



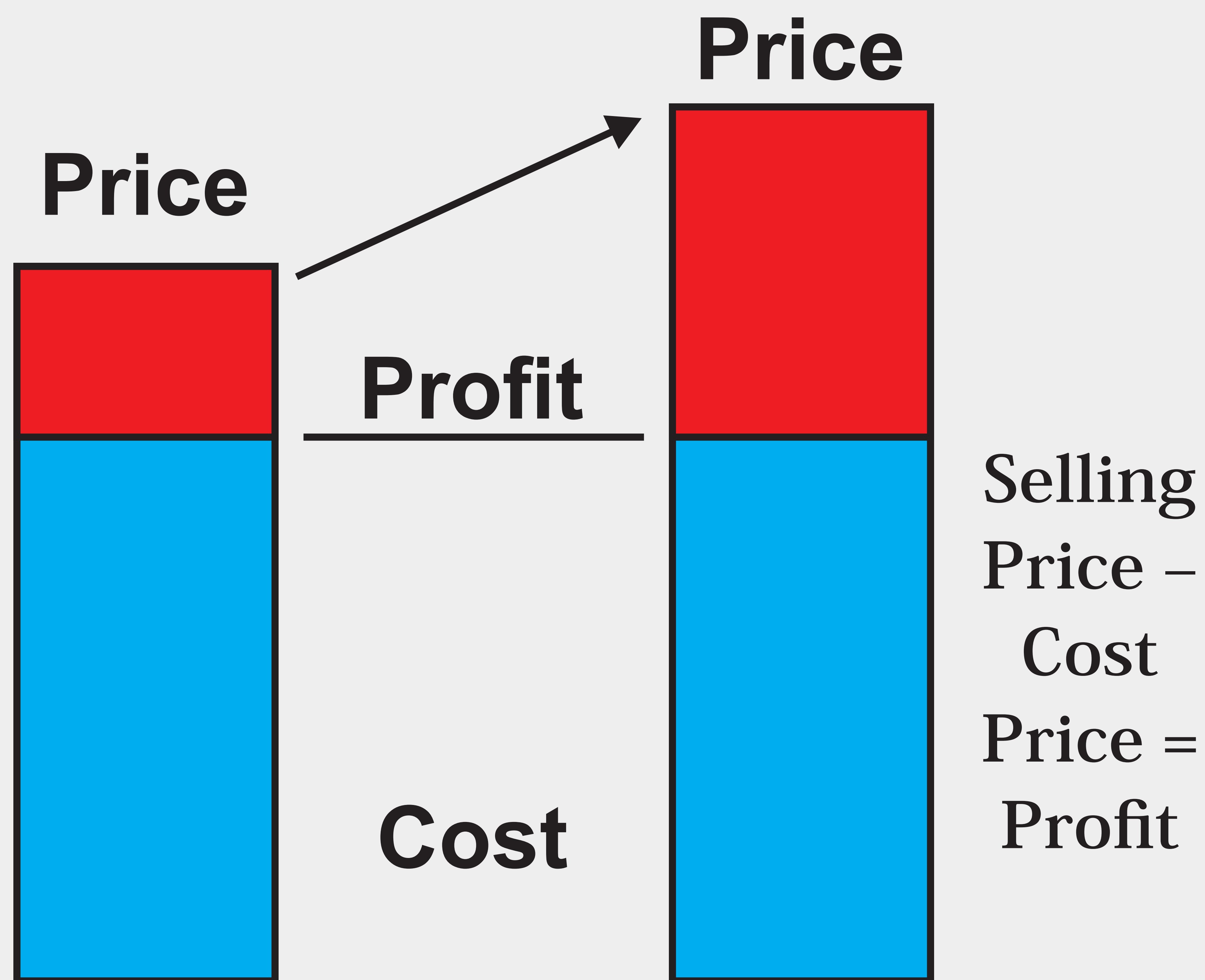
## Cost Inefficiencies in Traditional Manufacturing System



