

# Quiz 07: Lean

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**Due** Mar 28 at 11pm      **Points** 50      **Questions** 10      **Available** until May 15 at 11:59pm  
**Time Limit** None

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## Instructions

You **may** use the slides from the lecture and other sources to answer these questions. Please be sure to cite any references but be sure to answer the following questions in your own words. Do NOT simply cut and paste the information from the slides. You will receive a score of 0 if you copy the prose from the slides.

## Attempt History

	Attempt	Time	Score
LATEST	<a href="#">Attempt 1</a>	3,338 minutes	50 out of 50

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Score for this quiz: **50** out of 50

Submitted Mar 28 at 10:08pm

This attempt took 3,338 minutes.

### Question 1

5 / 5 pts

What is value stream mapping? Why is it done?

Your Answer:

Value stream mapping is a lean management technique for analyzing the flow of materials, requirements and data associated with a given process, system, or product. VSM necessitates effective communication and coordination across many divisions within the organization. More cross-collaboration across business divisions may be a useful change for firms with siloed or isolated departments.

Value stream map is implemented to see the whole process flow from beginning to end and to devise a strategy for maximizing efforts in delivering the organization to its intended results. A value stream map shows you where the current gaps are by depicting the status. You may find possibilities in a future state map and design an implementation strategy to attain your goals once you've identified inefficient or unwanted operations. This sort of evaluation is an important part of Lean Manufacturing since it aids in the alignment of the company's resources to simplify informational or manufacturing operations within a set timeframe. Value Stream Mapping may help your organization operate better in any industry, whether you're processing raw materials, manufacturing physical goods, building software, handling administrative paperwork, or managing staff.

Diagram the flow of goods and/or information. I has the current map which shows the current situation and the future map which shows the desired situation. This is done to identify waste that should be removed from the current map and changes needed to establish the future map

## Question 2

5 / 5 pts

What is set-based development? Why is it done?

**Your Answer:**

Choose and build a variety of designs that will wow the consumer. Explore all choices with the aid of the customer and even execute a few basic options ahead of time. We may pick the best design model and discard the rest of the design models after we obtain adequate input from customers.

Set-based development is a method of determining the technology or style to utilize prior to beginning development. This ensures that the technology is acceptable to all stakeholders before it is adopted. Set-based development is the process of developers constructing prototypes or attending courses to become as comfortable with multiple technologies as they need to make a decide or going to a stakeholder and explaining the alternatives clearly so that everyone can conclude on a technology.

Set-based development is a process done to figure out which technology or style to use before going fully into development. This makes sure that all stakeholders are ok with the technology before it is implemented. Set-based development is the process of developers testing out different technologies by creating prototypes or taking courses on them to get as familiar with them as the developers need to make a decision, or to go to a stakeholder and explain to them the options clearly so all can come to a decision on a technology.

**Question 3****5 / 5 pts**

Describe two advantages of Kanban

**Your Answer:**

The two advantages of Kanban are: -

1. Kanban can be implemented upon many existing processes since the columns and prioritization and uses of the board can be customized. This makes Kanban very easy to be implemented into a company, without much confusion.
2. Kanban focuses the team on making modest, incremental improvements to the system. This enhances the company's Agile techniques and keeps the team focused on consistently delivering a product at the end of each sprint, rather than merely adding a bunch of new features. This makes the consumer pleased as well.

One advantage to Kanban is that it can be implemented upon many existing processes since the columns and prioritization and uses of the board can be customized. This makes Kanban very easy to be implemented into a company, without much confusion.

Another advantage to Kanban is that it makes the team focus on improving the system using small, iterative changes. This improves the Agile methods being used in the company, and keeps the team focused on continually delivering a product at the end of the sprint, and not just adding a lot of new stuff to development.

#### Question 4

5 / 5 pts

Why is it important to limit work in progress?

Your Answer:

Limiting a work in progress promotes a "work done" culture. When there is a clear indication of what current methods is causing a slowdown, teams can scurry around it to get it presumed, applied, and committed. Once holdups are eliminated, task across the squad resumes its normal flow. These benefits ensure that value augmentations are provided to the client more quickly, making WIP limits a useful element in agile expansion.

Programmers should only start new work when their previous task has been completed. Assignment of tasks should only be done after assessing how much burden the programmer has and how impactful is the task the programmer is doing. If there is a setback in work, a solution is formulated to counter the issue and reduce bottle neck.

- limiting work in progress may facilitate in contextual flipping.
- Excessive meetings can be prevented
- Aids in the elimination of repetition of effort.
- WIP limits may substantially reduce short pass delays.

Limiting work in progress helps the overall process to go smoothly by limiting backups at bottlenecks in the process. A bottleneck causes delays in the steps leading up to the bottleneck so adding more work before the bottleneck can add more backlog at the bottleneck. Optimal flow is achieved when each step generates exactly the same flow as can be accepted by the following step.

Think about maximizing the number of cars moving on a 3 lane highway. The optimal solution is to have exactly the number of cars that can fit simultaneously in the 3 lanes. Adding more cars causes traffic to back up.

## Question 5

5 / 5 pts

What are Kanban Boards? How are they used?

