



# Thinking Lean

In A

**High-Mix Low-Volume**

World

Delivered by

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*This Lean Stuff is pretty interesting,  
but .....*



- **We aren't Toyota**
- **We don't make 1000 cars a day, all the same**
- **We are always making something new**
- **We never make the same thing twice**
- **Lean doesn't apply to us**



*If you understand what Lean really is.... You will understand it applies to everyone.*



## *What is Lean ?*

**The elimination of waste everywhere, while adding value for the customer.**

**EVERYWHERE!!**

**Not just on the shop floor.**



## *2 Years of Lean on the shop floor of a HMLV Organization*

- Implemented 5S, (workplace organization).
- Implemented S.M.E.D. (setup/changeover reduction)
- Implemented pull systems on common raw materials and shop floor supplies.
- Implemented CI to constantly evaluate and improve the shop floor processes.
- Implemented TPM (total productive maintenance) so machines work when they are supposed to.



*So, why aren't things getting better ???*

**80%**

**Of the issues the shop floor has to deal with did not originate on the shop floor.**



*Where are the problems coming from ?*

**Sales:**

- **Customer expectations not clear**
- **Orders entered late**
- **Orders entered incomplete**
- **Orders entered wrong**
- **Last minute changes**



## *Where are the problems coming from ?*

### **Engineering:**

- Drawings late
- Drawings incomplete
- Drawings wrong



## *Where are the problems coming from ?*

### **Materials:**

- Wrong Material
- Material late
- Material short shipped
- Material defective



*Where are the problems coming from ?*

**Management:**

- Have to keep busy
- Employees not cross trained, lack of flexibility
- No training of “non-shop floor” personnel on Lean