$$\text{Selling Price} - \text{Cost Price} = \text{Profit}$$

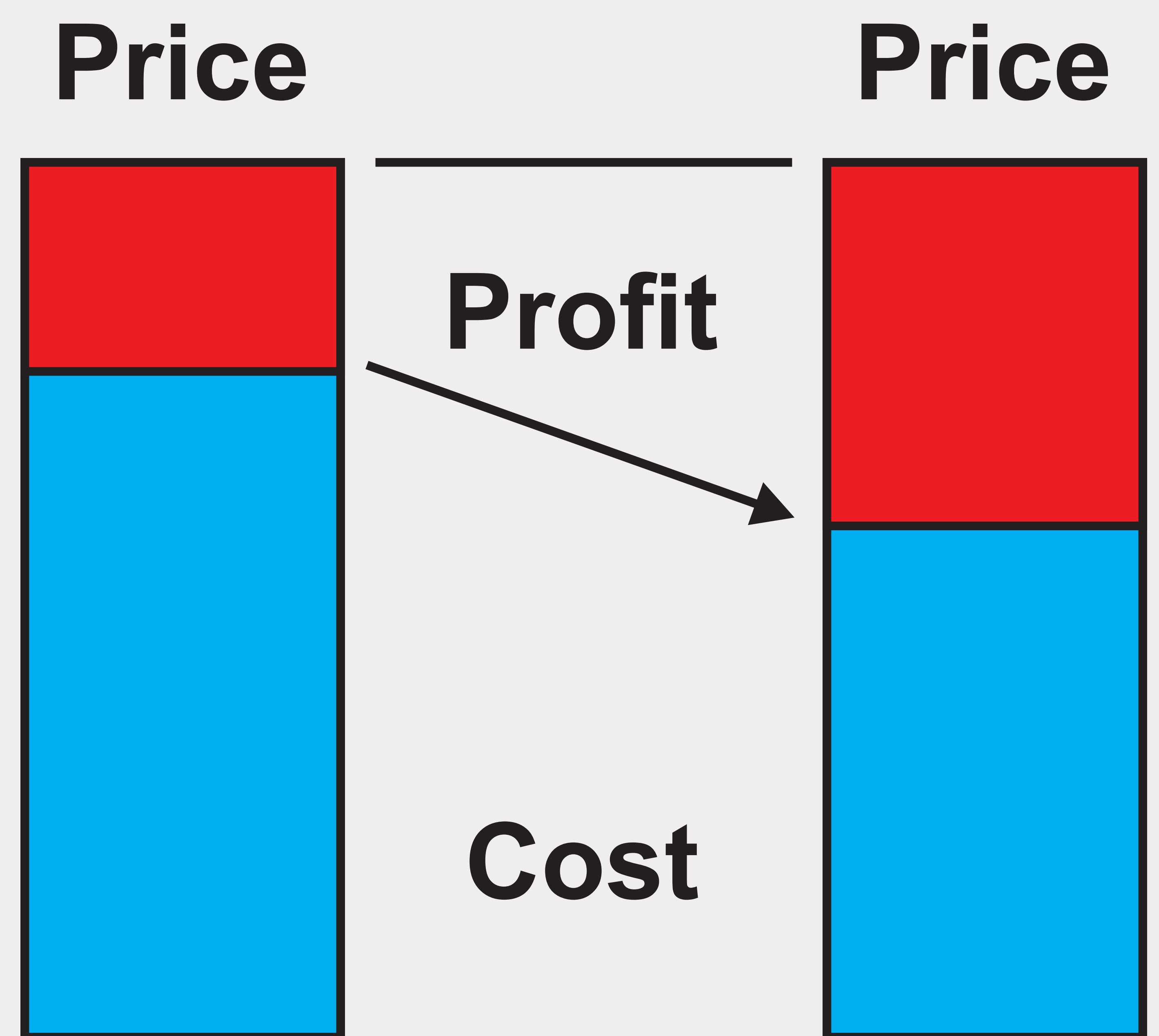
### Traditional Thinking

$$\text{Price} - \text{cost} = \text{profit}$$



### Lean Thinking

$$\text{Price} - \text{cost} = \text{profit}$$



### Traditional

- Complex
- Forecast driven
- Excessive inventory
- Speed up value-added work
- Batch production
- Long lead time
- Inspected-in
- Functional departments

