E1.PC2 **Physical vs. Transactional processes** **Understand**
Understand the similarities and differences between physical processes and transactional processes.

E2. HISTORY OF CONTINUOUS IMPROVEMENT

The Learning Element 'History of Continuous Improvement' explains the history of quality management and process improvement.

U1.E2.PC1 **History of continuous improvement** **Understand**
Understand the origins of Quality management, Lean and Six Sigma.

E3. PHILOSOPHY & PRINCIPLES

The Learning Element 'Philosophy & Principles' explains the values and principles of Lean. Similarities and differences to other improvement methods are also reviewed.

U1.E3.PC1 **Value and foundations of Lean** **Understand**
Understand the value of Lean, its philosophy and goals.

U1.E3.PC2 **Lean principles** **Understand**
Understand the Toyota philosophy, the 14 principles and the House of Quality. Understand the impact of the Toyota Production System (TPS) on strategy, quality and production.

E4. ORGANIZATIONAL PROCESS MANAGEMENT

The Learning Element 'Organizational Process Management' explains the cohesion between business strategy, systems, processes and performance.

- | | | |
|------------------|---|-------------------|
| U1.E4.PC1 | Continuous Improvement Maturity Model | Understand |
| | Describe the two axis of the CIMM framework. Describe how to apply the framework to develop organizations and how to improve processes. | |
| U1.E4.PC2 | Business processes performance | Understand |
| | Understand that various business processes have various key performance indicators (KPIs). Understand the basics of measurement systems in the organization. | |
| U1.E4.PC3 | Process improvement planning | Understand |
| | Understand which process improvement methods and techniques can be applied, based on the current maturity level of the organization. | |
| U1.E4.PC4 | Strategy development | Understand |
| | Understand the strategic planning process of Hoshin Kanri and how it forms the link between strategic mission and vision, tactical project plans and individual action plans. | |

E5. PROJECT SELECTION PROCESS

The Learning Element 'Project Selection Process' explains how projects are selected based on the strategy of the organization and financial measures.

- | | | |
|------------------|--|-------------------|
| U1.E5.PC1 | Financial measures | Understand |
| | Understand financial measures, including cost of poor quality (COPQ) and return on investment (ROI). | |
| U1.E5.PC2 | Project selection | Understand |
| | Understand that project selection needs to be aligned with the strategy of the organization. Participate in the project selection process. | |

U2. PROJECT MANAGEMENT

The Unit 'Project Management' outlines the way improvement projects should be executed. It starts with the identification of customers and its requirements. The Unit also covers a number of project management roadmaps, team formation, the project charter and a number of project management tools.

E1. TEAM FORMATION

The Learning Element 'Team Formation' reviews the different role and responsibilities within and around an improvement team. It also reviews how a team is formed.

U2.E1.PC1 Roles and Responsibilities Understand
Describe Lean levels of expertise: Master Black Belt, Sensei, Black Belt, Green Belt and Yellow Belt. Describe various team roles and responsibilities: Deployment leader, Champion, Project leader, Coach, and Team member.

U2.E1.PC2 Team member selection Understand
Understand the basic principles of team formation and team member selection.

E2. PROCESS IMPROVEMENT ROADMAPS

The Learning Element 'Process Improvement Roadmaps' reviews a number of roadmaps, including Plan-Do-Check-Act (PDCA) and Define, Measure, Analyze, Improve and Control (DMAIC).

U2.E2.PC1 Kaizen Roadmap Apply
Apply project management methods that can be used in the workplace for Kaizen initiatives e.g. PDCA, A3-report.

U2.E2.PC2 Problem Solving Process (8D) Apply
Apply the eight disciplines problem solving process which is used to approach and resolve problems.

U2.E2.PC3 DMAIC Roadmap Apply
Apply the DMAIC roadmap for breakthrough projects. Select the proper tools to use during the Process Improvement project.

E3. VOICE OF THE CUSTOMER (VOC)

The Learning Element 'Voice of the Customer' reviews customer identification (internal/external) and customer requirements.

U2.E3.PC1	Customer identification Demonstrate how the project will impact internal and external customers.	Apply
U2.E3.PC2	Customer requirements Understand the experience of customers linked to product features described in the range from dissatisfied, expected, satisfied and desired quality levels e.g. new KANO model.	Understand
U2.E3.PC3	Critical to quality (CTQ) Understand the basic principles of Critical to Quality.	Understand
U2.E3.PC4	CTQ Flowdown Understand that the Voice of Customer (VOC) requirements can be translated to external CTQs and internal CTQs.	Understand

E4. PROJECT CHARTER

The Element 'Project Charter' covers the description of the project such as problem description, objectives, scope, timing and benefits.

