



Lean Enterprise

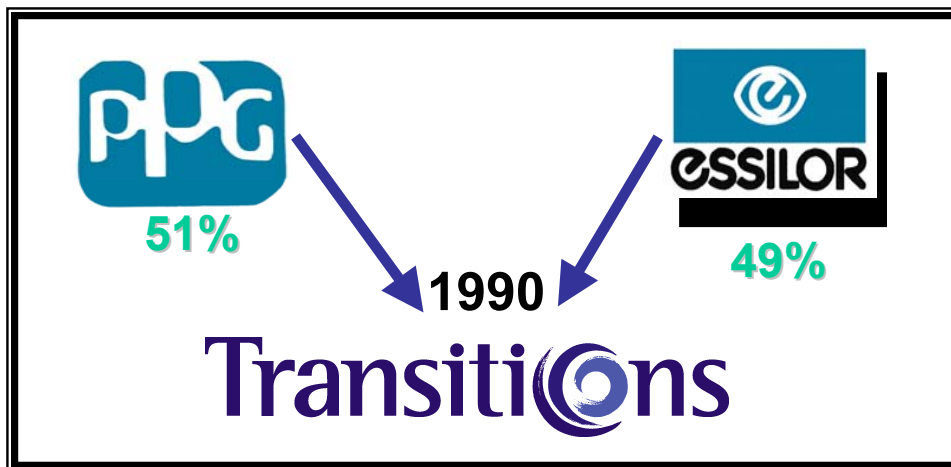
A Case Study in Deployment

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Transitions Optical



Business Overview



- **Globally:**

- 5 manufacturing sites
- USA, Philippines, Ireland, Brazil, Australia
- 31 million lenses/yr
- 1200 employees
- 50,000 sku's

- **Ireland:**

- 6m lenses/yr
- 200 employees
- 25,000 sku's



Catalysts for Lean in Transitions Ireland

- **Inventory Obsolescence Risk:**
 - ✓ Typical product life Cycle 2-3yrs
 - ✓ Multiple customers globally all holding inventory
 - ✓ Hindrance to developing new business
- **Low Cost Competition:**
 - ✓ Internal & External
 - ✓ Lower margin generic business
 - ✓ Need a competitive edge
- **Increasing product diversity and add on demand:**
 - ✓ Increasing Specialty demand – Made To Order
 - ✓ More backend process activity
 - ✓ Wider range of specifications



The Implementation Plan

- **Do you Have:**

- A clear agreed business need(s)
- Do you have senior management support

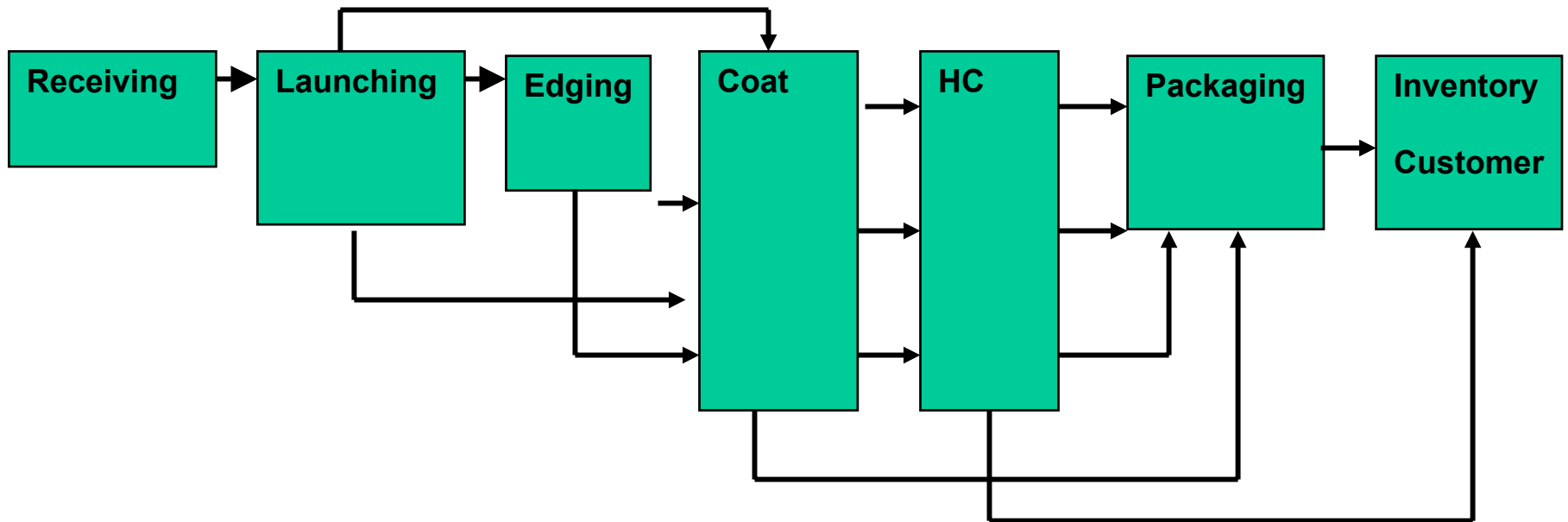
If Yes, then:

