

SIX SIGMA

K.M.Eazhil
Assistant Professor
Department of Mechanical Engineering
SNS College of Engineering
Coimbatore



SIX SIGMA

- A **Vision** and **Philosophical** commitment to our consumers to offer the highest quality, lowest cost products
- A **Metric** that demonstrates quality levels at 99.9997% performance for products and processes
- A **Benchmark** of our product and process capability for comparison to 'best in class'
- A practical application of statistical **Tools** and **Methods** to help us measure, analyze, improve, and control our process

What is Six Sigma





DISCUSSION

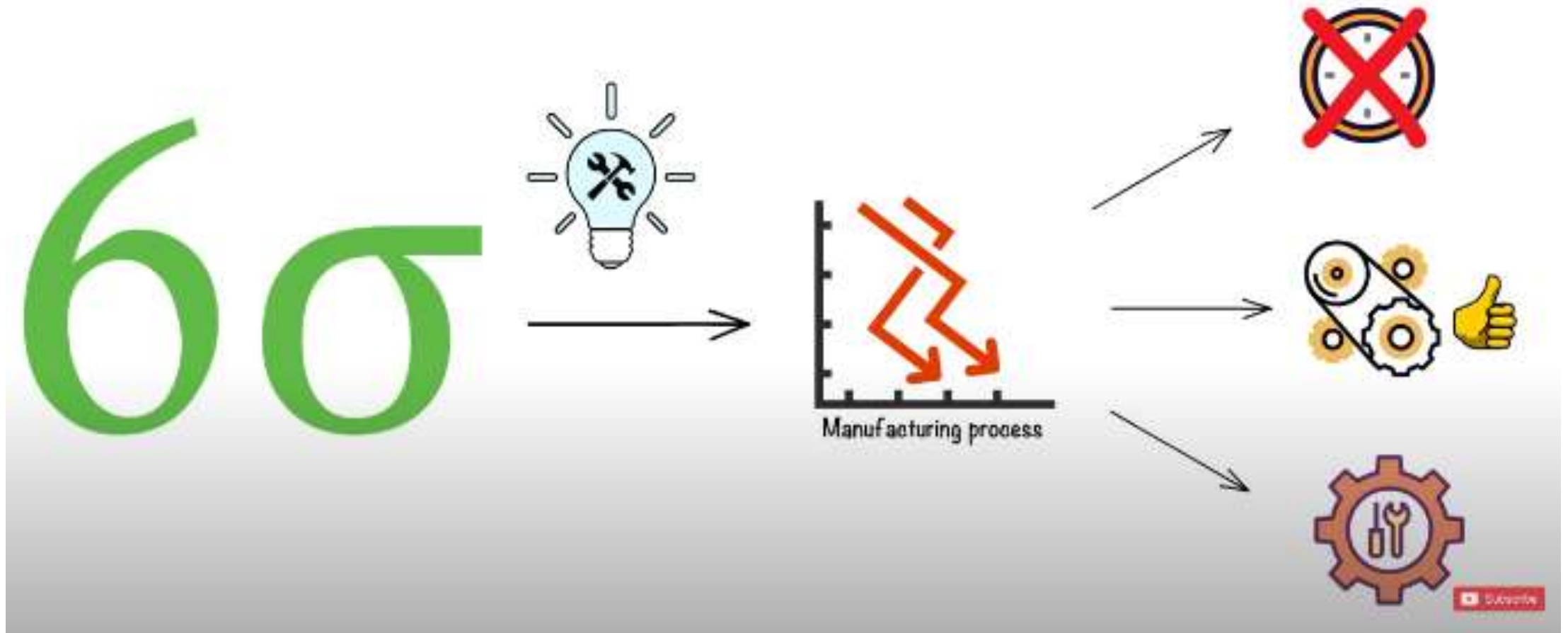
Which of the following are motivators?

1. Salary
2. Certificates from the President
3. Appreciation from customer
4. Air conditioned office

- a) I and IV only
- b) II and III only
- c) I,II,III and IV
- d) I,II and III only

HOW?

