SMED

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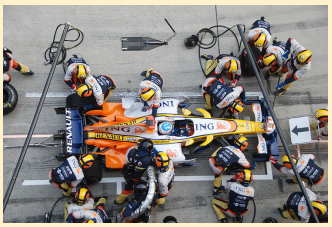


How do they do it

- Planning
- Teamwork
- Practice

- These result in increased speed and reduction of variation

SMED

- Plan the changeover
- Prepare
- Eliminate Waste
- Teamwork (Pit Crew)

Philosophy

- Drive down the total time it takes to change from one part number to the next
- SMED is one component of a Lean SYSTEM

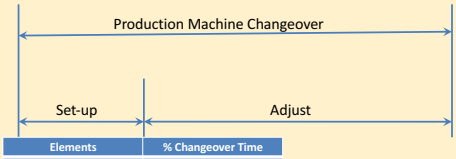
Benefits

- Reduced cycle time from customer order to shipment
- Changeover time reduced 50%-90%
- WIP reductions up to 90%
- Improved customer service
- Improved product quality
- Reduced costs
- More effective use of resources

Measurement

- Measure time from the last good part on the previous production run, to the first good part on the next production run.

Changeover Components



Elements	% Changeover Time
Remove Tooling	5%
Set-in Tooling	10%
Adjustments	75%
Inspection	10%

How to reduce changeover time

- 5S
- Define Internal and External Elements
- Convert Internal to External
- Streamline Internal
- Streamline External

How to reduce changeover time

- Internal
  - Those elements which occur when the machine is stopped
- External
  - Those elements which are done while the machine is running

Changeover reduction worksheet

Total Time:		50% Reduction		75% Reduction			90% Reduction			
		Define		Convert			Streamline		Streamline	
Element	Time	Int	Ext	Int→	Ext	Comments	Int	Comments	Ext	Comments

Other Applications

- Can you think of examples of how this might be used in a service environment?