### Lean

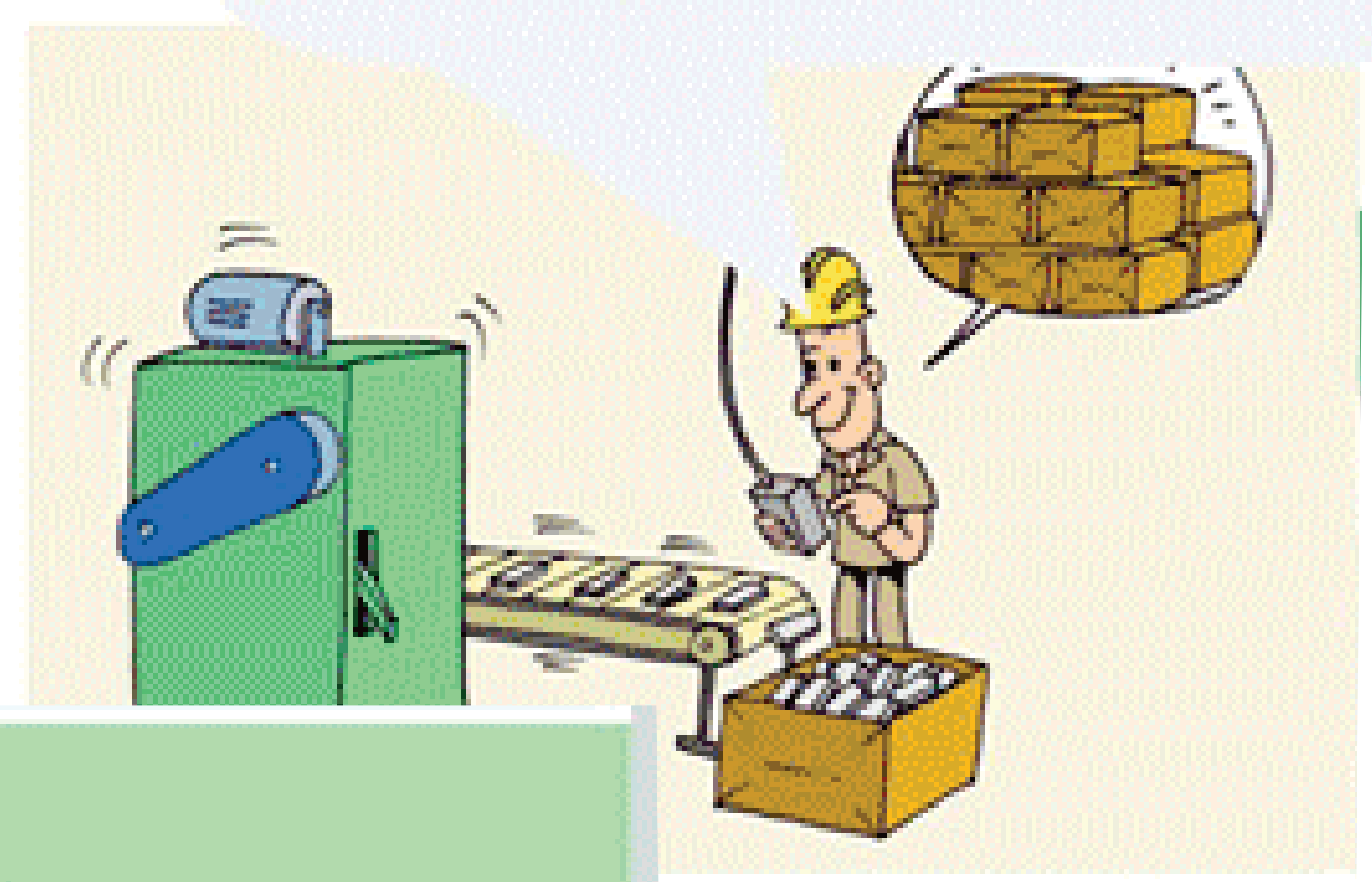
- Simple and visual signals
- Demand driven
- Inventory as needed
- Reduce non-value added
- Small lot size
- Minimal lead time
- Quality built
- Value stream managers

# What is Lean?

Lean manufacturing or lean production, often simply "lean", is a systematic method for the elimination of waste ("Muda") within a Manufacturing system.