WHY?



Six Sigma aims to reduce



Time



Defects



Variability



Increases customer loyalty

6σ



99.9996% of the time



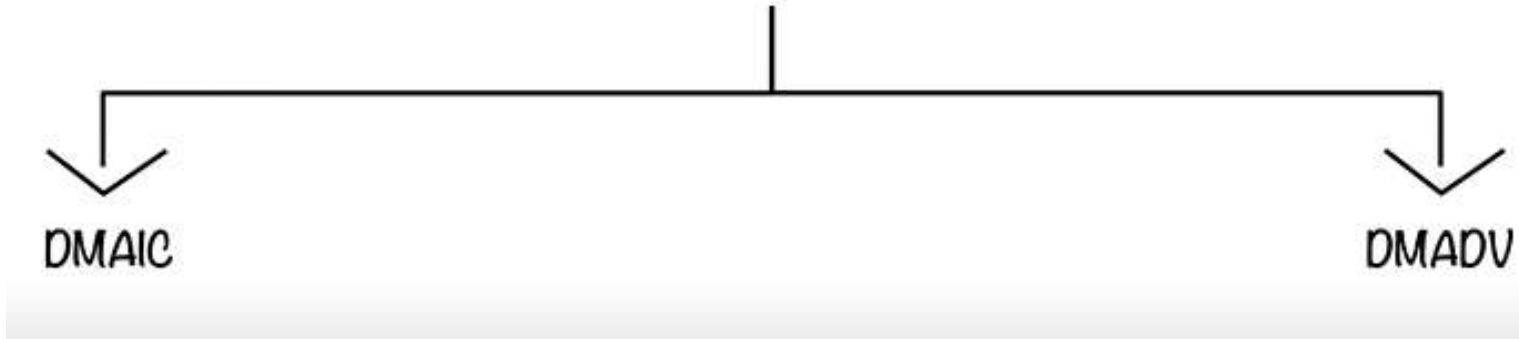
3.4 errors / million opportunities



Improves employee morale



6σ



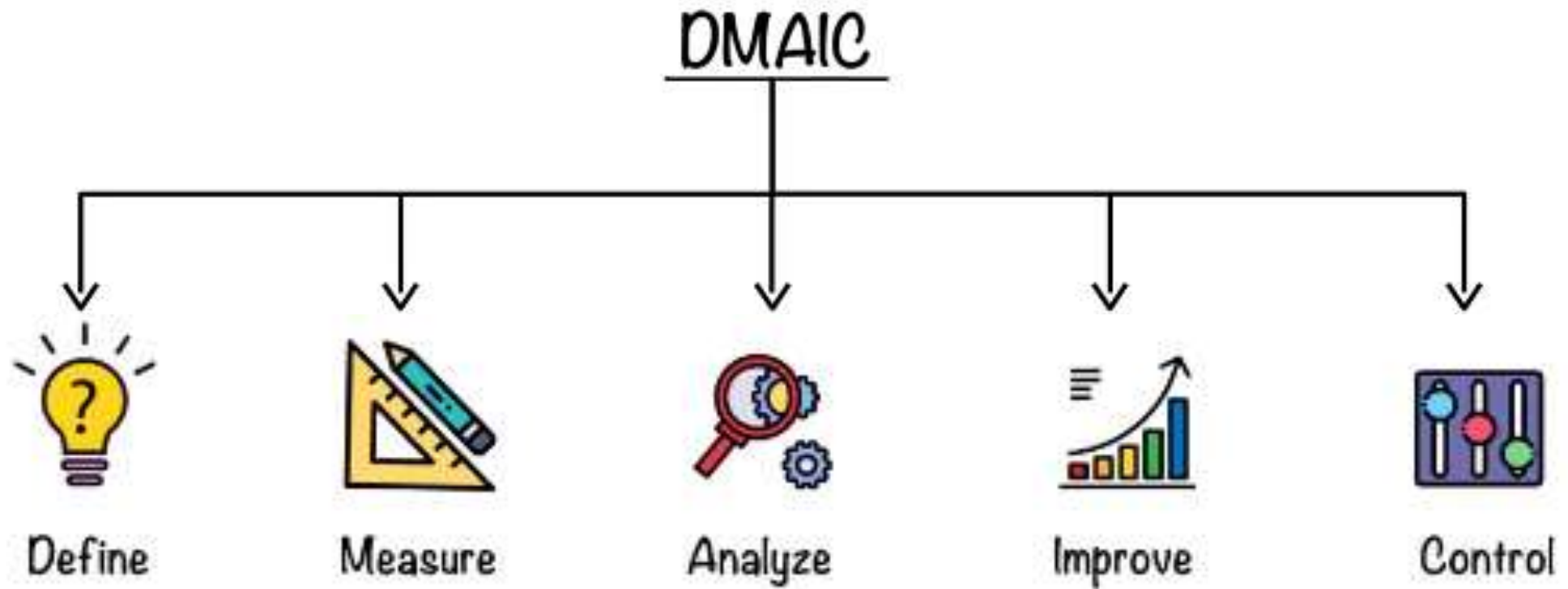
- Define
- Measure
- Analyze
- Improve
- Control

