



VA and NVA Analysis

? What is It

A vital part of value stream mapping is to **identify what value add is**, and **what it means to the process**. Graphical representation of the **value-added (VA)** and **non-value added (NVA)** time in a process.

🕒 When

- Identify **Motion** waste.
- **Reduce** or **eliminate delays** in operation.
- Improve Process **efficiency**.
- **Optimize crew** and **balance** people tasks.
- Used in the **Analyze** phase of the **DMAIC**.

🎯 Goals

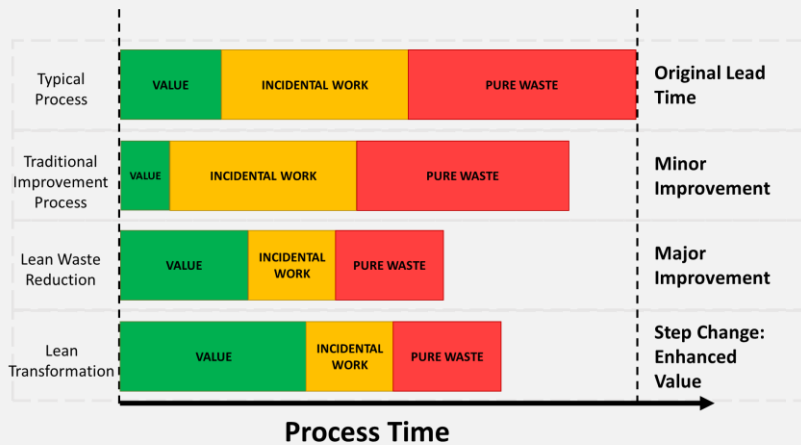
- To understand the **time wasted** and how to minimize it.
- Help **prioritize Non-value activities** that can be eliminated.
- Support better process design.
- Reduce **labor cost**.

📊 How

VA **Value-added activities:** Increase the worth of a product from the customer's perspective and the customer is willing to pay.

NVA **Non-value-added activities:** Add no value to the product and are not required for business operational reasons.

ENVA **Essential non-value-added activities:** Add no value but are necessary for the business because of the current process settings.



💡 Hints

- Value added activities are typically less than 10 percent of the total process lead time. Focus on eliminating the root causes of the 90 percent of the non-value added activities.
- Pair the Non-Value added analysis with the 8 Wastes, Process Walks and Process Mapping.

📄 Example

PathStone Group | **VA & NVA Analysis Worksheet**

Project: Line 34 Packer | Date: 1/23/2022 | State: AS-IS | Chart type: Material

Step #	Activity description	Time (min)	Distance (meters)	Operation	Transport	Inspection	Delay	Storage	Value Category	Inputs, outputs, rejection points, remarks, ...
1	Materials receiving	16.00	16		X			X	VA	Raw material warehouse
2	Storing	12.00							ENVA	
3	Raw feeding	23.00		X					VA	
4	Pre-grinding	33.00		X					NVA	
5	Balancing	20.00		X					VA	
6	Mixing	12.00		X					NVA	Silos
7	Holding	13.00	14					X	ENVA	
8	Packaging	13.00		X					NVA	

Count:	7	3	1	0	3		
Time per process step:	171	66	20	0	47		
Total VA	5	Activities	Total NVA	5	Activities	Total BNVA	0
VA Time	122	Minutes	NVA Time	94	Minutes	BNVA Time	0
Distance traveled	47	Meters	Lead Time	304	Minutes	VA	40.1%
						BNVA / NVA	59.9%

Value-added vs. Non-Value-Added

59.9% (BNVA / NVA) | 40.1% (VA)