- **Pre-Planning:**

- ✓ Where possible organise Business/Manufacturing Units around Value Streams
- ✓ Breakdown functional silos and establish ownership and accountability within the business units
- ✓ Establish clear metrics – Balanced Score Card
- ✓ Select an Individual to lead the lean implementation and train them

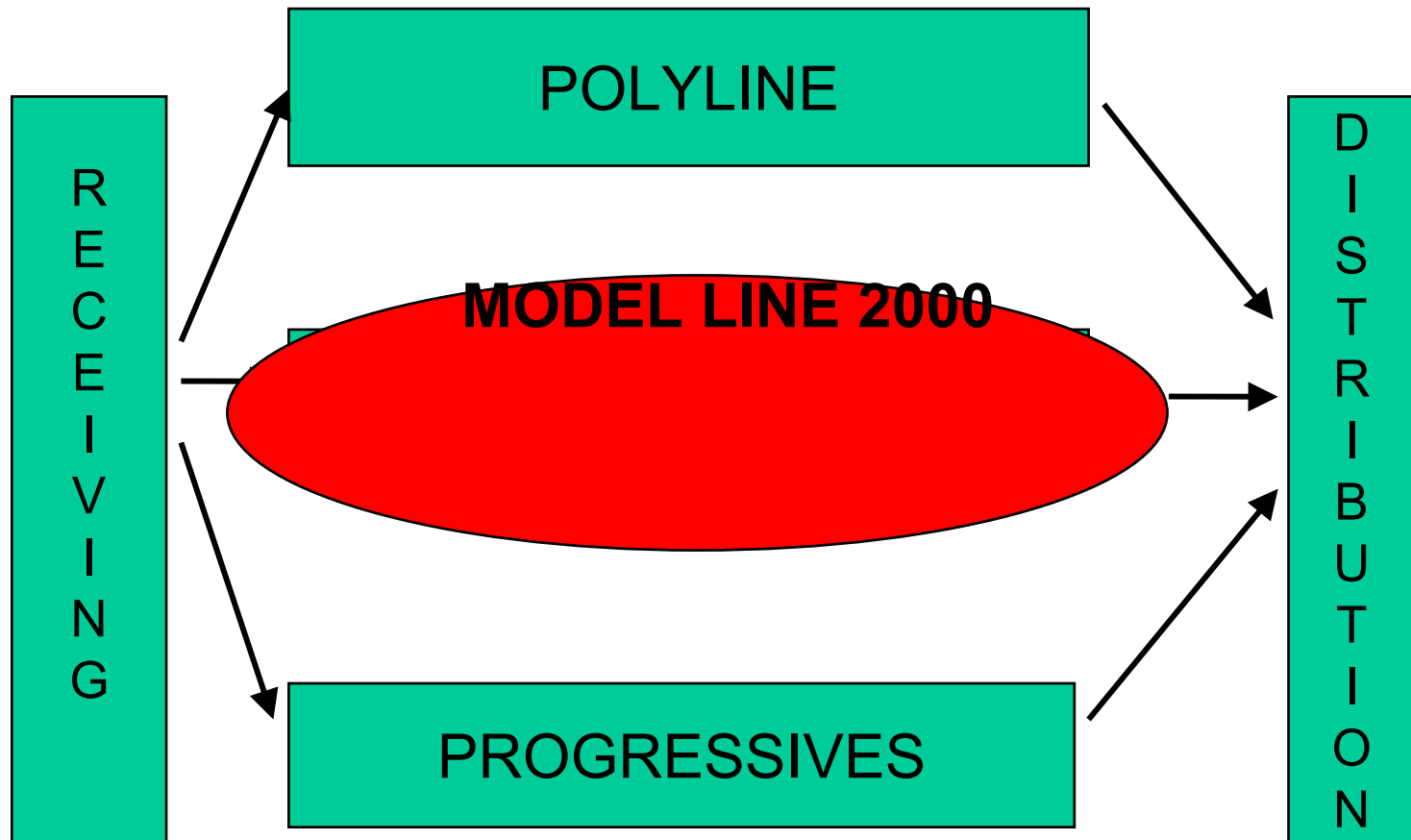


Old Structure (Pre-2000)





