

# How to Value Stream Map

How do you create a current state  
value stream map?

# How do we create a Value Stream Map?

- This is a team exercise
- Involve the people that are involved in the process
- What actually happens not what should happen
- Usually supplier to customer for a specific product or product family

# Choosing the product or product family

- Need to choose one product / family of products to map.
- Select one to be mapped;
  - Needs improvement
  - Valuable to the company
  - High likelihood of success
  - Can form the basis of improvement for other products / families

# Product Family Analysis

- Some times a company has many products and it can be difficult to decide which to map or define families of products
- Product families share common processes and process routes.
- Simple matrix can be used to identify product families (use your highest volume/contributing products)

# Product family analysis matrix

## Product Family Matrix

- Identify suitable Product Family by grouping:

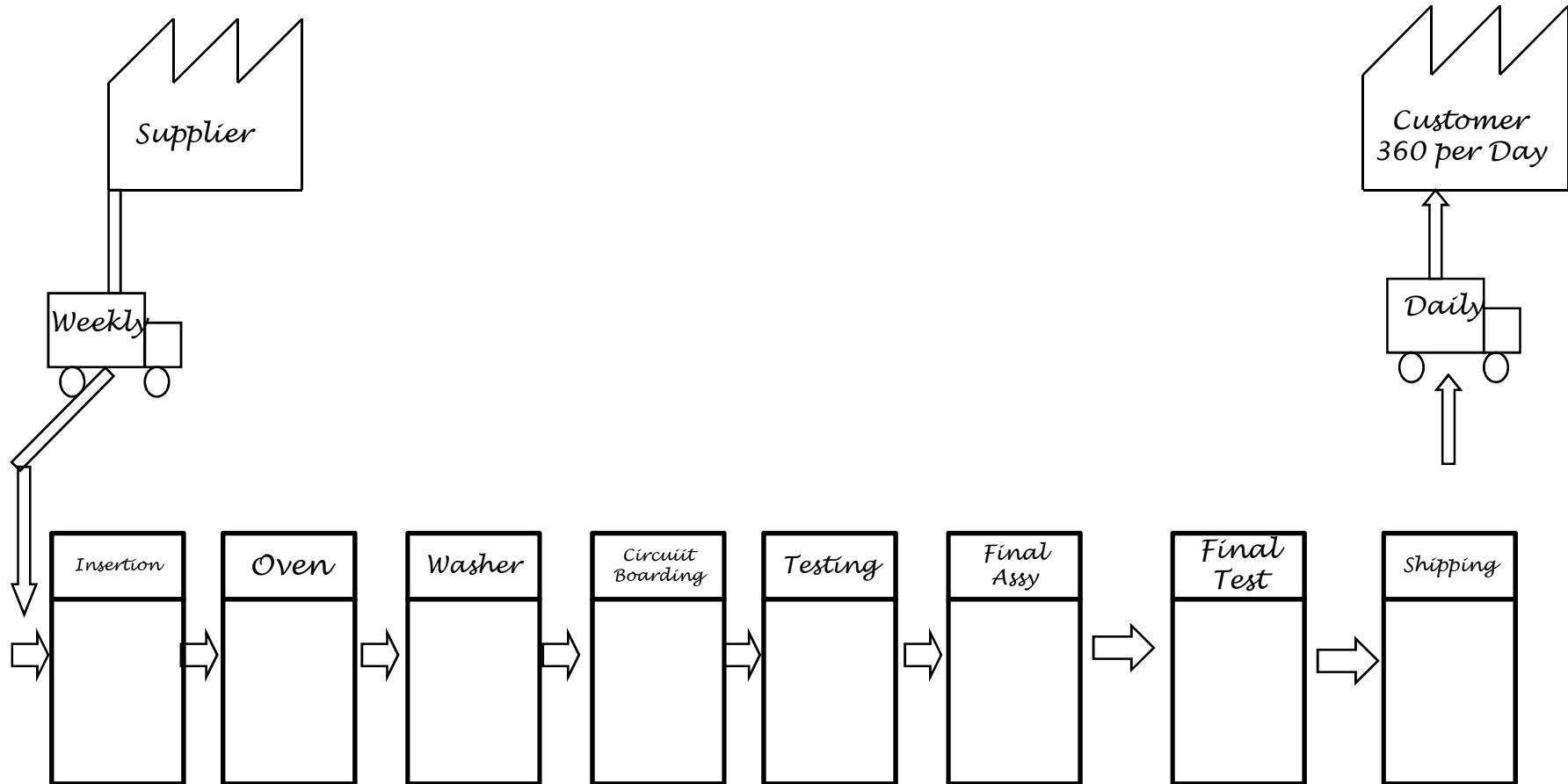
		Process steps and equipment							
		1	2	3	4	5	6	7	8
Products	A	■	■	■	■	■	■	■	■
	B	■	■	■	■	■	■	■	■
	C	■	■	■	■	■	■	■	■
	D	■	■	■	■	■	■	■	■
	E	■	■	■	■	■	■	■	■
	F	■	■	■	■	■	■	■	■
	G	■	■	■	■	■	■	■	■
	H	■	■	■	■	■	■	■	■
	I	■	■	■	■	■	■	■	■