- Define
- Measure
- Analyze
- Design
- Verify



EXAMPLE







Define



Determine what issues
you are facing

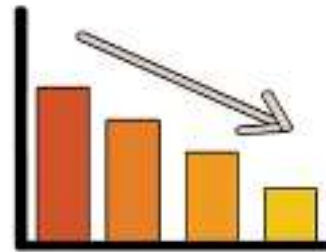


Opportunities for
improvement



Customer
requirements





Process
(Unaltered)



Measure

10	20	1.20	10
1.00	2.00	1.00	1.00
1.20	1.00	10	10

Manufactured in a day

In the current scenario



1000 cars are
manufactured in a day

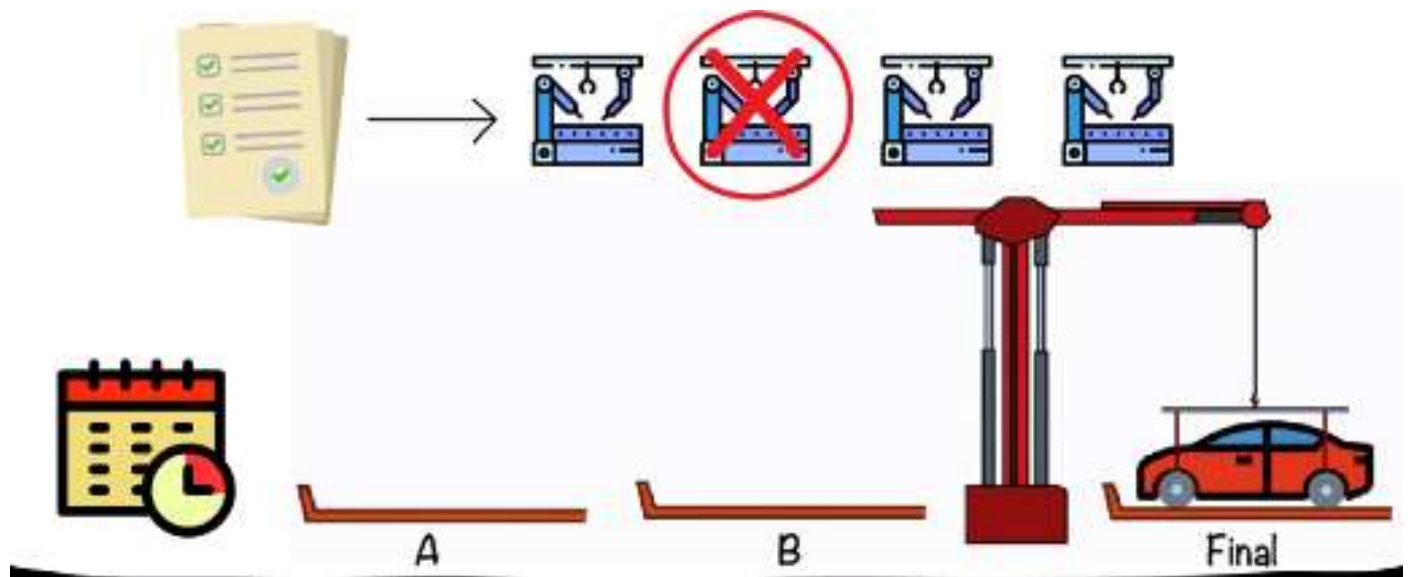


By 1/30 machines

Some of the metrics measured are



- Number of cars produced in a day
- Time taken to assemble a car
- Number of windshield wipers attached in a day
- Time taken for attaching windshield wipers
- Number of defects detected from each machine

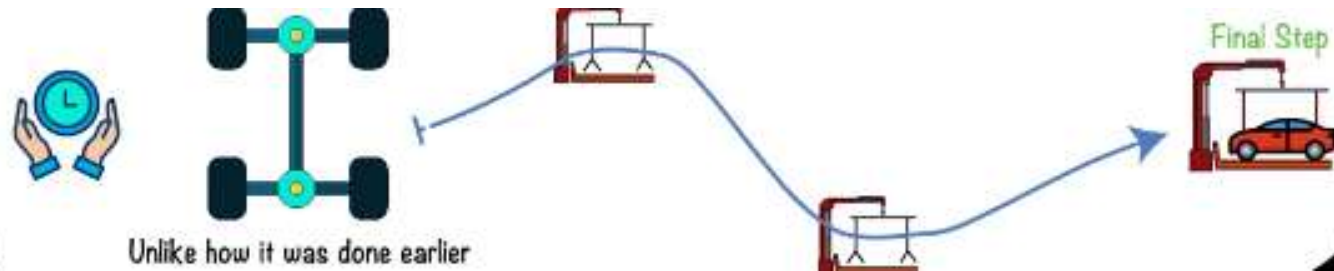




Improve