U2.E4.PC1	Problem statement Develop and analyze the problem statement in relation to customer requirements and business goals.	Analyze
U2.E4.PC2	Project scope and goal Develop and review project boundaries to ensure that the project has value to the customer (scope). Develop the objectives and measurable targets for the project based on the problem statement and scope (goal).	Analyze
U2.E4.PC3	Project performance measures Select performance measurements (Cost, Quality and Delivery) and establish key project metrics that relate to the voice of the customer.	Apply
U3.E4.PC4	Project benefits calculation Calculate the hard benefits of the project and describe the soft benefits of the project.	Apply

E5. PROJECT MANAGEMENT TECHNIQUES

The Element 'Project Management Techniques' reviews a number of tools that are used during execution of the project.

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|------------------|---|-------------------|
| U2.E5.PC1 | Time management
Understand the importance and basic disciplines of time management. Apply the elements of time management. | Apply |
| U2.E5.PC2 | Project progress
Apply project planning tools such as Gantt charts, critical path method (CPM) and program evaluation and review technique (PERT) charts. Apply basic disciplines of time management e.g. attending meetings, arriving on-time, coming prepared, being punctual and to the point. | Apply |
| U2.E5.PC3 | Project risk management
Describe the purpose and benefit of project risk analysis. Attending risk assessment and assure useful contribution by identifying risks. | Apply |
| U2.E5.PC4 | Project documentation
Provide input and select the proper vehicle for presenting project documentation (e.g. spreadsheet output and storyboards). Create project documentation in line with standard organization templates. | Apply |
| U2.E5.PC5 | Lessons learned
Identify and document lessons learned from all phases of a project. Identify possible improvements and ownership. | Understand |

U3. LEVEL I – CREATING A SOLID FOUNDATION

The Unit 'Creating a solid foundation' reviews how to achieve a solid foundation for further process improvement programs. This foundation consists of a proper and organized work environment, reliable equipment and standardized work.

E1. ORGANIZED WORK ENVIRONMENT

The Learning Element 'Organized work environment' is about good housekeeping and how to set up a proper and safe work environment in a structured manner.

- U3.E1.PC1 Organized work environment (5S) Apply**
Organize the work environment by applying 5S (Sort, Straighten, Shine, standardize, Sustain). Understand that an organized environment will improve safety and moral.

E2. STANDARDIZED WORK

The Learning Element 'Standardized work' is about implementing and improving standards.

- U3.E2.PC1 Standardized work and Documentation Apply**
Standardize tasks and processes to establish the foundation for continuous improvement and employee empowerment. Prepare documents, standard operating procedures (SOPs) and one-point-lessons to ensure that the improvements are sustained over time.

E3. QUALITY MANAGEMENT

The Learning Element 'Quality Management' is about developing procedures to identify and detect defects. Also preventing mistakes and avoiding problems will be discussed.

- U3.E3.PC1 Quality Management System Apply**
Propagate the quality management system and procedures. Identify opportunities for improvement.
- U3.E3.PC2 Ongoing evaluation and auditing Apply**
Apply tools for the ongoing evaluation of the improved process, including auditing (internal / external), monitoring for new constraints and identification of additional opportunities for improvement.

U4. LEVEL II – CREATING A CONTINUOUS IMPROVEMENT CULTURE

The Unit 'Creating a continuous improvement culture' reviews how to create a continuous improvement culture at the shop floor. This Unit reviews setting up and facilitate Kaizen teams. It also reviews a number of problem solving techniques and tools.

E1. KAIZEN

The Learning Element 'Kaizen' reviews how to organize and facilitate improvement teams at the shop floor that work on Kaizen improvement initiatives.

U4.E1.PC1	Short Interval Management Implement Short Interval Management, Stand Up meetings and corrective actions.	Apply
U4.E1.PC2	Visual Workplace Apply the elements of Visual Workplace and describe how they can help to control the improved process.	Apply
U4.E1.PC3	Root Cause Analysis Define and apply root cause analysis, recognize the issues involved in identifying a root cause. Apply problem solving process and tools.	Analyze
U4.E1.PC4	Kaizen events Facilitate improvement teams and Kaizen events.	Apply

E2. BASIC QUALITY TOOLS

The Learning Element 'Basic Quality Tools' reviews a number of basic quality tools.