- Group products into families based upon similar downstream process steps

# Where do we start?

- A3 Paper, Pencil and inquiring set of minds..
- Define the Process to be mapped and bound the process (Supplier – Customer)
- Create a process box for each process step
- Sometimes we may map an entire supply chain and the process boxes can be companies.

# Map the process flow

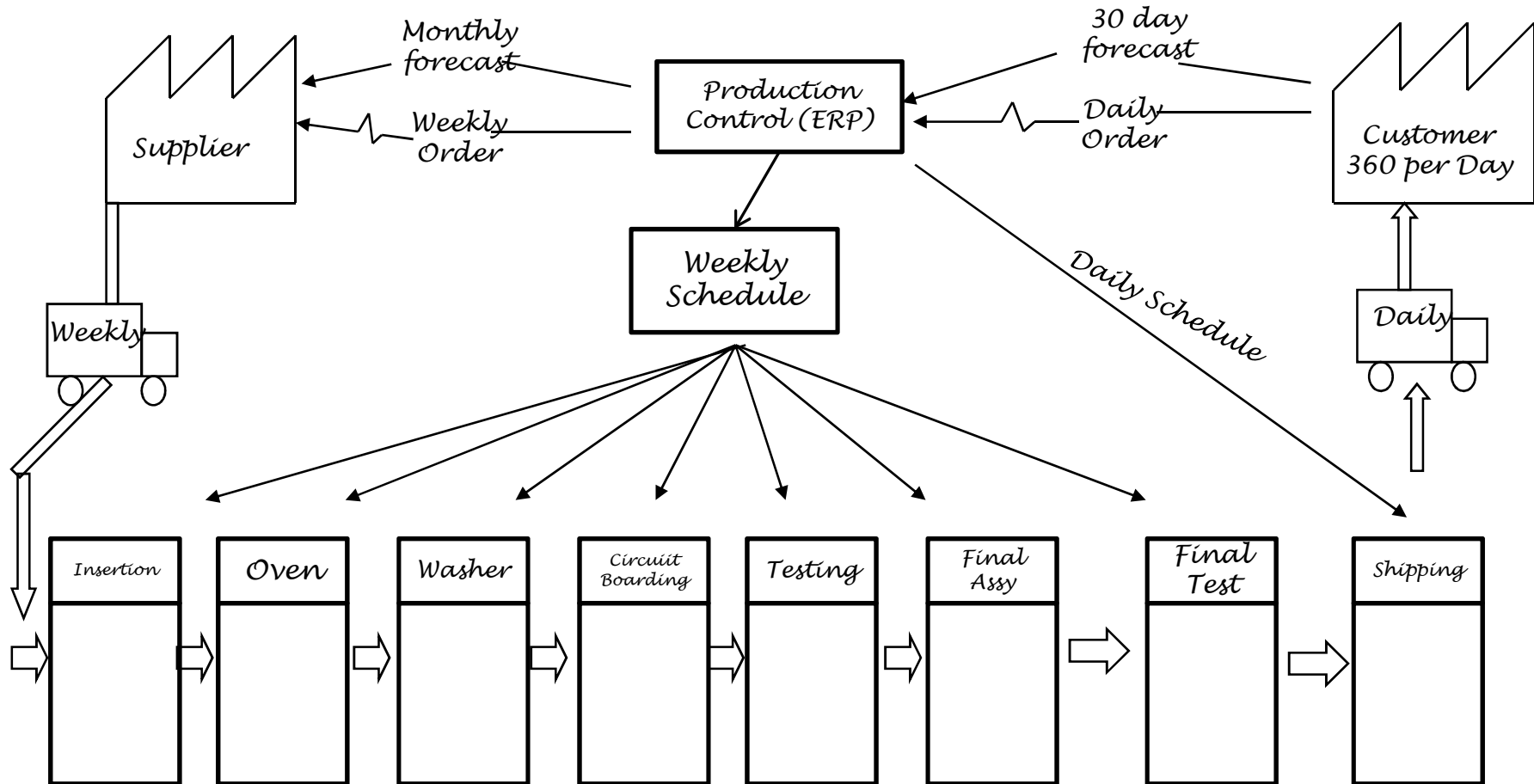


# Information flows

- One of the things that differentiates VSM from other techniques is adding the flow of information;
- Add information flows to show how orders are placed and schedules communicated.