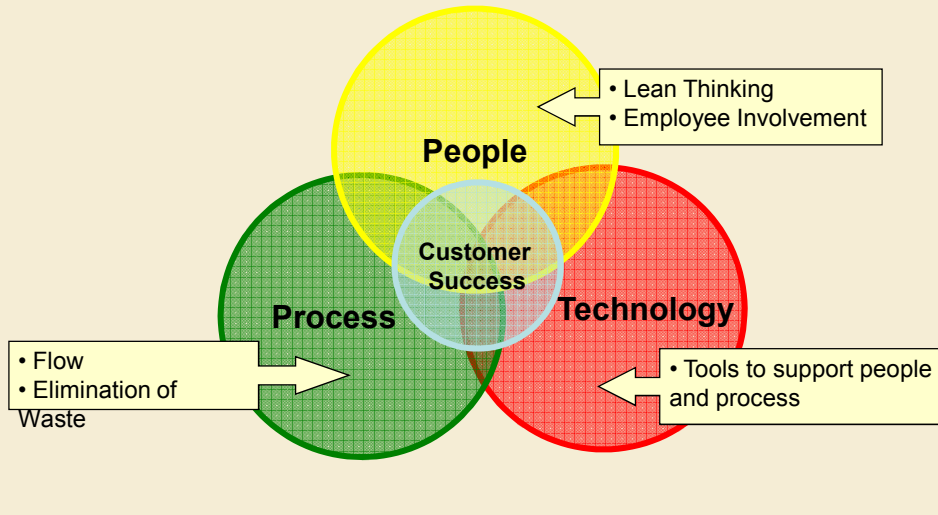


*These Issues are just part of doing business.*

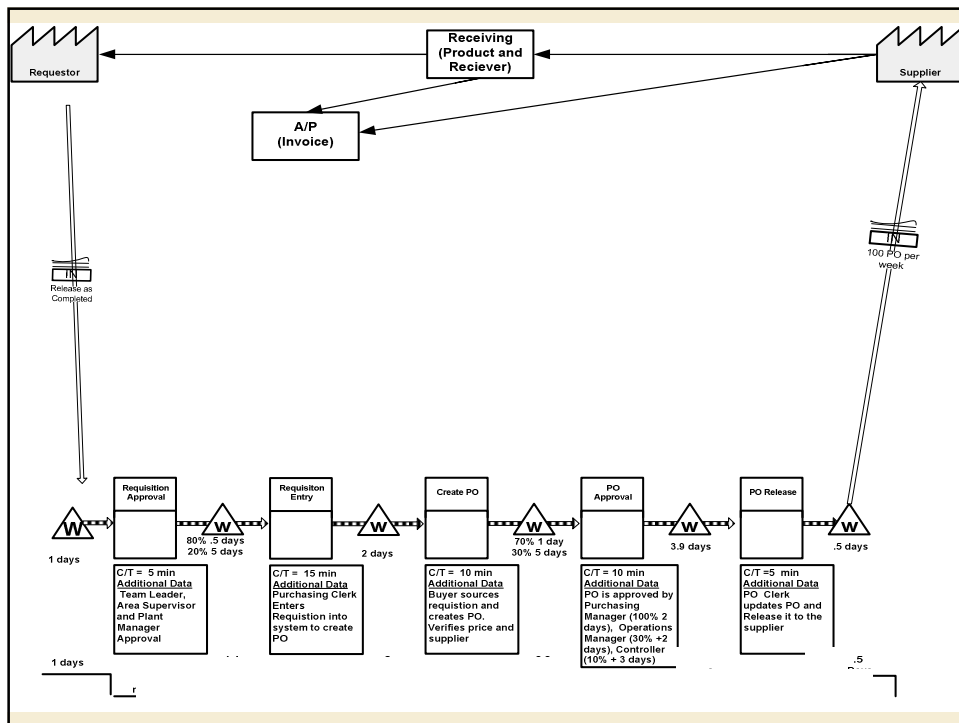
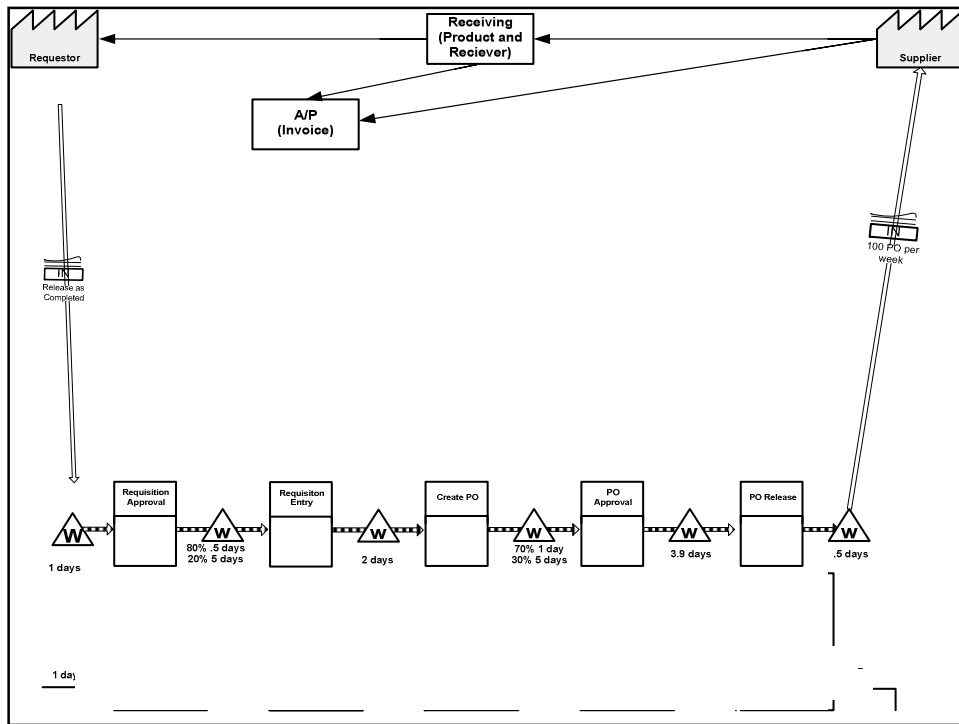