Your Answer:

It is a work plan framework that increases a group's efficiency by reducing idle time. It allows the group to track how they spend their time. Provides tracking and efficiency data to aid individuals in identifying problem areas. When a problem is identified, the group may begin to address it. Using the Kanban framework is a good idea. Flexibility, centered on continuous conveyance, reduction of lost work/time, increased productivity, increased effectiveness, and team part's ability to concentrate It's thought of as a force structure. Work items are taken from the queue and completed errands in the order of need.

Kanban boards show the team's progress as stories proceed through the steps of becoming a tale and being delivered. There should only be a certain number of elements in each column, which covers narrative creation, acceptance, development, testing, and deployment. This avoids things being left over in the sprint when too many tales are pushed into one phase and don't finish. Kanban boards are used to keep track of time and prioritize the most important features of a system.

Kanban boards visually display the progress of the team as stories are going through the stages from becoming a story to being deployed. Each column, which includes story creation, acceptance, development, testing, and deployment, should only have a specific amount of items in each column. This prevents items from being left over in the sprint when too many stories are moved into one phase, and don't reach completion. Kanban boards are used to manage time and prioritize the most valuable aspects of the system.

**Question 6****5 / 5 pts**

How does Kanban limit work in progress?

Your Answer:

To know how do Kanban limit work in progress. We can begin by answering two simple questions:

How many people are on my team?

How many tasks do I need them to work on at once?

Depending on the kind of work my team does and the number of people on it, a good starting point is somewhere between the number of team members plus 1 and twice the number of team members. For example, a good WIP limit for a team of five people would be somewhere between 6 and 10 tasks.

Productivity is always a work in progress, and we can iterate until we find the best WIP limits for our team. Once we have established our initial WIP limits. At least two weeks' time is given before we can make changes. It takes people time to learn new patterns. Observe what is happens during those two weeks.

After two weeks we can ask our team for their feedback about the work. If our team is overwhelmed by the pile of work. This means our WIP limit may be set too high. Whereas if the team is sitting idle with no work to do. This means our WIP limit may be set too low.

This way we can adjust and reevaluate after another two weeks and making sure to keep excellent communication with your team so we can all work together to establish good WIP limits.

Each column in the Kanban board limits the number of tasks that can be worked and tasks are pulled from the column to the left rather than pushed from the right.

### Question 7

5 / 5 pts

Explain Palmer's quotation,

"Kanban is the science of not trying to do too much at once"

Your Answer:

The quotation "Kanban is the science of not trying to do too much at once" states that if we start to perform things all at once we might end up in a fuzz and "Science" means it is a systematic study of structure and behavior of the things we try to understand and implement.

Therefore, executing things in a structured manner would help us a plentiful and deleting unwanted waste. This way Kanban helps team to make smooth delivery by prioritizing the important task and focus on improvement of the process.

Kanban boards are used to make sure that too many tasks are not being worked at the same time and focus on moving the items completely across the board rather than just getting them onto the board. Kanban helps the team to prioritize work and focus on process improvement.



Stop starting and start finishing. Kanban boards are used to make sure that not too much is being worked on, and focuses on moving the items completely across the board rather than just getting them onto the board. Kanban helps the team to prioritize work and focus on process improvement

**Question 8****5 / 5 pts**

How was Piggly Wiggly's inventory process different from other grocery stores in 1950?

Your Answer:

Usually what happened in normal stores in 1950's was store clerks or employees would assist customers with products they desired to buy by manually looking through stock and grabbing items. Whereas as Piggly Wiggly, was the first grocery shop where consumers went to the aisle and chose what they wanted to buy. It was the first store to use self-service technology. Rather than requesting the worker to furnish them with an item from the shop, customers were free to pick whatever they needed. Store workers' only job requirement was to replace the item when it became low or empty. This followed the lean principle of postponing as long as feasible, eliminating waste in the conventional practice of shopping, when a customer is assisted by another store employee while others wait in line for their turn.

The stores were the first to have people shop for food on their own, and not have clerks go and grab items from stock. The workers would just restock what was running low when it started to run low. This followed the lean principle of deciding as late as possible, and eliminating the waste in the existing process of shopping one customer at a time per worker.

**Question 9****10 / 10 pts**

Describe your project team's current process (you don't need to draw a diagram) including how you communicate, how you integrate code from each team member, how you test code from all test members, and how you package and submit the results.

Evaluate your project team's current process and identify waste in your process. Describe a new process for your team to follow to eliminate waste in your team's current process.

Your Answer:

We use Zoom meetings and a Slack channel to communicate. To keep track of our progress, we have daily or alternate-day standups meetings. We attempt to keep our meetings around 15 minutes or less in length. We employ pair programming on occasion since it allows us to learn from each other's experience. We strive to avoid bottlenecks by allocating the person with better domain expertise. We aim to push the code to GitHub at regular intervals so that continuous integration can be implemented. Our fault at the beginning of the project was that we procrastinated very much since our tasks were split without much thinking, and some activities were dependent on another person's work. As a result, our team is now devoting more time and effort to sprint planning and adding unfinished jobs to our backlog.

**Question 10****0 / 0 pts**

“I pledge on my honor that I have not given or received any unauthorized assistance on this assignment/examination. I further pledge that I have not copied any material from a book, article, the Internet or any other source except where I have expressly cited the source.”

**Correct!**☒ True☐ FalseQuiz Score: **50** out of 50