Caldwell & Associates Course Body of Knowledge

Lean Yellow Belt (YB) Practitioner Onsite Workshop - 2 days (16 hours)

Introduction to Lean – An introduction of Lean including definitions, benefits, principles and history. Blooms Taxonomy target level (max): Apply
Gemba (The Real Place) – A philosophy that reminds us to get out and spend time on the “floor” – the place where real action occurs. Blooms Taxonomy target level (max): Apply
Kaizen (Continuous Improvement) – A strategy where employees work together proactively to achieve regular, incremental improvements in the process. Blooms Taxonomy target level (max): Apply
KPIs (Key Performance Indicators) – Metrics designed to track and encourage progress towards critical goals of the organization. Blooms Taxonomy target level (max): Understand
Introduction to Teamwork and Team Skills
MUDA (Wastes) / MURA (Fluctuation) / MURI (Overburden) – the three families of efficiency losses. Muda (Waste) being anything in the creation process that does not add value from the customer’s perspective. MURA (Fluctuation) being waste of unevenness or inconsistency and it works against efficiency, Mura creates many of the seven wastes that we observe, Mura drives Muda! By failing to smooth our demand we put unfair demands on our processes and people and cause the creation of inventory and other wastes. MURI (Overburden) to give unnecessary stress to our employees and our processes. Blooms Taxonomy target level (max): Understand
5S – Sort (eliminate that which is not needed), Set In Order (organize remaining items), Shine (clean and inspect work area), Standardize (write standards for above), Sustain (regularly apply the standards). Blooms Taxonomy target level (max): Apply
Introduction to Just-In-Time (JIT)
Bottleneck Analysis – Identify which part of the process limits the overall throughput and improve the performance of that part of the process. Blooms Taxonomy target level (max): Analyze
Continuous Flow – Creation where work-in-process smoothly flows through production with minimal (or no) buffers between steps of the process. Blooms Taxonomy target level (max): Analyze
Takt Time – The pace of production that aligns production with customer demand. Calculated as Planned Production Time / Customer Demand. Blooms Taxonomy target level (max): Create
Value Stream Mapping – A tool used to visually map the flow of production. Shows the current and future state of processes in a way that highlights opportunities for improvement. Blooms Taxonomy target level (max): Create
Flow diagram (or swim-lanes diagram) – Visual mapping of a transactional / cross-functional process showing tasks sequence for each actor on parallel lanes, to highlight complexity, lost time, irritants, thus showing improvement opportunities and project a target improved process. Blooms Level: Apply
Spaghetti diagram – Visual tool to represent the physical flow of products or movements of persons, highlighting wastes, safety or cross-flow quality risks. Blooms Level: Evaluate
Layout Planning – Review and discuss different layouts such as product layout, process layout, cellular layout, etc. Blooms Taxonomy target level (max): Apply
Single-Minute Exchange of Dies (SMED) – Reduce setup (changeover) time to less than 10 minutes. Techniques include: Convert setup steps to be external (performed while the process is running), Simplify internal setup (e.g. replace bolts with knobs and levers), Eliminate non-essential operations, Create Standardized Work instructions. Blooms Taxonomy target level (max): Apply

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Heijunka (Level Scheduling) – A form of production scheduling that purposely produces in much smaller batches by sequencing (mixing) product variants within the same process. Blooms Taxonomy target level (max): Understand

Kanban (Pull System) – A method of regulating the flow of goods both within the “factory” and with outside suppliers and customers. Based on automatic replenishment through signal cards that indicate when more goods are needed. Blooms Taxonomy target level (max): Analyze

Jidoka (Zero Defect Principle) – Aiming for zero-defect, by preventing their occurrence, signalizing, reacting as quick as possible and solving definitively. This relies on various tools and techniques such as Autonomation, Andon, Poka-Yoke, Root-Cause Analysis and Quick Response Quality Control. Blooms Taxonomy target level (max): Analyze

Andon – Visual feedback system for the plant / office “floor” that indicates production status, alerts when assistance is needed, and empowers operators to stop the process. Blooms Taxonomy target level (max): Analyze

Poka-Yoke (Error Proofing) – Design error detection and prevention into production processes with the goal of achieving zero defects. Blooms Taxonomy target level (max): Analyze

Root Cause Analysis – A problem solving methodology that focuses on resolving the underlying problem instead of applying quick fixes that only treat immediate symptoms of the problem. A common approach includes use of Ishikawa (fish-bone diagram) and 5 Whys.. Blooms Taxonomy target level (max): Analyze

Risk Analysis – Risk of failure in Lean improvements and processes and how we can consider and reduce them to have a successful projects. Including the concepts of the FMEA method for products, machines, processes or projects. Blooms Taxonomy target level (max): Apply

Overall Equipment Effectiveness (OEE) – Framework for measuring loss for a given process. Three categories of loss are tracked: Availability (e.g. down time), Performance (e.g. slow cycles), Quality (e.g. rejects). Blooms Taxonomy target level (max): Understand

Standardized Work – Documented procedures for production that capture best practices (including the time to complete each task) in order to avoid variability of practices and favoring sustainability of Kaizen improvements. Must be “living” documentation that is easy to change. Blooms Taxonomy target level (max): Create

Sustainment – Discuss importance of maintaining and sustaining results of Lean project after improvement and how it can be monitored through regular meeting and team review and etc. Blooms Taxonomy target level (max): Apply

Visual Management – Visual indicators, displays and controls used throughout facilities to improve communication of information. Blooms Taxonomy target level (max): Create

Short Interval Control / Active Supervision – Set of standardized management rituals to monitor Safety / Quality / Delivery / Cost performances in a timely manner to allow early reaction and daily improvements, involving field actors (in consistence with Gemba and collective intelligence logic): measurements at the workstation, stand-up operational meetings, Gemba walks, shift hand-overs, relying on the Visual Factory. Blooms Level: Analyze

Hoshin Kanri (Policy Deployment) – Excluded from the IASSC Lean Leader Intermediate Level BoK

Kaizen task-force workshops – Also known as “Kaizen Blitz or Kaizen Event”. A structured work group improvement event focused in couple of days (typically 3 to 5), involving field players and following DMAIC logic to deliver rapid, accessible, accepted and demonstrated improvements. Blooms Level: Analyze

DMAIC (Define, Measure, Analyze, Improve, Control) – A step-by-step methodology to carry out an improvement initiative answering a clear need for change, based on facts and being put under standard for sustainability. Blooms Level: Remember

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SMART Goals – Goals that are: Specific, Measurable, Attainable, Relevant, and Time-Specific. Blooms Taxonomy target level (max): Analyze
Stakeholder Management – Discuss Stakeholder analysis including communication, presenting, reporting and change management. Blooms Taxonomy target level (max): Apply
PDCA (Plan, Do, Check, Act) – An iterative methodology for implementing improvements: Plan (establish plan and expected results), Do (implement plan), Check (verify expected results achieved), Act (review and assess; do it again). Blooms Taxonomy target level (max): Analyze
Caldwell & Associate Certification Exam - Free
Caldwell & Associates courses are based on IASSC body of knowledge
No Project