## Over production

Are we producing exactly what is required?



## Waiting time

Are people waiting too long for materials to be processed?

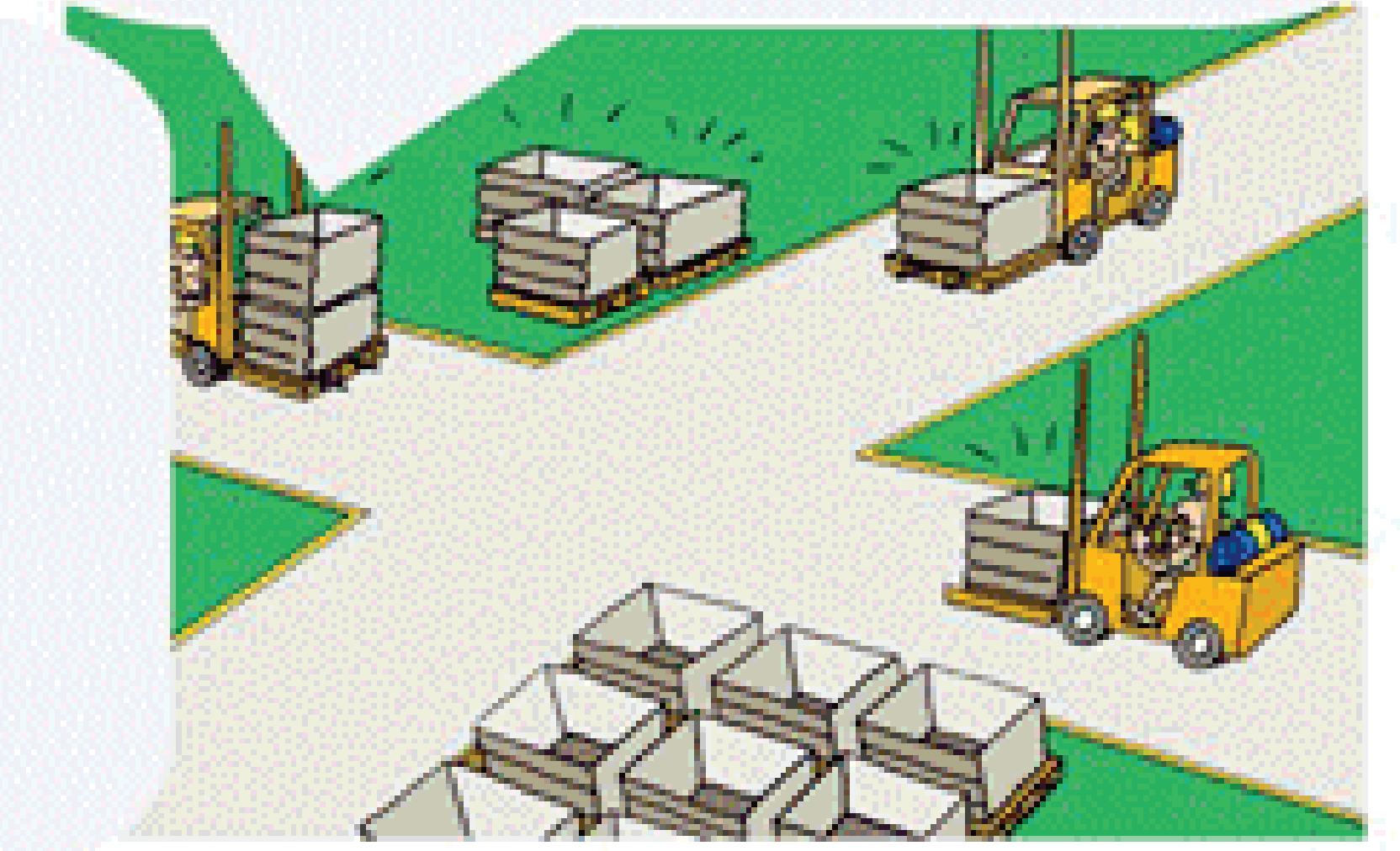


## Rework/rejects

How can I avoid mistakes?