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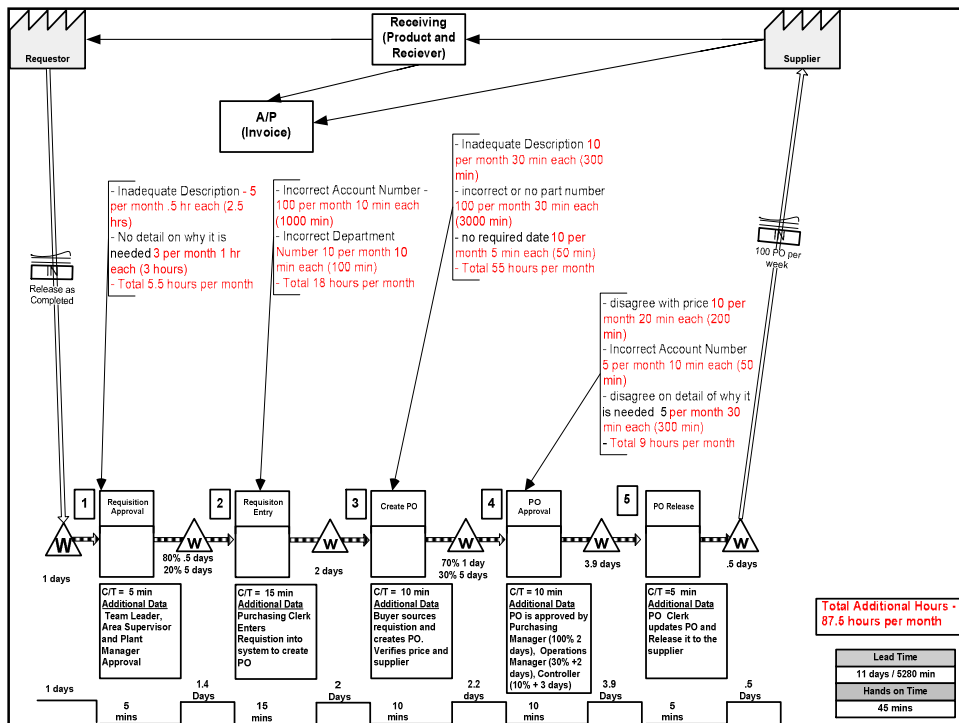
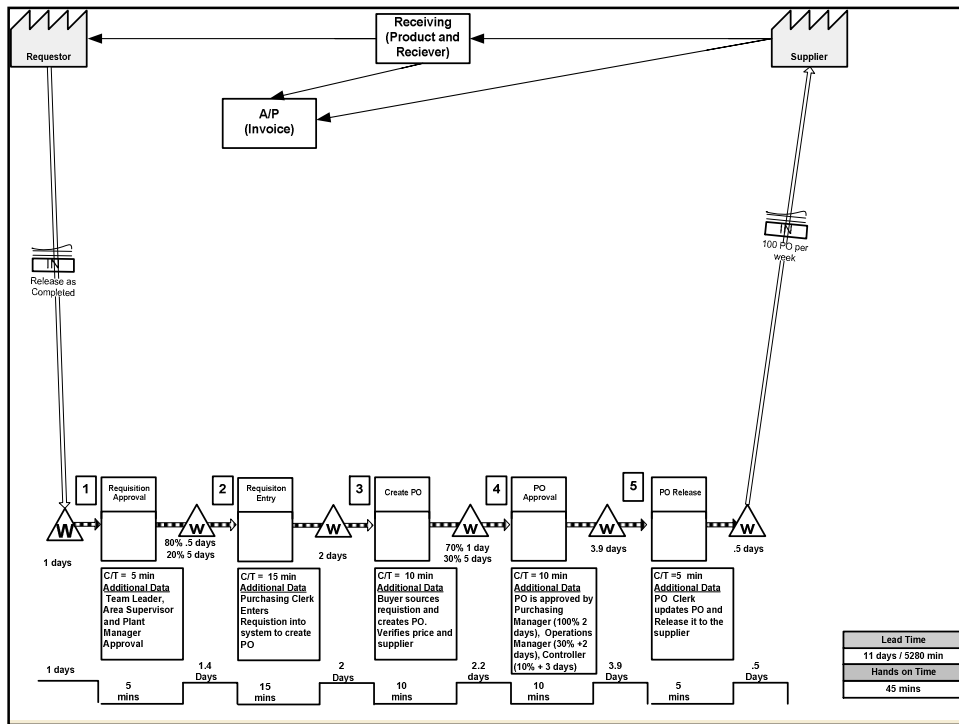


