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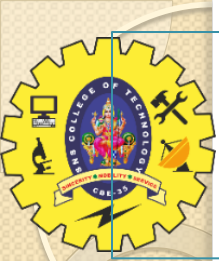
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DEPARTMENT OF AUTOMOBILE ENGINEERING

19AUZ405 – LEAN MANUFACTURING

IV YEAR / VII SEMESTER

Topic – Value Stream Mapping



Value Stream Mapping



- “Value stream mapping is a lean manufacturing or lean enterprise technique used to document, analyze and improve the flow of information or materials required to produce a product or service for a customer.”



Value Stream Mapping

Definition.

Value-stream mapping, also known as "material- and information-flow mapping", is a lean-management method for analyzing the current state and designing a future state for the series of events that take a product or service from the beginning of the specific process until it reaches the customer.



Value Stream Mapping

Importance Value Stream map

It is a visual tool that displays all critical steps in a specific process and quantifies easily the time and volume taken at each stage.

Its show the flow of both materials and information as they progress through the process.

It is a series of steps that occur to provide the product or service that their customers want or need.

It provides us with a structured visualization of the key steps and corresponding data needed to understand and intelligently make improvements that optimize the entire process



VSM – Why, What, Where?

- ◆ Key tool for Lean implementation, makes process & problems visible
- ◆ Forms the basis of an improvement plan and a common language
- ◆ Highlights Suppliers, Inputs, Process, Outputs and Customers (SIPOC)
- ◆ Is a qualitative tool for identifying and eliminating waste (or muda)
- ◆ Aligns organisations processes, creates a sense of teamwork / ownership
- ◆ Involves drawing - current state, future state, & an implementation plan
- ◆ Spans the entire value chain, from raw materials receipts to finished goods delivery
- ◆ A paper and pencil tool to help you visualise and understand the linkage between material and information flow
- ◆ Focuses on maximising the overall flow



Value Add & Non Value Add

Value Add (VA)

- ◆ Any activity the customer values (and is willing to pay for)
 - Who are your customers?
 - What do they really want?

- ◆ To be considered “value add”, a process step must have YES to all these questions
 - Does the customer care?
 - Does it change the thing?
 - Is it done right the first time?
 - Is it required by law or regulation?

Non Value Add (NVA)

- ◆ Any activity that consumes time and / or resources & does not add value to the service or product for the customer. These activities should be eliminated, simplified, reduced, or integrated.
 - Necessary - Legal / regulatory requirements
 - Unnecessary - Waiting, Unnecessary processing, Errors/defects, Motion (people), Transportation (product), Underutilised people, Inventory



VSM - Principles

- ◆ Diagnostic Tool
 - Reveals hidden symptoms of larger problems
- ◆ Strategic Planning Activity
 - Helps prioritise opportunities for improvement
 - Results in an implementation plan
- ◆ Macro-Level - Visual Representation
 - Information flow
 - People and material flow
 - Each process block represents a handoff or a break in the timeline
- ◆ Contains Relevant Metrics
 - Lead time – throughput / turnaround / flow time
 - Cycle time – touch / process time



VSM Charter

- ◆ Vision
- ◆ Mission
- ◆ Improvement Objectives
- ◆ Strategic Plan
- ◆ Critical Success Factors
- ◆ Drivers
- ◆ Process Description
- ◆ Management Information System
- ◆ Start / End Date
- ◆ High Level Scope
- ◆ Benefits Realisation
- ◆ Process Champion
- ◆ Team Leaders
- ◆ Team Members
- ◆ Facilitators
- ◆ Risk & Tolerance
- ◆ Drivers
- ◆ Roles & Responsibilities



Thank You !