U4.E2.PC1	Visualization of data Propagate the purpose and use of data visualization, analysis and communication.	Apply
U4.E2.PC2	Basic Quality Tools Apply and analyze the outcome of basic quality tools: Check sheet; Pareto chart; Scatter plot; Bar chart; Pie chart; Time Series Plot, Histogram and Box plot.	Analyze

E3. BASIC MANAGEMENT TOOLS

The Learning Element 'Basic Management tools' reviews a number of tools that are very powerful in the problem solving process.

U4.E3.PC1	Brainstorm Techniques Apply brainstorm techniques: Affinity diagram, 5-Why's and Ishikawa.	Apply
U4.E3.PC2	Decision making Apply decision making techniques e.g. Cause & Effect matrix and multi-voting.	Apply

U5. LEVEL III – CREATING STABLE AND EFFICIENT PROCESSES

The Unit ‘Creating stable and efficient processes’ reviews how the logistical flow of processes can be improved and made more stable, predictable and efficient. This Unit also reviews tools which can be used to visualize and analyze the process flow. This unit also reviews a number of tools and techniques that can be used to improve efficiency, effectiveness, productivity and agility of processes. All Level III Learning Elements and Performance Criteria follow the DMAIC structure.

DEFINE

E1. PROCESS MAPPING

The Learning Element ‘Process Mapping’ reviews a number of tools to map the process flow that can be used in Lean projects.

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| U5.E1.PC1 | Process Flow diagram
Apply process mapping to visualize the flow of activities and decisions within a process. | Apply |
| U5.E1.PC2 | High level process description
Distinguish between key process input variables and key process output variables based on a high level process map e.g. SIPOC. | Analyze |

MEASURE

E2. LEAN PERFORMANCE

The Learning Element ‘Lean Performance Metrics’ reviews different types of data, measurement scales and Lean performance metrics. This Element also reviews process flow analysis.

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|------------------|---|----------------|
| U5.E2.PC1 | Process Flow analysis
Analyze process flow and utilization. Apply Little's Law. | Analyze |
| U5.E2.PC2 | Performance metrics
Analyze Lean performance metrics e.g. takt time, cycle time, lead time, queue time, WIP, yield and OEE. | Analyze |
| U5.E2.PC3 | Defects and Defectives
Calculate process performance metrics (e.g. PPM, DPU and RTY). Describe the difference between a defect and a defective. | Apply |

E3. MEASUREMENT SYSTEMS

The Learning Element 'Measurement systems' reviews different measurement methods and techniques. This Element also reviews types of data, measurement scales and data collection tools.

U5.E3.PC1	Metrology Describe elements of metrology, including calibration systems, traceability to reference standards, the control and integrity of standards and measurement devices.	Understand
U5.E3.PC2	Measurement methods Define and implement measurement methods.	Apply
U5.E3.PC3	Data types Describe and review qualitative and quantitative data, continuous (variables) and discrete (attributes) data.	Apply
U5.E3.PC4	Measurement scales Define and interpret nominal, ordinal, interval and ratio measurement scales. Apply Likert scale to convert an ordinal scale into a discrete or continuous interval scale.	Apply
U5.E3.PC5	Data collection tools Define and apply tools for collecting data e.g. data sheets, check sheets, concentration diagrams and questionnaires.	Apply

ANALYZE

E4. VALUE STREAM ANALYSIS

The Learning Element 'Value Stream Analysis' reviews how to create a Value Stream Map of the current situation.

U5.E4.PC1	Value Adding versus Non Value Adding Distinguish value added from non-value added activities.	Analyze
U5.E4.PC2	Value Stream Mapping (Current State) Apply Value Stream Mapping to construct a Current State Map of the process to identify waste and non-value added activities.	Apply

E5. BASIC STATISTICS

The Learning Element 'Basic statistics' reviews the basic terms of sample and descriptive statistics.

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|------------------|--|--------------|
| U5.E5.PC1 | Descriptive statistics
Calculate population parameters and sample statistics e.g. proportion, mean and standard deviation. | Apply |
| U5.E5.PC2 | Variation
Divide special cause and common cause variation. | Apply |

E6. CORRELATION AND REGRESSION

The Learning Element 'Correlation and Regression' describes the predictive models using regression techniques to determine the relation between factors on a response.