## Transporting

How can I avoid moving parts from one place to another?



## Inventory

Where and how can we reduce our stock?

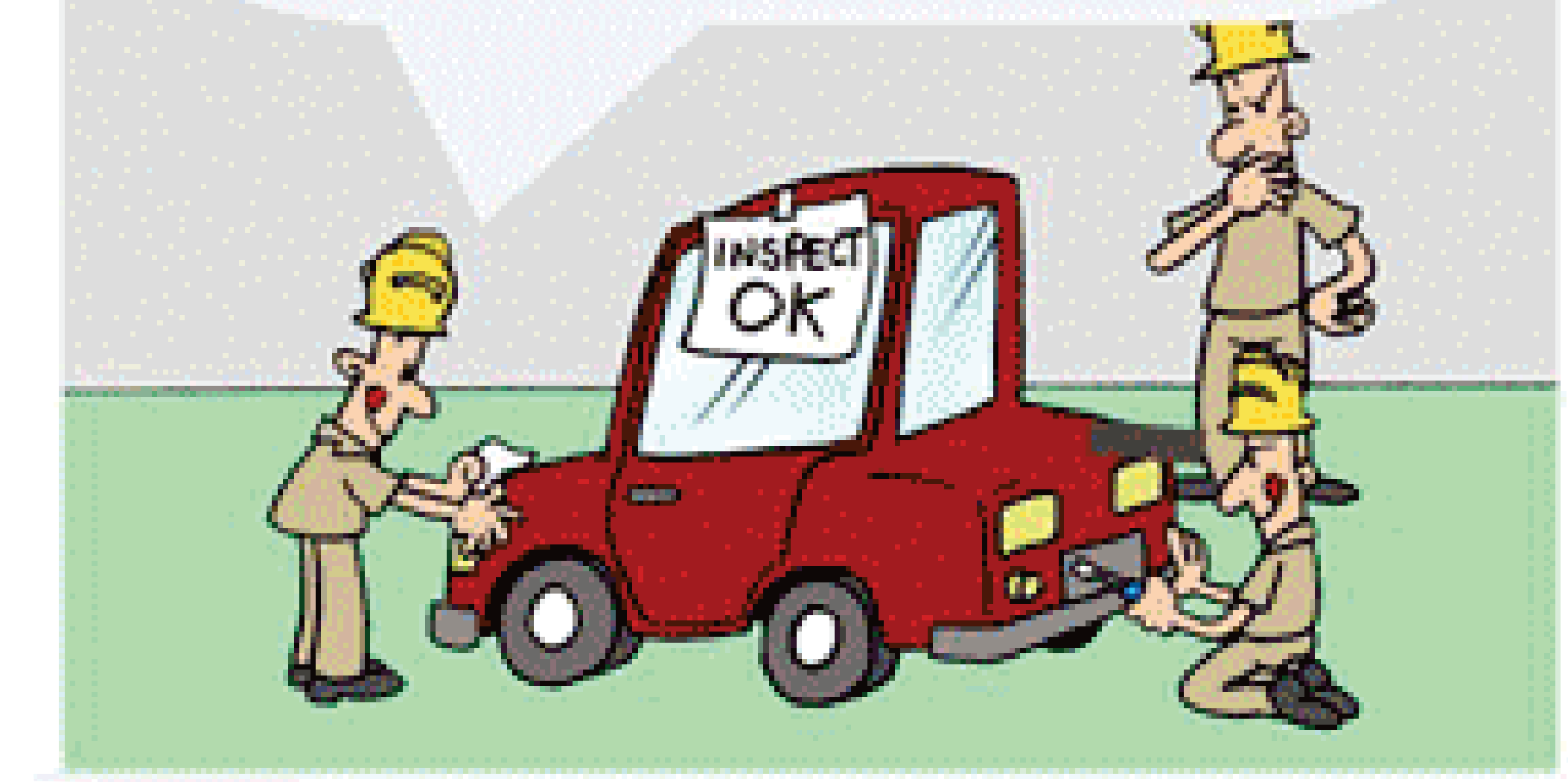


## Motion

How can I make my job easier in order to avoid too much motion?

