

# **SNS COLLEGE OF TECHNOLOGY**

(An Autonomous Institution)

COIMBATORE-35.



- Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A++' Grade  
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

## **DEPARTMENT OF AUTOMOBILE ENGINEERING**

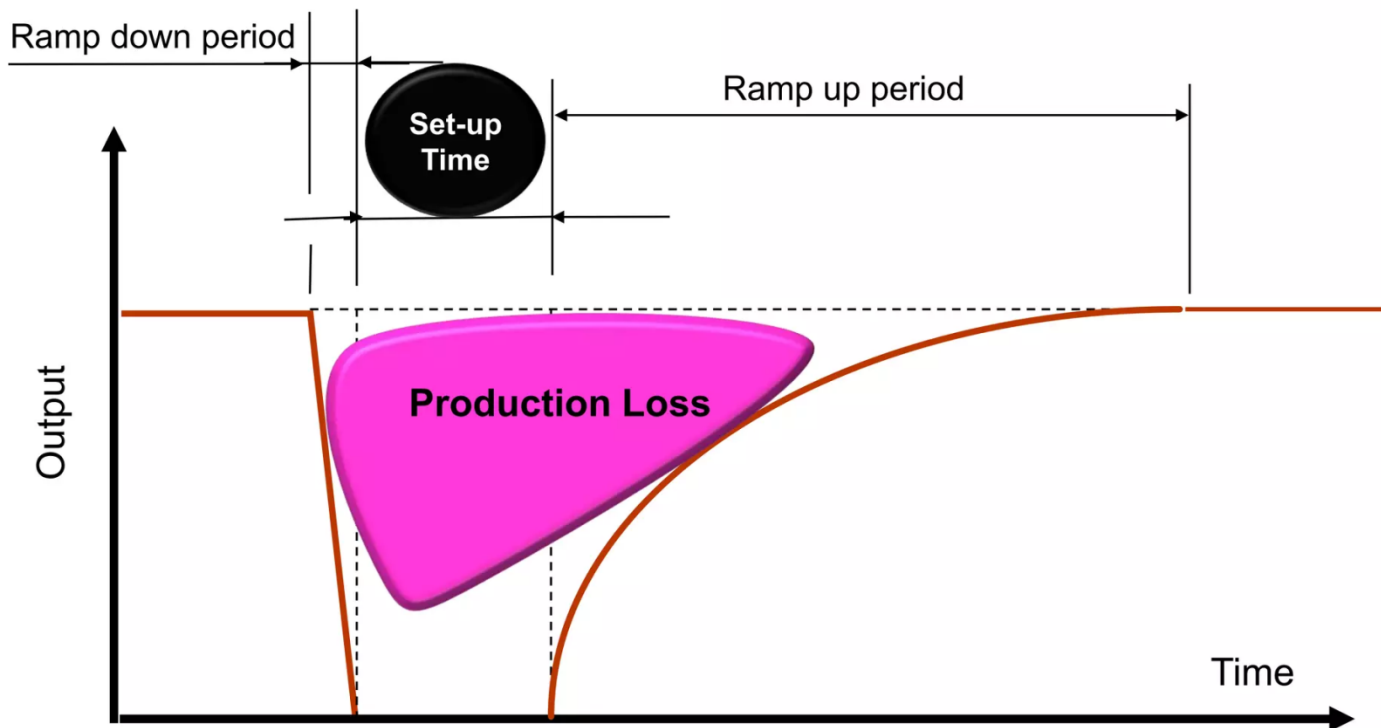
### **COURSE NAME : 19AUZ405 – LEAN MANUFACTURING**

