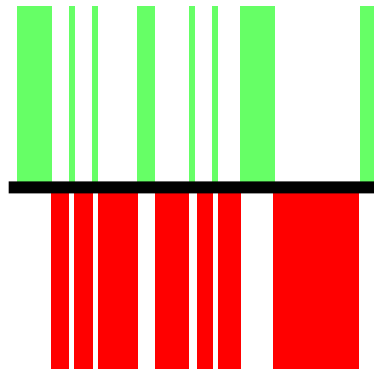


# Continuous Improvement Toolkit

## Time Value Map



## Managing Risk

PDPC  
FMEA RAID Logs  
Fault Tree Analysis  
Risk Assessment\*

## Deciding & Selecting

Pros and Cons  
Break-even Analysis  
Force Field Analysis  
Decision Tree  
QFD  
Kano Analysis  
Critical-to Tree  
Cause and Effect Matrix  
Confidence Intervals  
Probability Distributions  
Graphical Analysis  
Run Charts  
Control Charts  
Sampling  
Brainstorming  
Nominal Group Technique  
Affinity Diagram  
Lateral Thinking

## Planning & Project Management\*

Importance-Urgency Mapping  
Cost Benefit Analysis  
Pugh Matrix  
SWOT  
TPN Analysis  
Prioritization Matrix  
Paired Comparison  
Pareto Analysis  
ANOVA  
Hypothesis Testing  
Scatter Plot  
Correlation  
5 Whys  
Chi-Square Test  
Fishbone Diagram  
TRIZ\*\*\*  
SCAMPER\*\*\*  
Mind Mapping\*  
Attribute Analysis  
Visioning

## Traffic Light Assessment

Lean Measures  
OEE  
MSA  
RTY  
Descriptive Statistics  
Cost of Quality  
Reliability Analysis

## Understanding Performance

Benchmarking  
Focus groups  
Photography  
Measles Charts  
Data Collection  
Critical Incident Technique  
Observations

## Understanding Cause & Effect

Design of Experiments  
Regression  
Multi-vari Charts  
Relationship Mapping\*

## Identifying & Implementing Solutions\*\*\*

Simulation  
TPM  
Mistake Proofing  
Pull Systems  
JIT  
Ergonomics  
Work Balancing  
Automation  
Bottleneck Analysis  
Visual Management  
Flow  
Value Analysis  
5S  
Waste Analysis  
SMED  
Process Redesign

## Time Value Map

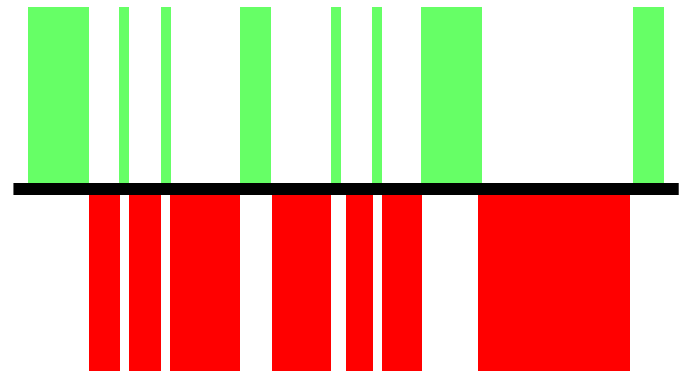
IDEF0  
Value Stream Mapping  
SIPOC  
Flow Process Chart  
Process Mapping  
Flowcharting  
Service Blueprints

## Creating Ideas\*\*

## Designing & Analyzing Processes

# - Time Value Map

- ❑ It is a tool that tracks how a specific process spends its time.
- ❑ It is a graphical description of value-added and non-value added time in a process.
- ❑ The aim is to eliminate waste and streamline the process whenever possible.
- ❑ Only activities that are seen as value-added by the customer are plotted above the middle line.
- ❑ Activities and tasks that do not add value to the customer are plotted below the middle line.



# - Time Value Map

**We Can Track any Work Item into One of 3 categories:**

❑ **Value Added Activities (VA):**

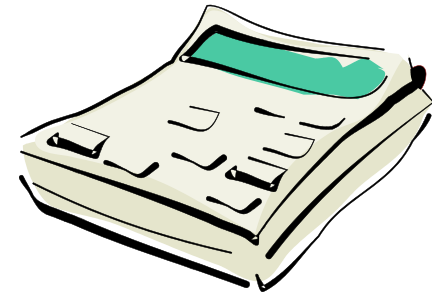
- Increase the value of the product or service from the customer perspective.

❑ **Essential Non-Value Added Activities (ENVA):**

- Necessary for the business, but the customer would not be willing to pay extra for them (unavoidable wastes).
- Examples: Invoicing, regulatory, purchasing, R&D, etc.