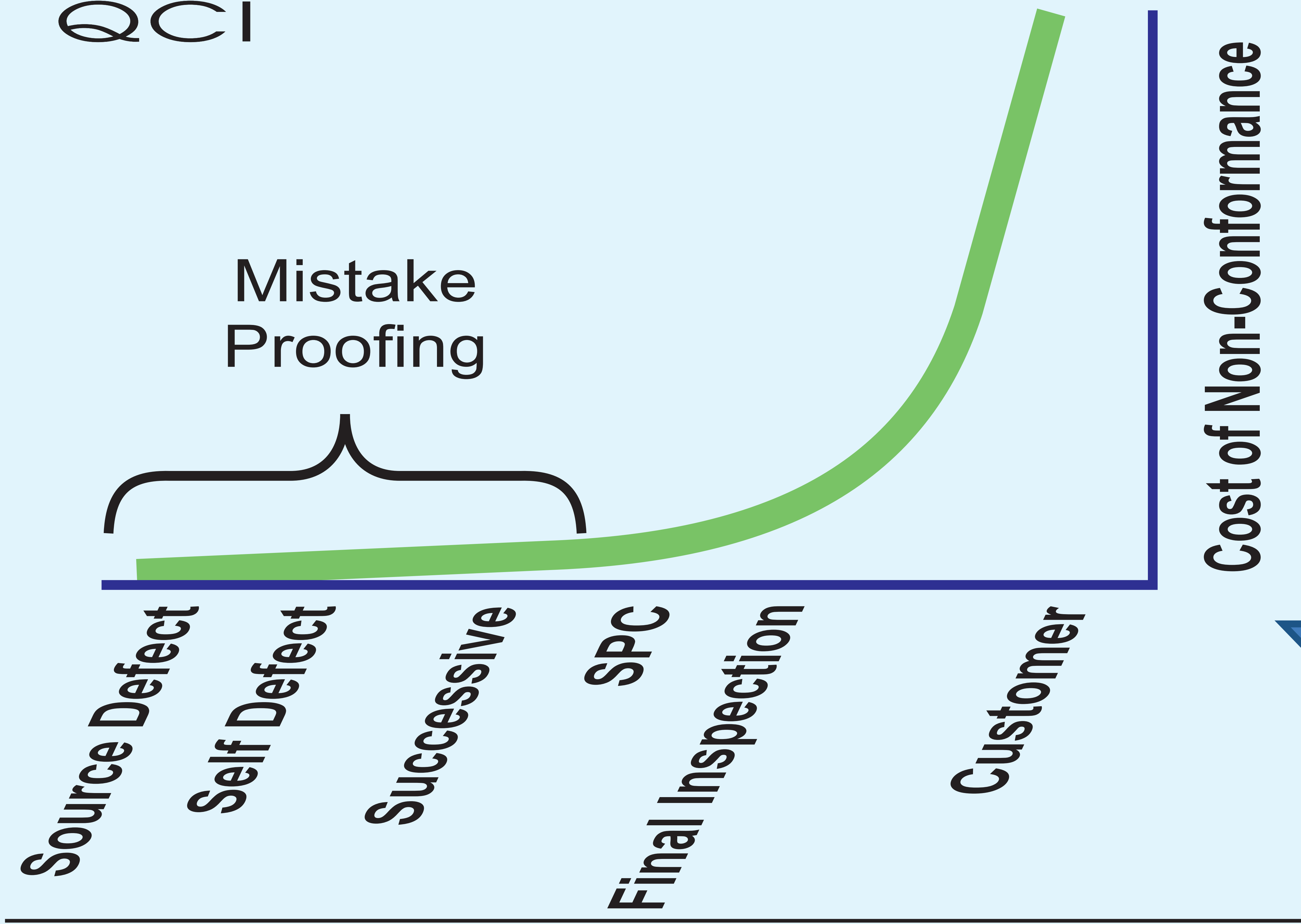
## Over processing

Can operations be eliminated from my work?