**IV YEAR / VII SEMESTER**

**Topic – Setup Time Reduction**

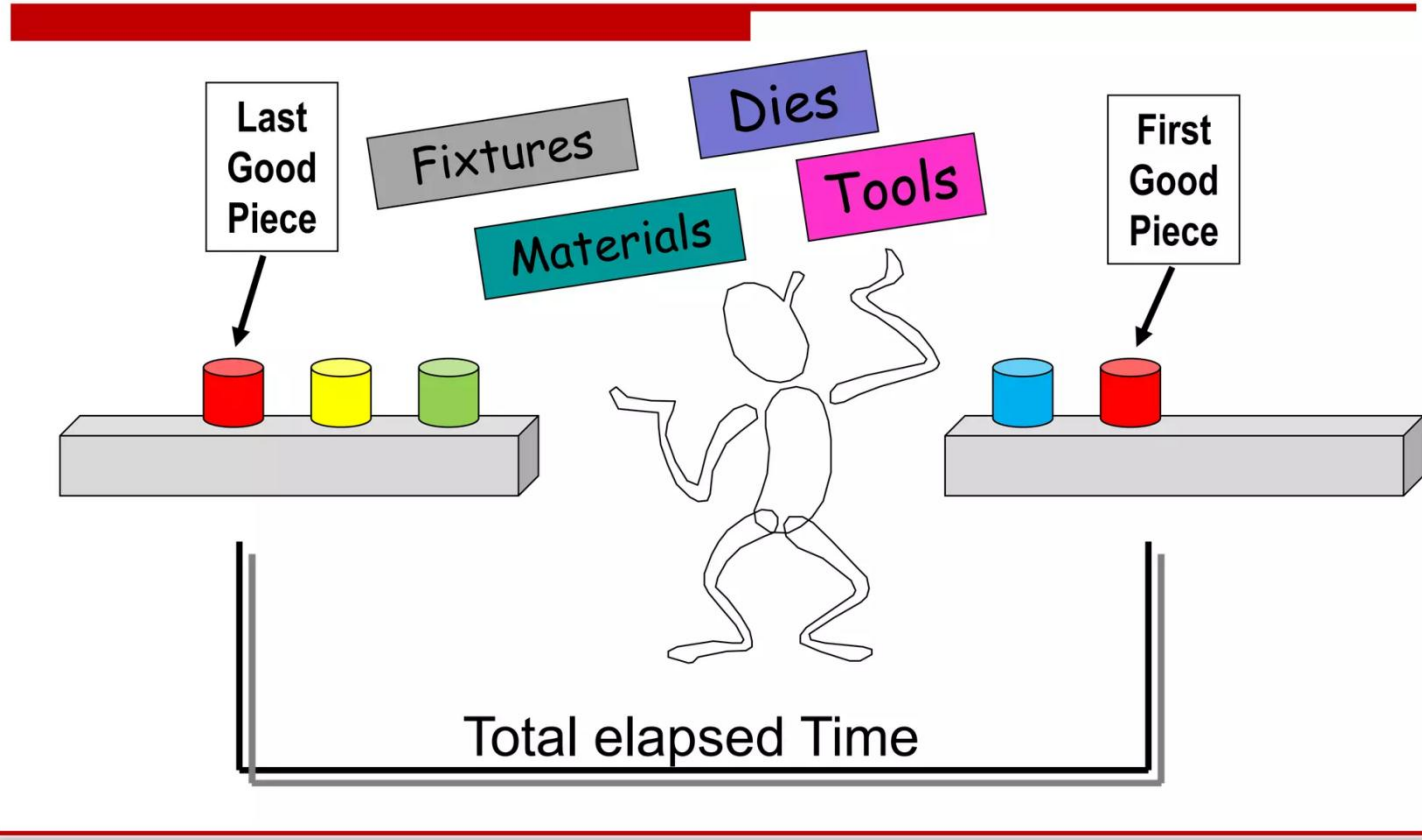


# Set-up - Definition





## Set-up - Definition





## Set-up Reduction - Goal

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# Zero Set-up or Eliminate Set-up

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# Set-up Reduction...

## Is NOT

- A program to eliminate set-up people
- A panacea to overcome poor management or poor process layouts
- A requirement to spend large capital investment to attain significant benefits

## Is

- A tool (like many) to reduce waste and excessive time
- A low-cost method to achieve increased capacity from existing equipment
- A process to reduce lot sizes and improve product mix
- A cross-functional team approach to problem-solving



## Set-up Reduction – Bigger Picture

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- In order to reduce lead time
  - It is necessary to reduce lot size
  - Which in turn reduces work in process
  - To do this, you must reduce set-up time
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## Set-up Reduction – Typical Application

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- Processes making a high variety of end items
  
  - Processes using high cost components (greater benefits of inventory reduction)
  
  - Capacity bottleneck operations
    - avoids purchase of new equipment
    - avoids overtime
    - better customer order fill
    - quicker response time
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## Set-up Reduction – Traditional Practice

### Material movement occurs after the machine is turned off

- Completed products are transferred to next operation
- Raw material is moved after the machine is stopped

### Defects or missing equipment noticed when the machine is running

- Setup tooling delivered after the changeover has begun
- Defective product identified after internal setup has begun