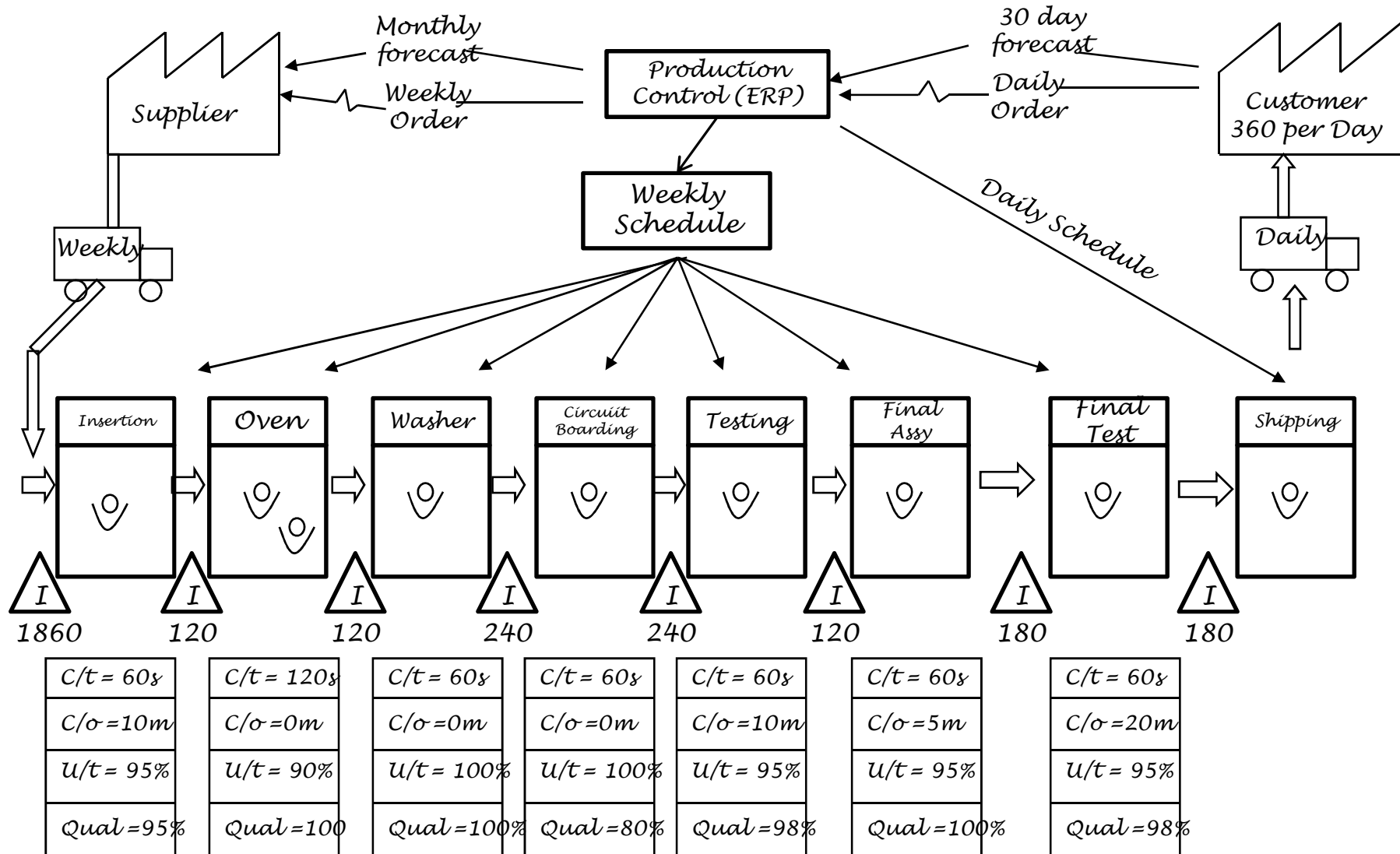
# Add Information Flows



# Collect process data

- Next we need to record the process data for our process, typical data that should be collected;
  - Inventory
  - Cycle time (time taken to make one product)
  - Change over time (from last good piece to next)
  - Uptime (on-demand machine utilization)
  - Number of operators
  - Net available working time
  - Scrap rate
  - Pack size/pallet sizes