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|------------------|---|--------------|
| U5.E6.PC1 | Correlation coefficient
Calculate and interpret the correlation coefficient. Determine its statistical significance (p-value) and recognize the difference between correlation and causation. | Apply |
| U5.E6.PC2 | Regression analysis
Apply linear regression analysis. Use the regression model for estimation and prediction. Interpret the residual analysis to validate the model. | Apply |

IMPROVE

E7. REDUCING MUDA (WASTE)

The Learning Element 'Reducing Muda' reviews how to identify Waste in the organization and in the processes.

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|------------------|---|----------------|
| U5.E7.PC1 | Waste identification (for the Operation)
Identify and analyze the 8 types of waste (Muda); Overproduction, Waiting, Transport, Overprocessing, Inventory, Movement, Defects, Unused expertise. | Analyze |
| U5.E7.PC2 | Waste identification (for the Customer)
Identify and analyze the 7 types of customer waste (Muda); Opportunity Loss, Delay, Unnecessary Movement, Duplication, Incorrect inventory, Unclear Communication and Errors. | Analyze |

E8. REDUCING MURI (OVERBURDEN)

The Learning Element 'Reducing Muri' reviews how to identify overburdening the organization and how to implement flow and work balancing to reduce overburden. This element also reviews the relations between Lean with TPM and TOC.

U5.E8.PC1	Flow Describe the importance of flow for reducing Muri. Implement flow in the organization.	Apply
U5.E8.PC2	Work balancing Describe the importance of Work balancing for reducing Muri. Implement Work balancing.	Apply
U5.E8.PC3	Total Productive Maintenance (TPM) Understand the eight pillars of TPM and understand how it can be used for process improvement.	Understand
U5.E8.PC4	Competence Management (Skill Matrix) Describe how competence management supports the reduction of Muri.	Understand

E9. REDUCING MURA (UNEVENNESS)

The Learning Element 'Reducing Mura' reviews how to identify unevenness in the organization and in the processes. This element also reviews a number of techniques to reduce unevenness.

U5.E9.PC1	Pull Describe the importance of pull for reducing Mura. Implement pull in the organization by applying Kanban systems.	Apply
U5.E9.PC2	Volume and Type leveling Implement a balanced process flow by both volume leveling, type leveling and one piece flow.	Apply
U5.E9.PC3	Quick Change Over (SMED) Reduce change over times by implementing Single Minute Exchange of Die (SMED).	Apply

E10. VALUE STREAM IMPROVEMENT

The Learning Element 'Value Stream Improvement' reviews how the techniques and tools that reduce Muda, Muri and Mura can be applied in constructing a Future State Value Stream Map.

U5.E10.PC1	Value Stream Mapping (Future State) Define the gap between the current state and the target condition. Define a Future state map using Value Stream Mapping. Apply techniques to reduce Muda, Mura and Muri.	Apply
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CONTROL

E11. FIRST TIME RIGHT

The Learning Element 'First Time Right' looks at how results that have been achieved in process improvement projects can be sustained. This element reviews the following techniques and principles: Process FMEA, Control plan, Jidoka and Poka Yoke.

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|-------------------|--|--------------|
| U5.E11.PC1 | Process FMEA (pFMEA)
Prepare all elements of a Process FMEA, calculate the risk priority number (RPN) and review the effect of FMEA results on processes, products and services. | Apply |
| U5.E11.PC2 | Control plan
Prepare a control plan to document and hold gains. Define controls and monitoring systems. Transfer of responsibility from the project team to the process owner. | Apply |
| U5.E11.PC3 | Jidoka & Poka Yoke
Understand the line has to be stopped when there is a quality problem. Apply Poka Yoke to avoid quality problems. | Apply |

E12. STATISTICAL PROCESS CONTROL (SPC)

The Learning Element 'Statistical Process Control' explains the controls methods used to identify out-of-control situations and deviations over time. Different types of SPC charts are reviewed.

- | | | |
|-------------------|--|-------------------|
| U5.E12.PC1 | SPC Objectives and benefits
Describe the objectives and benefits of applying SPC and control charts. | Understand |
| U5.E12.PC2 | Control charts
Apply the Xbar-R control chart. | Apply |
| U5.E12.PC3 | Tests for Special Causes
Identify out of control situations. Understand the basics of rules for determining statistical control. | Understand |

U6. PRODUCT AND PROCESS DEVELOPMENT

The Unit 'Product and Process development' is about applying Lean principles and techniques to develop products, services and processes from an early stage in the development phase.