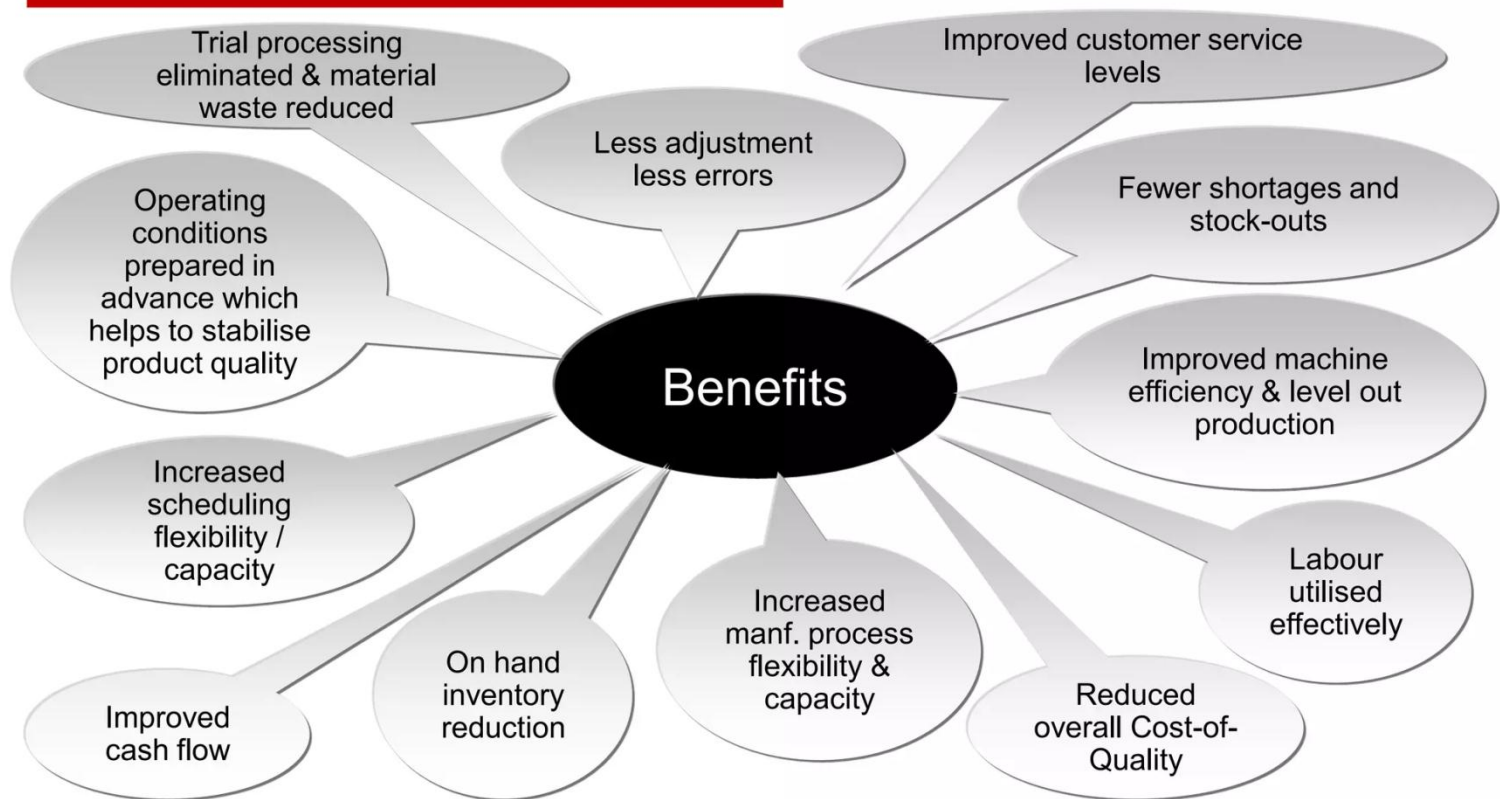
### Defective tooling, fixtures, setup instruments are noticed, after the machine is turned on

- The operator notices that equipment is missing tools etc after internal setup has begun