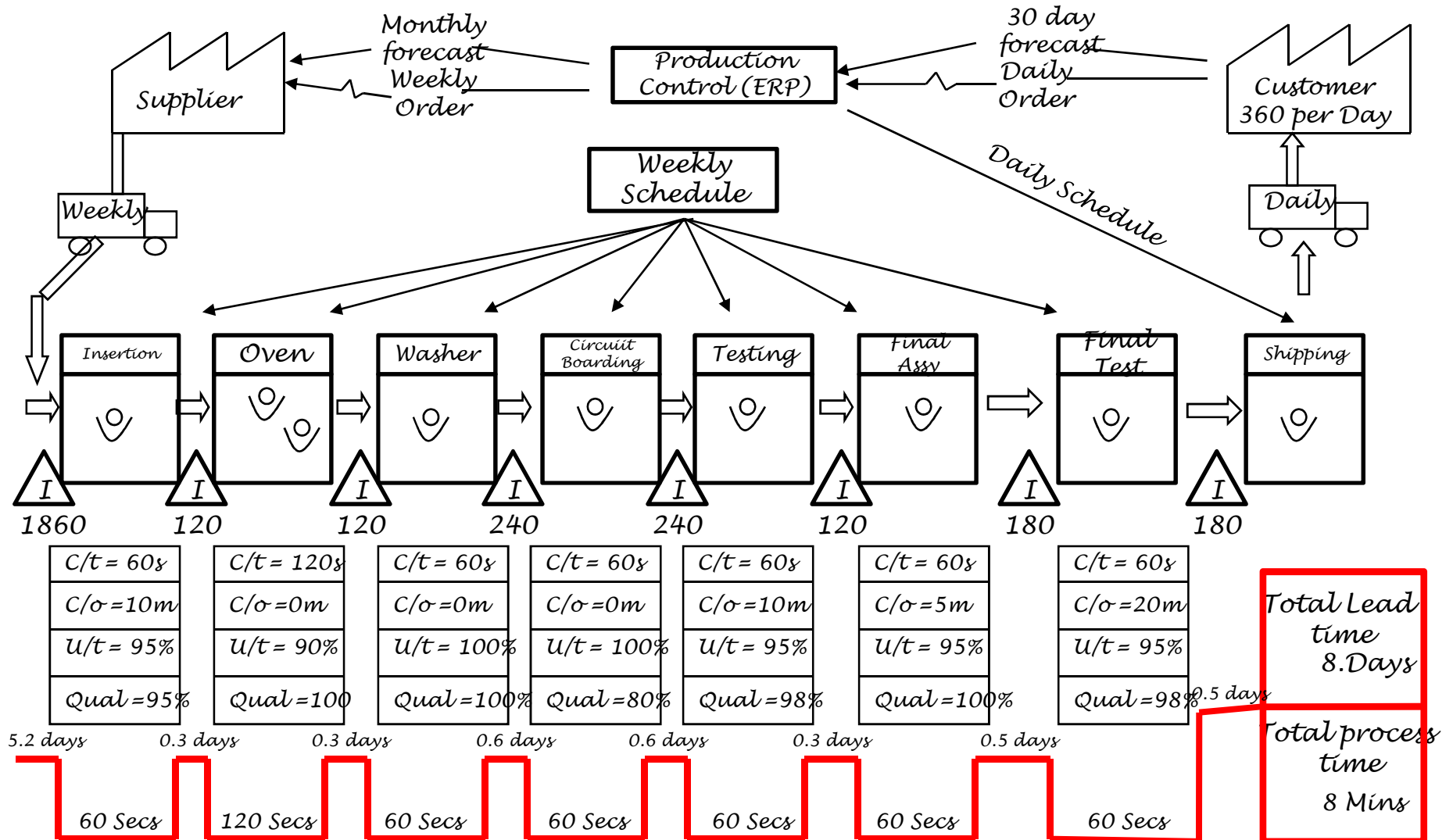
# Add The Data



# Creating a time line

- We want to show how long inventory remains in the system
- How long a product is processed for
- Use inventory and daily demand to calculate how many days of inventory you have.
- Processing time is time taken to process one item not a batch

# Analyze the data



# What does our VSM tell us

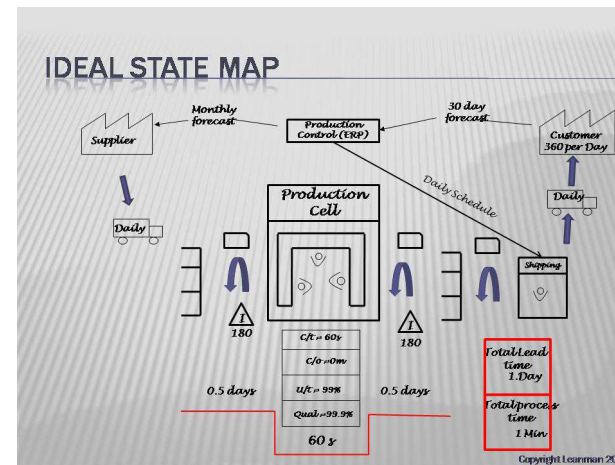
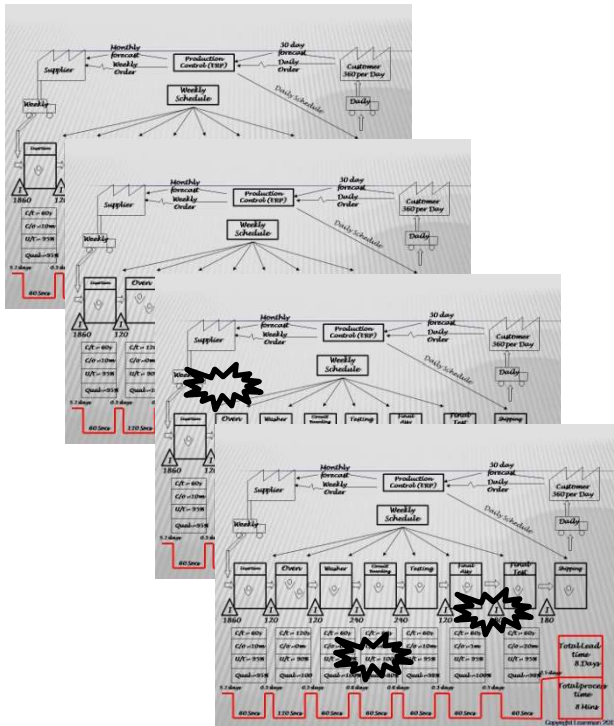
- The timeline tells us that product takes only 8 minutes to be processed but a single piece of inventory can be within the organization for over 8 days...
- The data boxes show us which processes have long changeovers or poor quality performance and other issues.

# Next stage for our VSM

- The next stage is to create our Ideal state value stream map.
- This should be a challenging improvement on where we are today.
- Future state maps can then be created to move us toward the ideal using kaizen improvement bursts.

# Moving from Current State to Ideal State VSM

Through a series of future state maps utilizing Kaizen Bursts we move from Current state to our ideal state map.





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