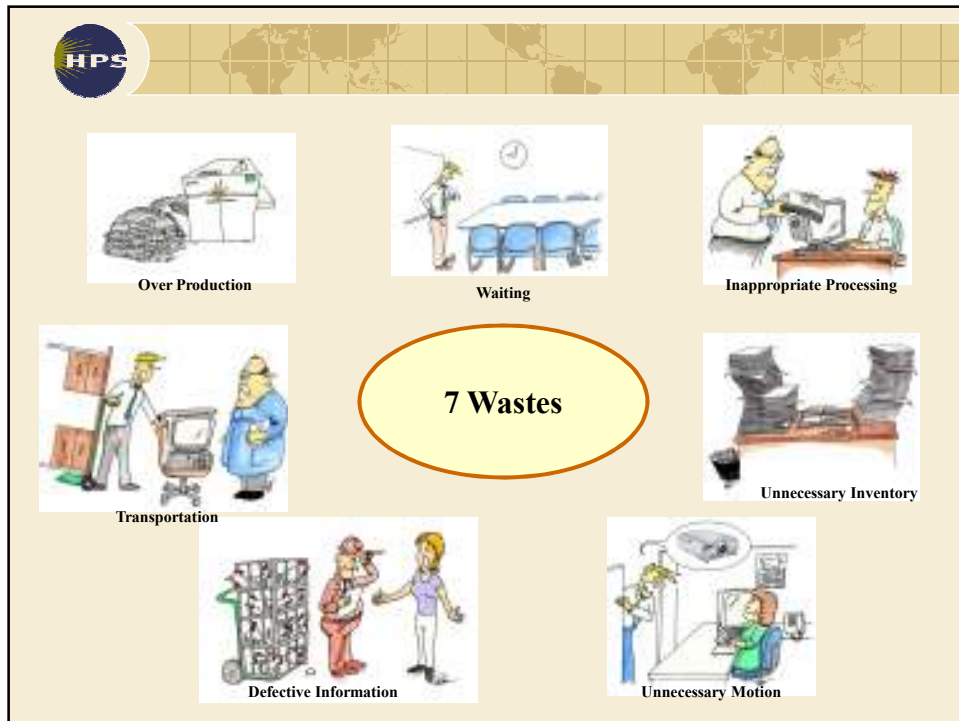
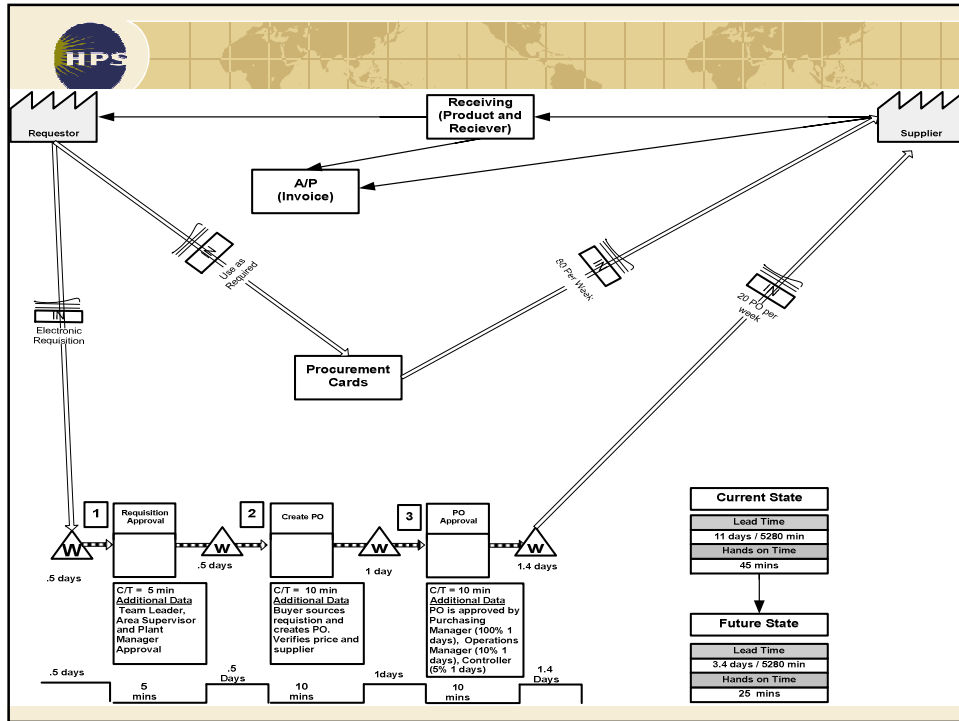
## *The Lean Drivers*



*Lean is not just a Shop  
Floor Thing*









*Particularly in HMLV  
Organizations, Lean must extend  
off the shop floor, through the  
entire enterprise and beyond, to  
the supply chain.*



*Lean*

*It's All In The Thinking*



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