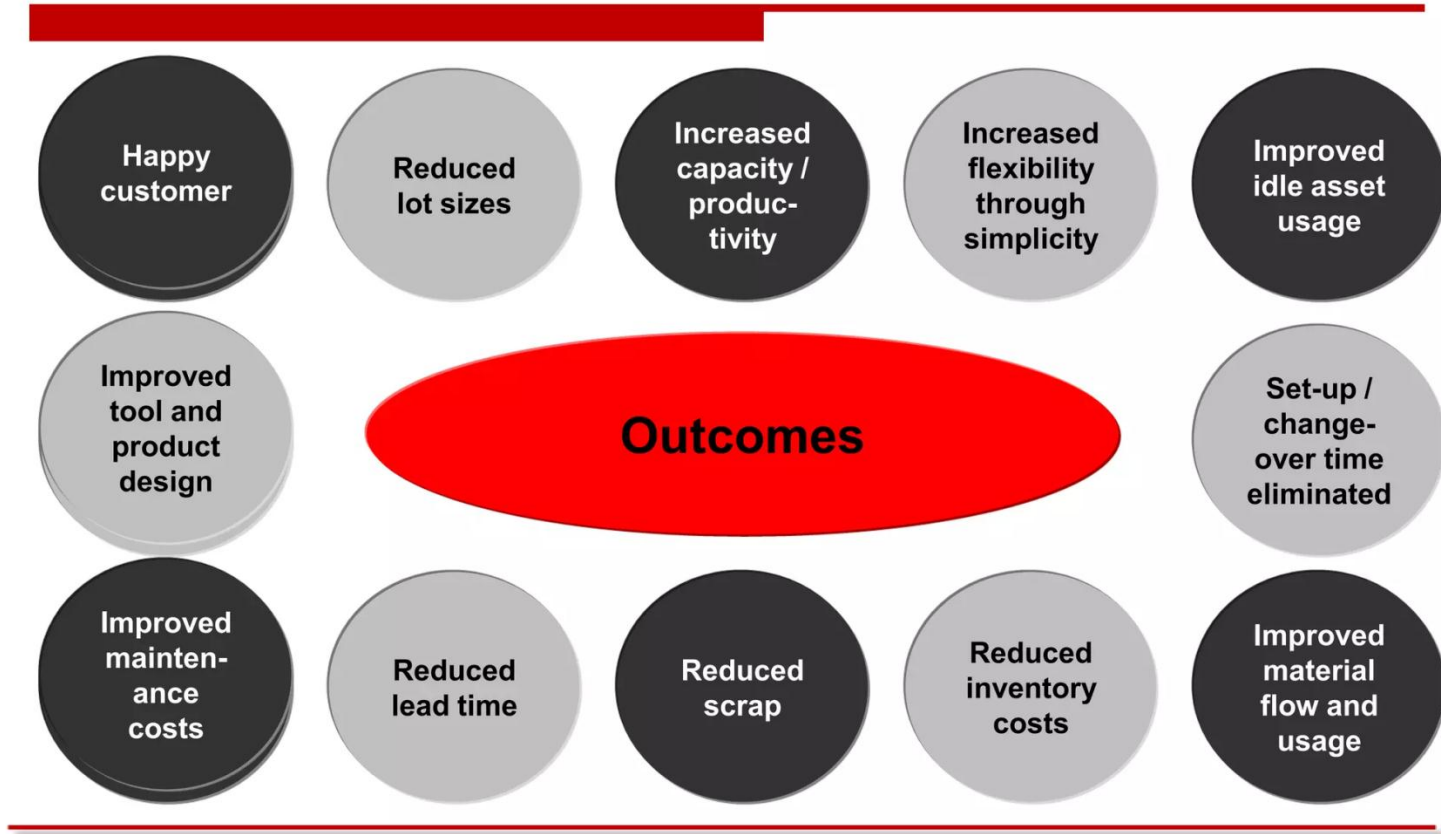


# Set-up Reduction - Benefits



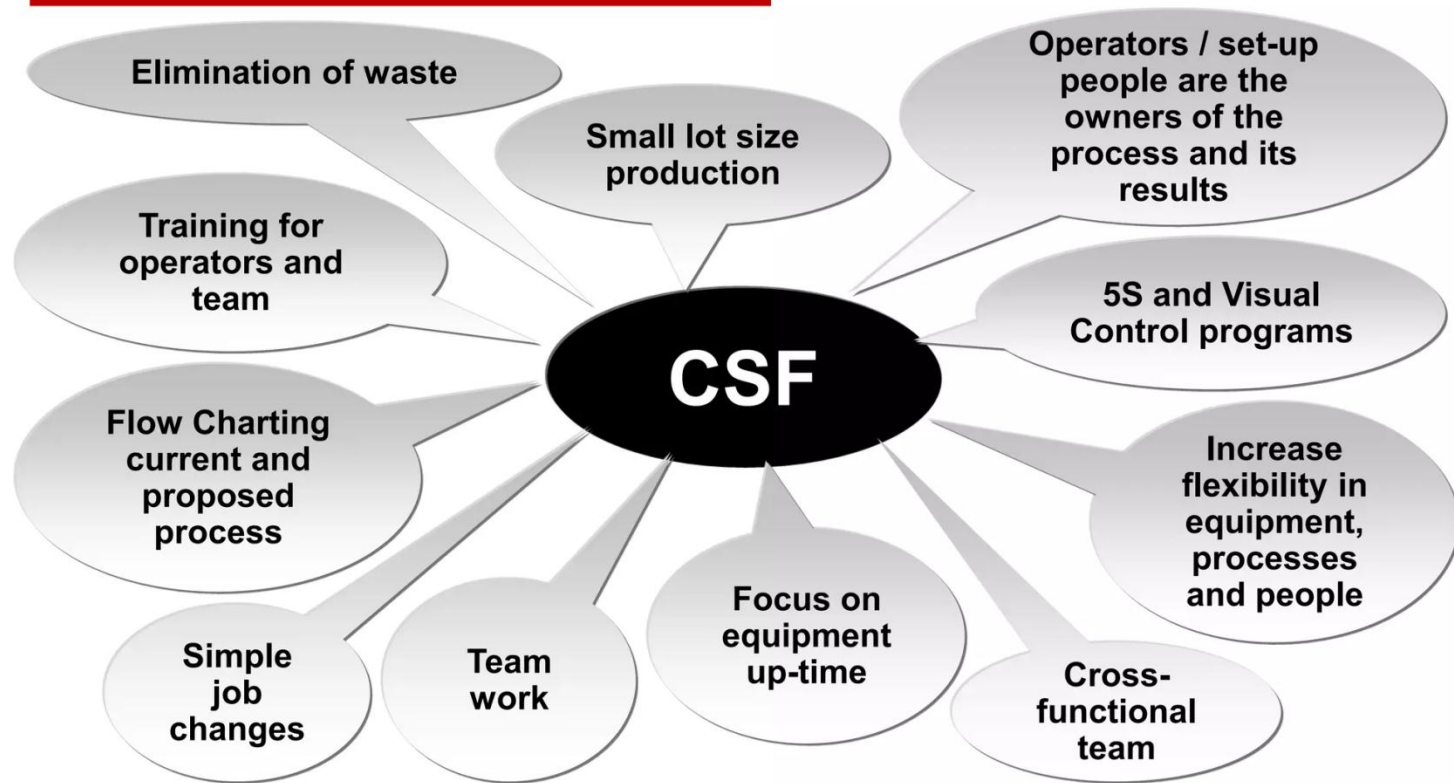


# Set-up Reduction - Outcomes





# Set-up Reduction – Critical Success Factors





## Set-up Goals – Your Mandate

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- **Target 50% Reduction First Time**
  - **Continuous Improvement**  
