

Tools for LARGE Businesses

Level 3 Question 8: Do we use Lean or other Operational excellence tools to systematically improve our processes?

Title	Lean Tools
Why	<p>Lean techniques are used to create processes that have no non-value add parts. Any part of a process that does not add value the consumer are eliminated using Lean techniques. Applying Lean techniques is a strict and disciplined approach to modifying and maintaining processes that adds 100% value to the client and does not waste any costs with non-value adding steps. This has a positive effect on Rol. Following Lean techniques is a must for anyone who is responsible for a process. There will always be some sort of waste in a process and using Lean techniques will help to eliminate waste.</p>
What	<p>The five principles are considered a recipe for improving workplace efficiency and include:</p> <ol style="list-style-type: none">1) defining value,2) mapping the value stream,3) creating flow,4) using a pull system, and5) pursuing perfection
How	<ol style="list-style-type: none">1. Value Stream Mapping in 7 Steps The purpose of Value stream mapping is to visualize the whole process from start to end with all parties involved. Typically, people will work only on one small part of a process, and hence, not have the full overview of what impact their actions has on the rest of the process.<ol style="list-style-type: none">a. Document the current process.b. Identify and list every step in the process.c. Identify customer value.d. Define what the perfect process looks like.e. Identify those parts of the current process that get in the way of perfection.f. Identify major initiatives to reduce or eliminate waste.2. Eliminating Waste In lean there has been identified 8 generic types of waste, that occur in any type of process. The excersice is to identify where it occurs and how to eliminate it. Types of waste are:<ul style="list-style-type: none">• Transport• Inventory• Motion.• Waiting.• Overproduction.

	<ul style="list-style-type: none"> • Over-processing. • Defects. • Unutilized talent. <p>3. Systematic Problem solving Recognize that a problem exists Analyze the problem - Collect information Identify possible causes (solutions) to the problem Evaluate the possible causes (solutions) Develop an action plan to correct the problem and take action Verify that the problem has been corrected.</p> <p>4. Continues Improvements - Kaizen The purpose of KAIZEN is to improve work processes in a variety of ways. Kaizen is a generic Japanese word for improvement or making things better. KAIZEN was created in Japan following World War II. The word Kaizen means "Continuous Improvement." It comes from the Japanese words "kai" which means "change" or "to correct" and "zen" which means "good."</p> <p>5. Error Proofing - Poka-Yoke The purpose of Poka-Yoke, the second of the Lean techniques, is to prevent the occurrence of mistakes or defects. It uses a wide variety of ingenious devices to prevent mistakes. An example is an automotive gasoline tank cap having an attachment that prevents the cap from being lost. Poka-Yoke is also known as Mistake Proofing - the Japanese approach to "Mistake Proofing" in all aspects of Manufacturing, Customer Service etc. It employs visual signals that make mistakes clearly stand out from the rest. Its older name is baka-yoke (fool proofing). Poka-Yoke is one of the most important Lean techniques.</p> <p>6. Keep a clean and orderly workspace - 5S Of all the Lean Techniques, 5S is the one that is focused on organizing. The purpose of 5S is to reduce wasteful time and motion at a micro level. It is an organized approach to housekeeping that ensures tools, parts and other objects are in known, optimum locations. Actually, it is a framework to create and maintain your workplace. 5S Stands for: Sort, Set-in- order, Shine, Standardize, Sustain. The act of sorting means that all unnecessary tools and other items are removed from the workplace. Set- in-order means that all necessary items are placed in locations that minimizes waste of motion. For example, tools that are used frequently are placed close to the work station while tools that are used less often are placed in storage further away from the work station. Shine means that that work place is kept in a clean and orderly manner. Next, standardize means that all processes in a work station is standardized. Finally, Sustain means that the workers in that uses the work station maintain the standard that has been set in the previous four S's.</p> <p>7. Simple replenishment - KANBAN The purpose of KANBAN, is to schedule production and minimize work- in-process while encouraging improvement in many areas. KANBAN establishes a small stock point (usually at the producing WorkCentre) that sends a signal when items are withdrawn by a downstream process. The producing WorkCentre replaces the items removed. Kanban literally means signboard or billboard in Japanese. Kanban utilizes visual display cards to signal movement of material between steps of a product process. It is a scheduling system for Lean and Just-in-Time. KANBAN</p>
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	<p>was developed at Toyota to find a system to improve and maintain a high level of production.</p> <p>8. Just In Time Just-in-time is simply a production strategy that strives to improve a business Return on Investment (RoI) by reducing in-process inventory and associated carrying costs. To meet JIT objectives, the process relies on signals or KANBAN between different points in the process, which tell production when to make the next part. Just-in-time is actually a manufacturing philosophy which leads to "Producing the necessary units, in the necessary quantities at the necessary time with the required quality".</p> <p>9. Takt-time The purpose of Takt-time is to balance the output of sequential production processes and prevent inventory buildups and shortages. It is the average time required between output units at a particular process coordinated with final customer requirements. Takt-time is one of the Lean techniques in the Lean Toolbox. It is the frequency at which a product or service must be completed in order to meet customer needs. The formula for Takt-time is: $TAKT\ Time = \frac{Available\ Time}{Required\ Output}$</p> <p>10. Heijunka – Process Leveling Heijunka is the leveling of production by both volume and product mix. This system does not build products according to the actual flow of customer orders. Heijunka takes the total volume of orders in a period and levels them out so the same amount and mix are being made each day. It means Production leveling/smoothing. It is a technique to reduce waste which occurs due to fluctuating customer demand.</p>