New Business Unit Structure





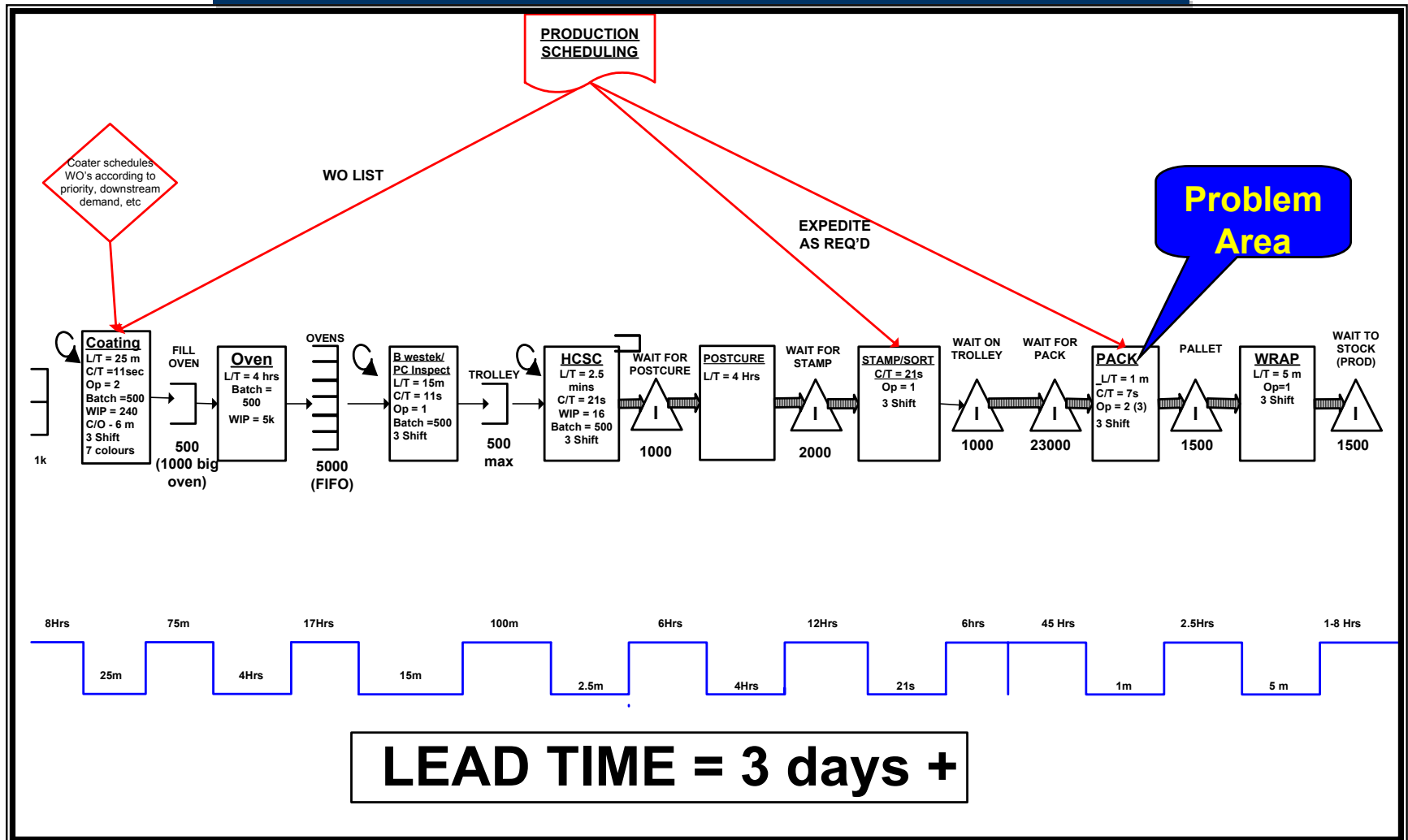
Implementation – Next Steps

- You must educate your people (preferably the entire population)
- Establish a cross-functional implementation team
- Establish a Steering Committee
- Define Value from your customer perspective
- Map the current and future value stream for your model line
- Kaizen events are quick wins and typically demonstrate dramatic improvements
- Start to “Pull” Product through your process