**Target 20% per year thereafter**
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# Set-up Reduction - Implementation

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***Kaizen***

**'SMED' / 'QCO'**

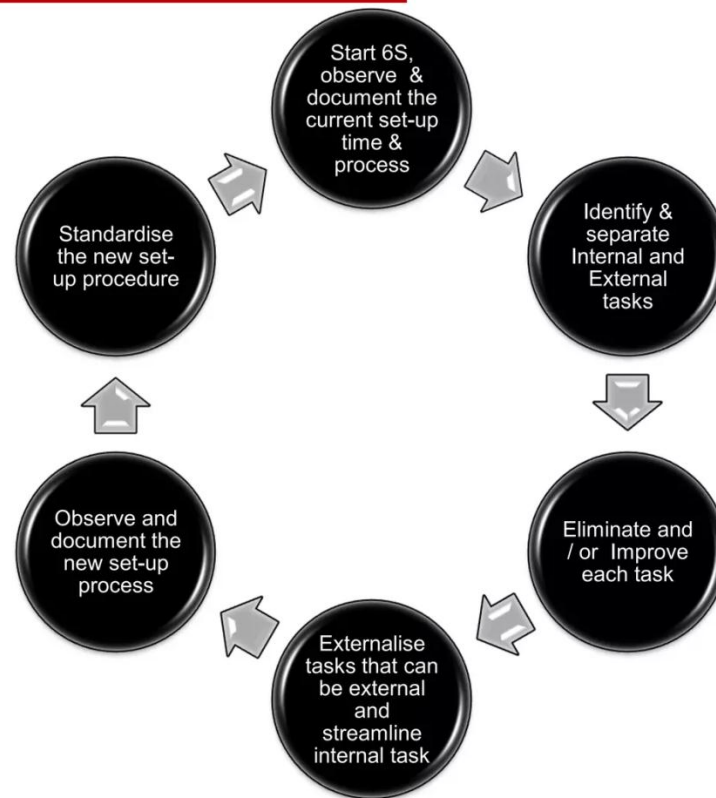
**Objective:** Faster Changeovers  
(Set-Up Reduction)

**>50% Improvement**

**Low cost**



# Set-up Reduction – Implementation





*Thank You !*