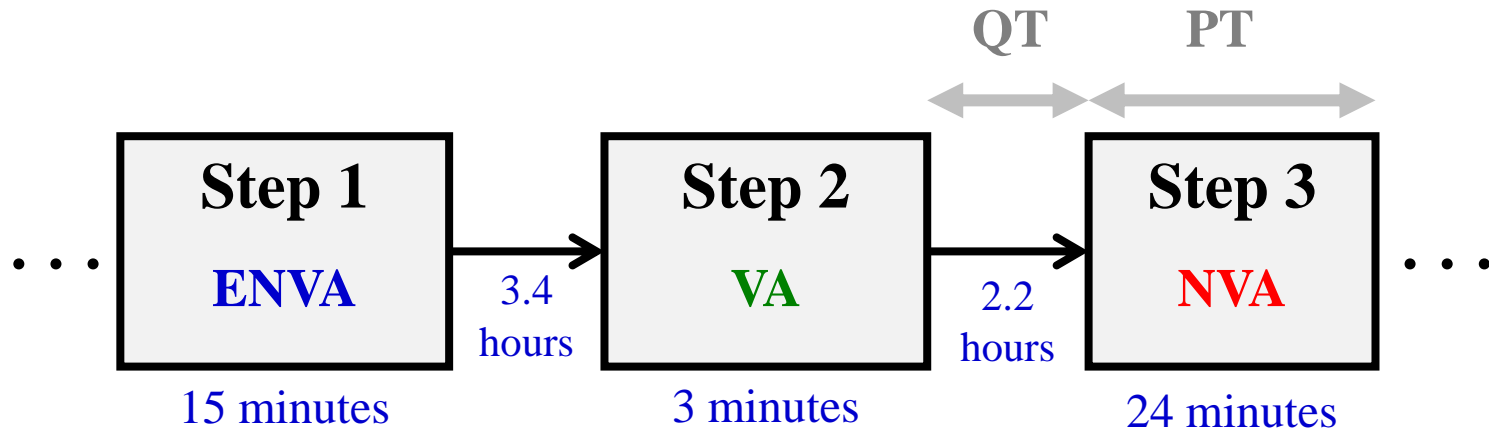
❑ **Non-Value Added Activities (NVA):**

- Add no value and not required for business operational reasons.
- Examples: Rework, Scrap, over processing, delayed starts, etc.
- Consider the 8 wastes.



# - Time Value Map

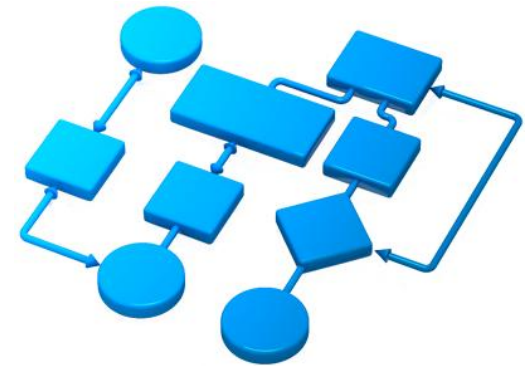
- Once all the activities and their times are identified, projects and systems can be implemented to:
  - Decrease non-value added activities.
  - Decrease the overall waiting time.



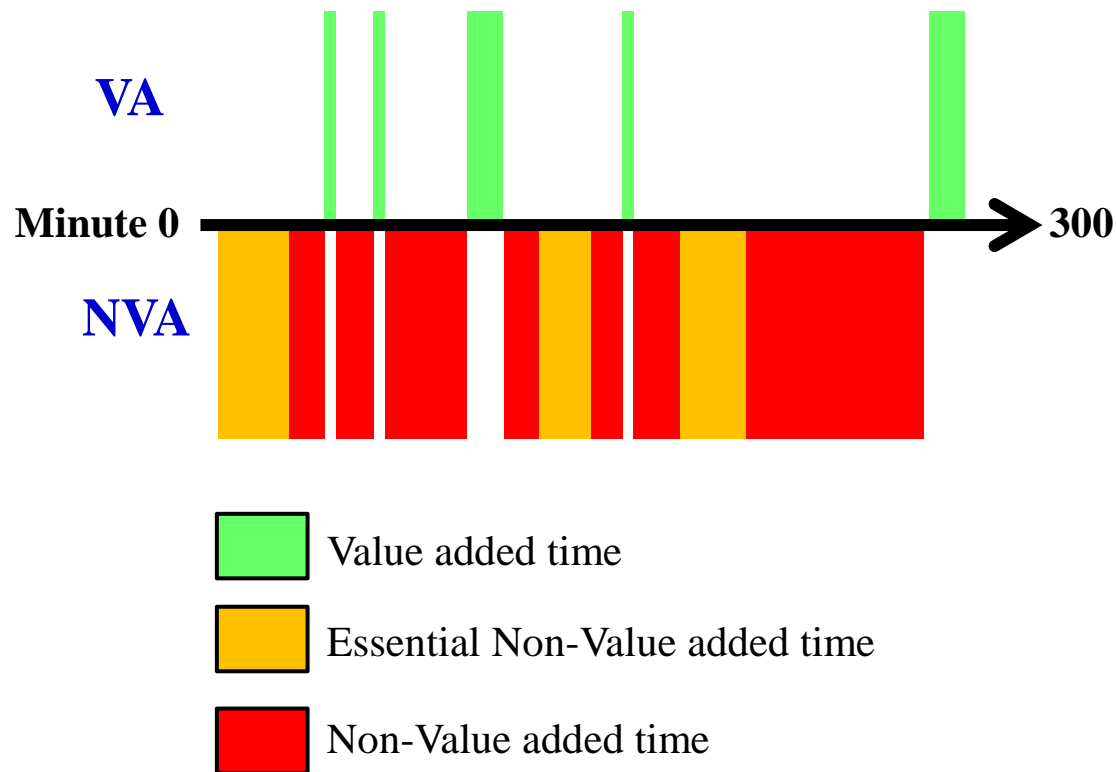
# - Time Value Map

## Drawing the Map:

- ❑ It is usually constructed using the Queue and Process times recorded during the Value Stream Mapping process:
- ❑ Make sure that everyone is clear on what is going to be tracked.
- ❑ Start by drawing the center line (the timeline of the process).
- ❑ Above this line, chart the activities that are adding value.
- ❑ Below the timeline, track the non value-added activities with two different colors (to differentiate between unavoidable and avoidable waste).
- ❑ The idle queuing time could be represented by the blank space.



# - Time Value Map



# - Time Value Map

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## **Tips:**

- ❑ It provides a good representation of the overall cycle time in the process.
- ❑ Unlike the Value Stream Map and the Value Add Chart, it places a great emphasis on showing the wasted amount of time.