- At first go for the low hanging fruit



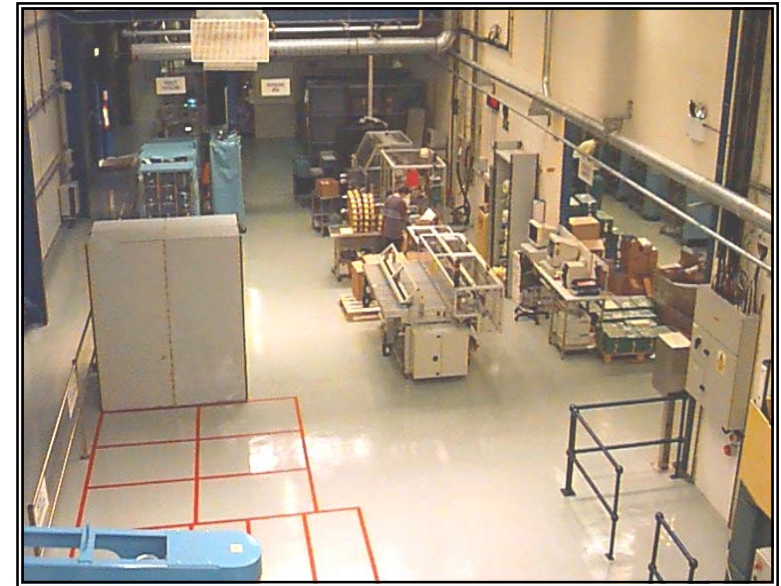


Value Stream Example





Kaizen Example



Lean:

- ✓ Reduced WIP by 15k lenses
- ✓ Reduced turnaround time by 20-24hrs
- ✓ Increased Productivity by 30%

Quality/Ergonomics

- ✓ Reduced Lifting and moving
- ✓ Reduced pack errors and cust complaints

Financial

- Improved productivity, reduced WIP and improved Service
- Estimated Savings at \$80k/yr