E1. PRODUCT LIFECYCLE MANAGEMENT (PLM)

The Learning Element 'Product Lifecycle Management' reviews the process of managing the entire lifecycle of products and services. The product lifecycle is the collective stages that a product or service goes through from its conception and design through to its ultimate disposal.

U8.E1.PC1 Product Lifecycle Management Understand
Understand the lifecycle for products and services, efficiently and cost-effectively, from ideation, design and manufacture, through to service and disposal.

U7. LEAN DEPLOYMENT PROCESS

The Unit 'Lean Deployment process' reviews how Lean programs should be deployed across the organization. It explains the role and responsibilities of Leadership in its efforts to coach and inspire improvement teams. Also team development and change management aspects will be reviewed.

E1. MANAGEMENT OF CHANGE

The Learning Element 'Management of Change' reviews the dynamics that can occur during a project such as cooperation, resistance, escalation of problems and solving roadblocks.

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|------------------|--|-------------------|
| U7.E1.PC1 | Organizational culture
Understand there are various techniques for facilitating management of change.
Understand the impact an organization's culture and inherent structure can have on the success of Lean. | Understand |
| U7.E1.PC2 | Change Management approaches
Understand how deployment failure can result from the lack of resources or management support. Participate in both the Top-Down and Bottom-Up approach. | Understand |
| U7.E1.PC3 | Stakeholder analysis
Identify process owners, internal and external customers and other stakeholders in a project. Understand different stakeholders have different goals. | Understand |

E2. LEAN LEADERSHIP

The Learning Element 'Leadership' explains the roles and responsibilities of executive leaders. This includes effective communication, motivating, coaching and rewarding improvement teams.

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|------------------|---|-------------------|
| U7.E2.PC1 | Learning organization
Understand the role and responsibilities of leadership in the process improvement process. | Understand |
| U7.E2.PC2 | Effective communication
Understand the importance of learning organizations. | Understand |
| U7.E2.PC3 | Team performance and motivation
Demonstrate team progress in relation to goals, objectives and other metrics. Apply techniques that motivate team members and support and sustain their participation and commitment. | Apply |
| U7.E2.PC4 | Coaching
Understand the importance of coaching. | Understand |

APPENDIX A – BLOOM'S TAXONOMY FOR PERFORMANCE CRITERIA

In addition to specifying content, each performance criteria in this skill set also indicates the intended complexity level of the test questions for each topic. These levels are based on 'Levels of Cognition' (from Bloom's Taxonomy – Revised, 2001), and can be used to create learning outcomes for students.

The Taxonomy of Educational Objectives, often called Bloom's Taxonomy, is a classification of the different objectives that educators set for students (learning objectives). The taxonomy was proposed in 1956 by Benjamin Bloom, an educational psychologist at the University of Chicago. During the nineties, Lorin Anderson a former student of Bloom revisited the cognitive domain in the learning taxonomy. Bloom's Taxonomy divides educational objectives into three 'domains': Affective, Psychomotor and Cognitive. This Skill set only notices the Cognitive domain. The 'Levels of Cognition' are in rank order - from least complex to most complex. The Green Belt skill set only uses the levels 'Understand', 'Apply and 'Analyze'.

Remember

Recall or recognize terms, definitions, facts, ideas, materials, patterns, sequences, methods, principles, etc. The LSSA uses the following verb at this level: Recall.

Understand

Read and understand descriptions, communications, reports, tables, diagrams, directions, regulations, etc. The LSSA uses the following verbs at this level: Describe, Follow, Identify, Interpret, Participate, Understand.

Apply

Know when and how to use ideas, procedures, methods, formulas, principles, theories, etc. The LSSA uses the following verbs at this level: Apply, Assure, Calculate, Define, Demonstrate, Divide, Eliminate, Empower, Facilitate, Implement, Motivate, Organize, Plan, Prepare, Present, Promote, Propagate, Review, Select, Standardize, Support, Use.

Analyze

Break down information into its constituent parts and recognize their relationship to one another and how they are organized; identify sublevel factors or salient data from a complex scenario. The LSSA uses the following verbs at this level: Analyze, Construct, Design, Develop, Distinguish, Evaluate, Lead, Manage, Translate.

Evaluate

Make judgments about the value of proposed ideas, solutions, etc., by comparing the proposal to specific criteria or standards. The LSSA does not use this level in their skill sets.

Create

Put parts or elements together in such a way as to reveal a pattern or structure not clearly there before; identify which data or information from a complex set is appropriate to examine further or from which supported conclusions can be drawn. The LSSA does not use this level in their skill sets.



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