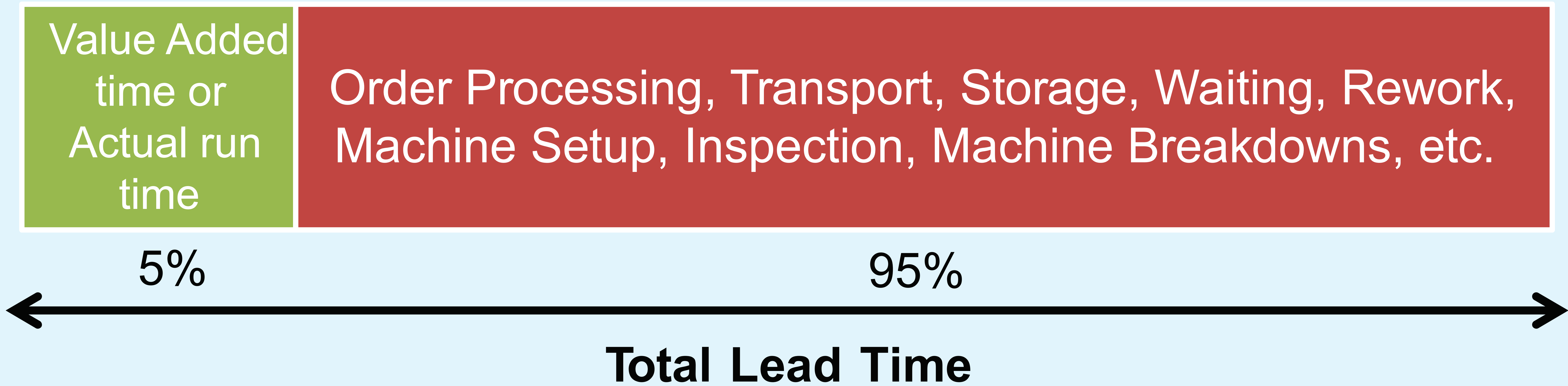


Waste in any form causes some type of cost !!!  
Get rid of it!!!

# Cost of Non-Conformance



**Typically >95% of Total Lead Time is Non-Value Added!!**





# LEAN MANUFACTURING COMPETITIVENESS SCHEME (LMCS)

## About The Scheme

**National Accreditation Board for Education and Training (NABET)** is a constituent Board of Quality Council of India. NABET has been appointed as National Monitoring and Implementing Unit (NMIU) for up - scale diversi on of Lean Manufacturing Competiveness Scheme of Ministry of Micro, Small and Medium Enterprises (MSME).

- Strong performance of MSME sector is necessary for us to achieve the objective of rapid and inclusive growth.
- The Scheme aims at enhancing the productivity and competitiveness of MSME Enterprises by reduction of wastages in manufacturing processes, inventory management, space management, energy consumption, etc through implementation of Lean Tools and Techniques

## Benefits

- Quality performance, fewer defects and rework (in house and at customer)
- Fewer Machine and Process Breakdowns
- Lower levels of Inventory
- Greater levels of Stock Turnover
- Effective utilization of space
- Higher efficiencies, more output per man hour
- Improved delivery perfor-mance
- Greater Customer Satisfaction
- Improved employee morale and involvement
- Improved Supplier Relations
- Higher Profits!

## Introduction

- Clusters are being formed comprising of 6-10 units.
- Lean Consultants implement various Lean Tools and Techniques depending on the need and requirement of Industry during period of 18 months.
- Fees of lean Consultant is being subsidized in the scheme.
- 80% cost of implementation being borne by Ministry of Micro, Small and Medium Enterprises (MSME) while 20% cost is borne by Industry.

*National Manufacturing Policy describe manufacturing as the main engine for growth of the economy & envisages manufacturing sector to reach a target of 26 per cent of the national GDP by 2022.*