The Maturing Lean Business



New Business Unit Structure

LEAN ENTERPRISE 2003



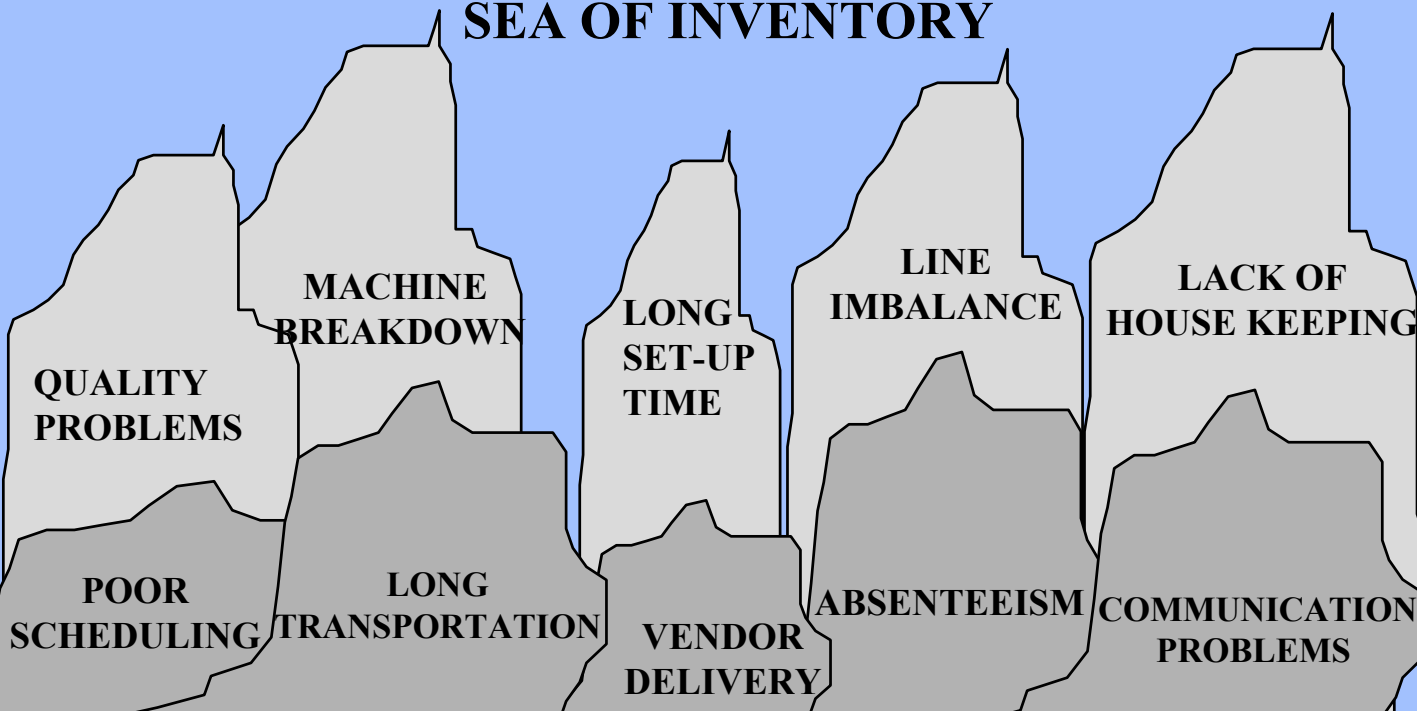
Before Lean

RAW MATERIAL

FINISHED PRODUCT
TO CONSUMER



SEA OF INVENTORY



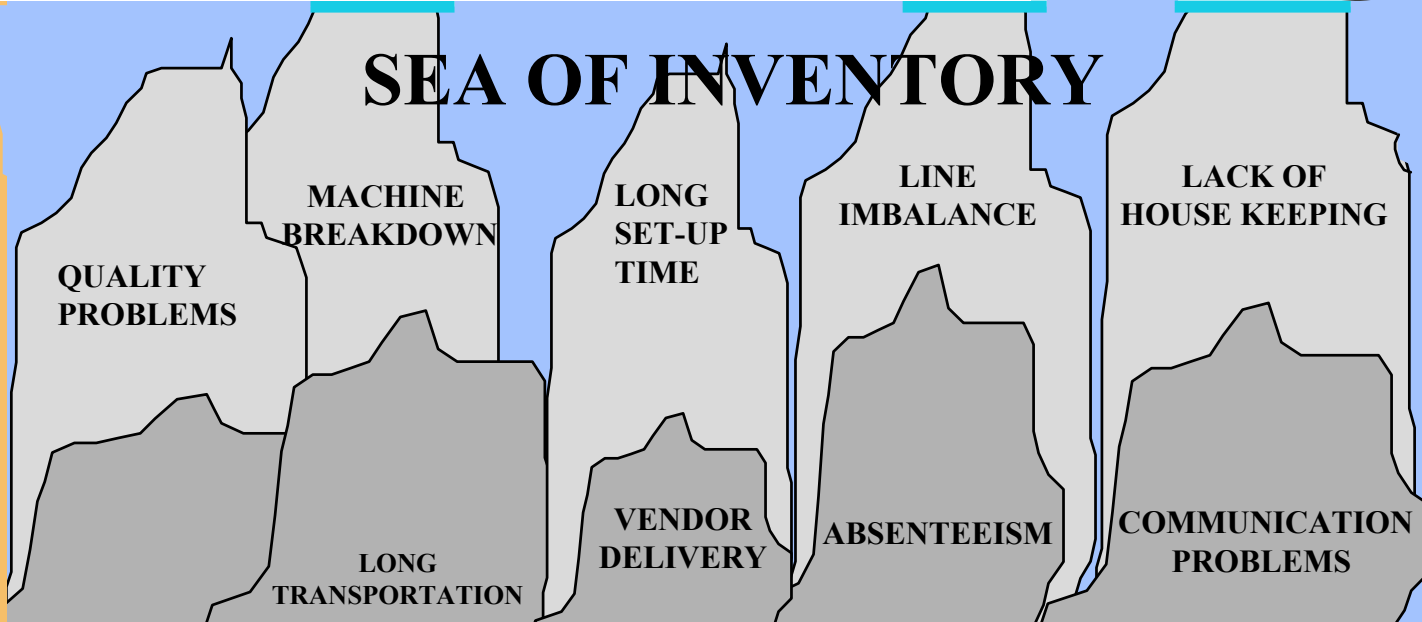


Later – Rocks to be Avoided

**FINISHED PRODUCT
TO CONSUMER**



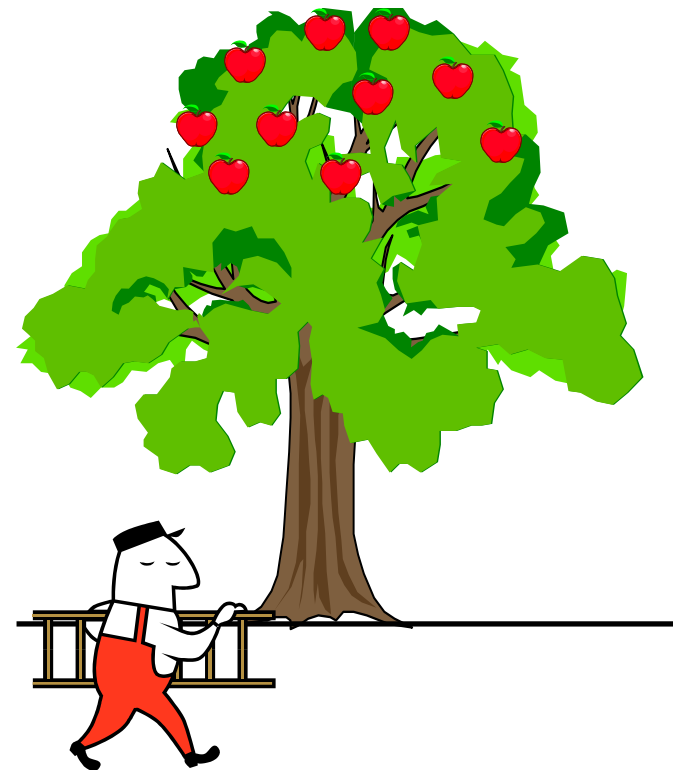
SEA OF INVENTORY





Ongoing Challenges

- Expanding the Lean Tool Kit:
 - Quick Changeover, Error Proofing, TPM, etc..
- Increasing your influence – Engineering/Finance/IT/ etc..
- Moving from “Pull” to “Continuous Flow”
- Reward and Recognise involvement, ideas and initiative
- Continue training and re-training. Invest in higher level training for you key people
- Expand Lean deeper and wider into your organisation. Eventually suppliers and customers