Replaced →





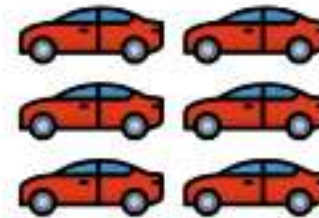
Control



&



Based on the changes made



~~1,000~~

2,000
cars a day



ASSESSMENT

"Deciding in advance what is to be done and who is to do it" highlighted one of the functions of management. Identify it

- a) Organising
- b) Planning
- c) Directing
- d) Controlling



ASSESSMENT

Highlight the feature of management depicted by the image given here

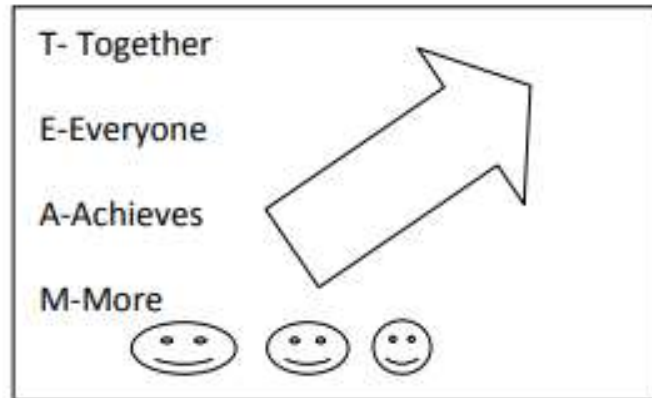
a) Group activity



b) Goal oriented

c) Pervasive

d) Dynamic





REFERENCES

1. <https://www.youtube.com/watch?v=4EDYfSI-fmc>
2. The Certified Six Sigma Yellow Belt Handbook by Govind Ramu
3. **What is Lean Six Sigma** By Michael L. George, David T. Rowlands, Bill Kastle



THANK YOU