**Lean manufacturing**

Before we start, a few questions:

*Has anyone ever thought about how you can optimize your tasks?*

**Slide 1: Introduction to Lean Manufacturing**

*Title: Understanding Lean Manufacturing*

* **Definition**: Lean manufacturing is a systematic method of minimizing waste in a production system while maximizing productivity. We can use it not only for huge productions, but also in training or performing personal tasks.
* **Origin**: Developed by Toyota in the 1950s, it focuses on continuous improvement and efficiency.
* **Key Principles**: Identify value, map the value stream, create flow, establish pull, and pursue perfection.

**Slide 2: Core Principles of Lean Manufacturing**

*Title: Five Principles of Lean Manufacturing*

1. **Identify Value**: Understand what is value for you and willing to waste time for.

2. **Map the Value Stream**: Visualize and understand every step in the process from raw to the release.

3. **Create Flow**: Eliminate waste and streamline the process to ensure a smooth flow of work.

4. **Establish Pull**: Produce only what is needed, when it is needed, and in the quantity needed by the next process.

5. **Pursue Perfection**: Continuously strive for improvement, setting the bar higher each time.

**Slide 3: Seven Wastes in Lean Manufacturing**

*Title: Minimizing Waste for Efficiency*

• **Overproduction**: Producing more than demanded.

• **Inventory**: Excess materials or products that tie up resources.

• **Waiting**: Delays in the production process.

• **Transportation**: Unnecessary movement of materials.

• **Motion**: Unnecessary movement.

• **Overprocessing**: Doing more than necessary to meet customer requirements.

• **Defects**: Producing products that do not meet quality standards.

**Slide 4: Tools and Techniques in Lean Manufacturing**

*Title: Implementing Lean Practices*

* **5S System:** Sort, Set in order, Shine, Standardize, and Sustain.
* **Kanban System:** Visualize workflow and manage inventory levels.

try to draw a scheme of your study process

* **Poka-Yoke (Error Proofing):** Design processes to prevent errors.

when you don’t save a work file for example

* **Kaizen (Continuous Improvement):** Encourage small, incremental improvements regularly.

Give yourself a reward for completing a difficult stage

* **Value Stream Mapping:** Analyze and optimize the entire production process.

**Slide 5: Benefits of Lean Manufacturing**

*Title: Driving Success through Lean*

* **Increased Efficiency:** Eliminate waste and optimize processes.
* **Cost Reduction:** Lower production costs (not only money, but also time) and improve resource utilization.
* **Improved Quality:** Focus on defect prevention leads to higher-quality products.
* **Faster Time-to-Release:** Streamlined processes result in quicker product developing.
* **Enhanced team Morale:** Involving your team in continuous improvement fosters a positive work environment.
* **Sustainable Growth:** Establish a foundation for long-term success through lean practices.