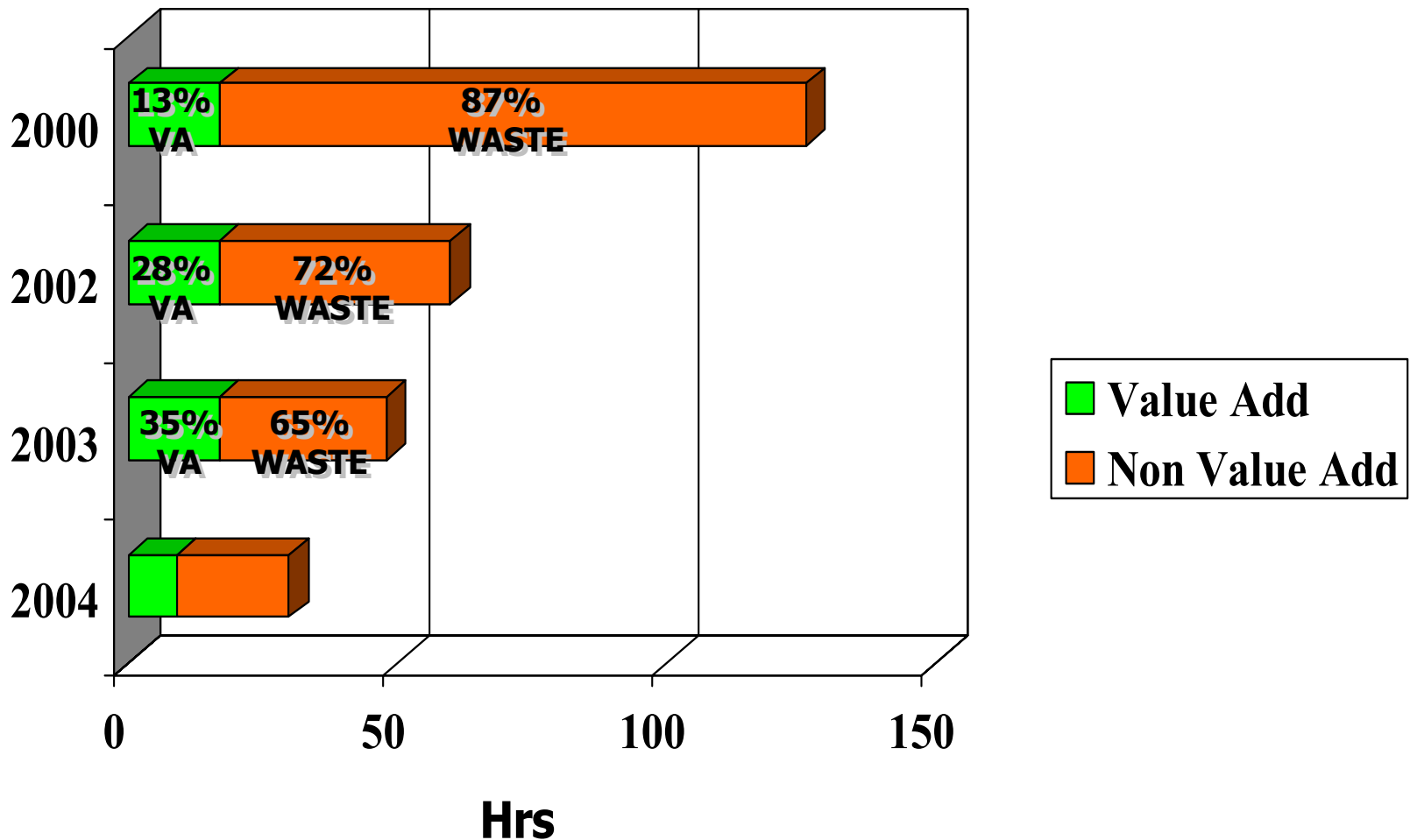




The Results

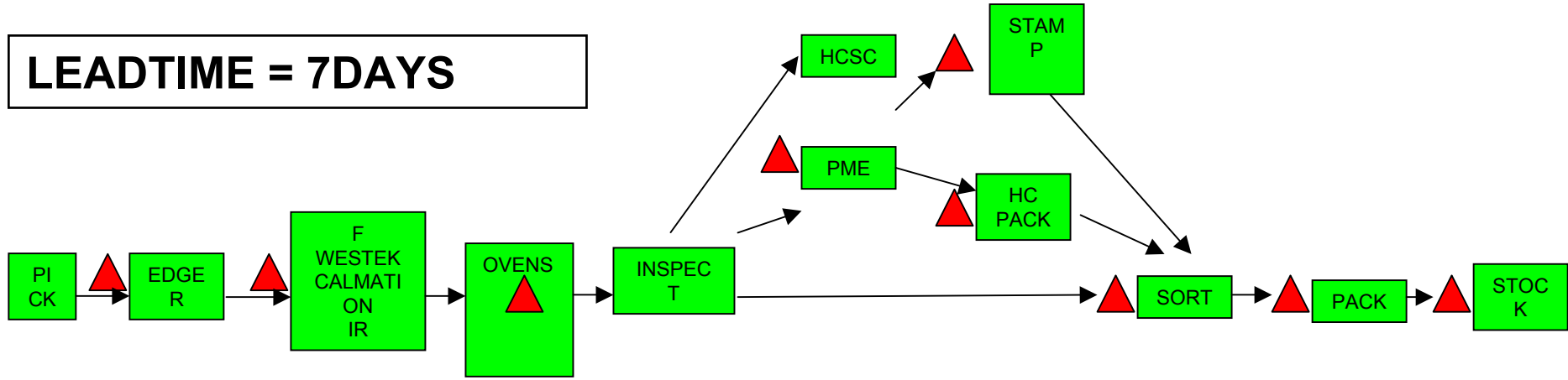


Value Add / Non Value Add



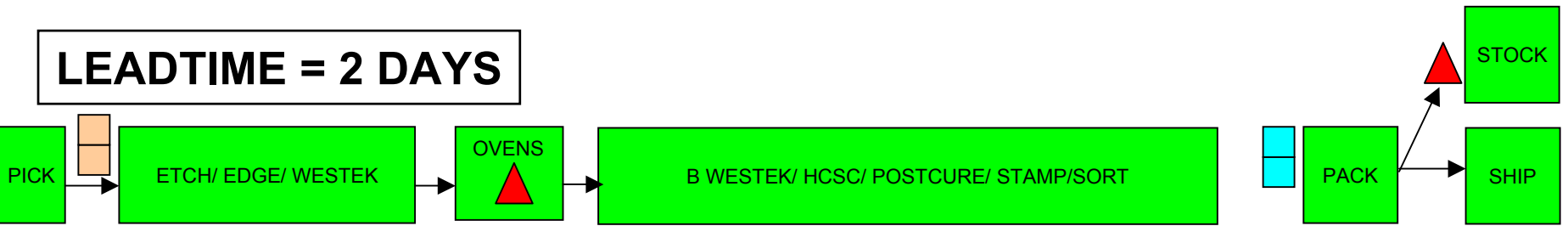
MODEL LINE 2000:

LEADTIME = 7DAYS



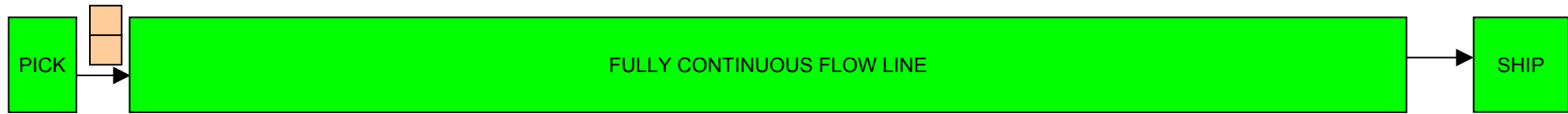
MODEL LINE 2003

LEADTIME = 2 DAYS



MODEL LINE 2004/5

LEADTIME = 8 HRS





Achievements

<u>Metric</u>	<u>2000</u>	<u>2003</u>
Leadtime	7-8 days	1-2 days
WIP	100-120k	20-30k
First Pass Yield	92%	98.8%
Handling Steps	68	36
Pull Systems	All Batch	Pull and CF
Batch Size	30-40	1 upwards
Sales/Employee		+ 50%
Internal Working Capital		-\$7m
Customer Working Capital		-\$5m



In Summary

You Must:

- ✓ **S**tart small but think big!
- ✓ **U**nderstand value and your value streams
- ✓ **C**ompel, Educate and Persuade
- ✓ **C**lear Strategy and Goals
- ✓ **E**nsure metrics and accountability exist
- ✓ **E**xpect mistakes but keep momentum going
- ✓ **D**emonstrate a bias for action