



# Experiences with Lean in Belgium

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## Content

- *Our experiences with Lean*
- *Lean successes in Flanders*
- *Lean failures*
- *Teaching Lean*



## Our experience with Lean

### ■ *Lean Enterprise Research Center*

- ☞ In-plant logistics voor Flanders' Drive consortium (automotive: Ford, Volvo Cars, Volvo Trucks, 1st tier suppliers)
- ☞ Model generator for simulating VSM
- ☞ Innoflow: 3 year project to introduce Lean in wood processing, furniture and textile sectors (Fedustria)

### ■ *Lean Forum ([www.leaninstitute.be](http://www.leaninstitute.be)):*

- ☞ 45 companies (120+ professionals) engaged in Lean practices
- ☞ exchange of experiences, thematic meetings, plant visits

### ■ *“Black Belt in Lean” course – 4th edition*

### ■ *Numerous in-company trainings and presentations*





## Toyota UK visit in 2007





Funded through



The Interreg IVB  
North Sea Region  
Programme



## ERIP Interreg project

- *3 year project (2009 – 2011)*
- *Introducing Lean into SME's*



- *With Lean exemplar support*

☞ Nissan UK, Scania NL, Philips NL, Daikin BE, ...

- *Partners*

☞ One NE, Newcastle Business School, PA Technology (UK)

☞ Ghent University (Flanders)

☞ University Groningen, NOM (NL)

☞ IVF Sverea (S), SINTEF (N)

☞ Hanseatic Parliament, Diepholz Muni, Uni Osnabruck (D)





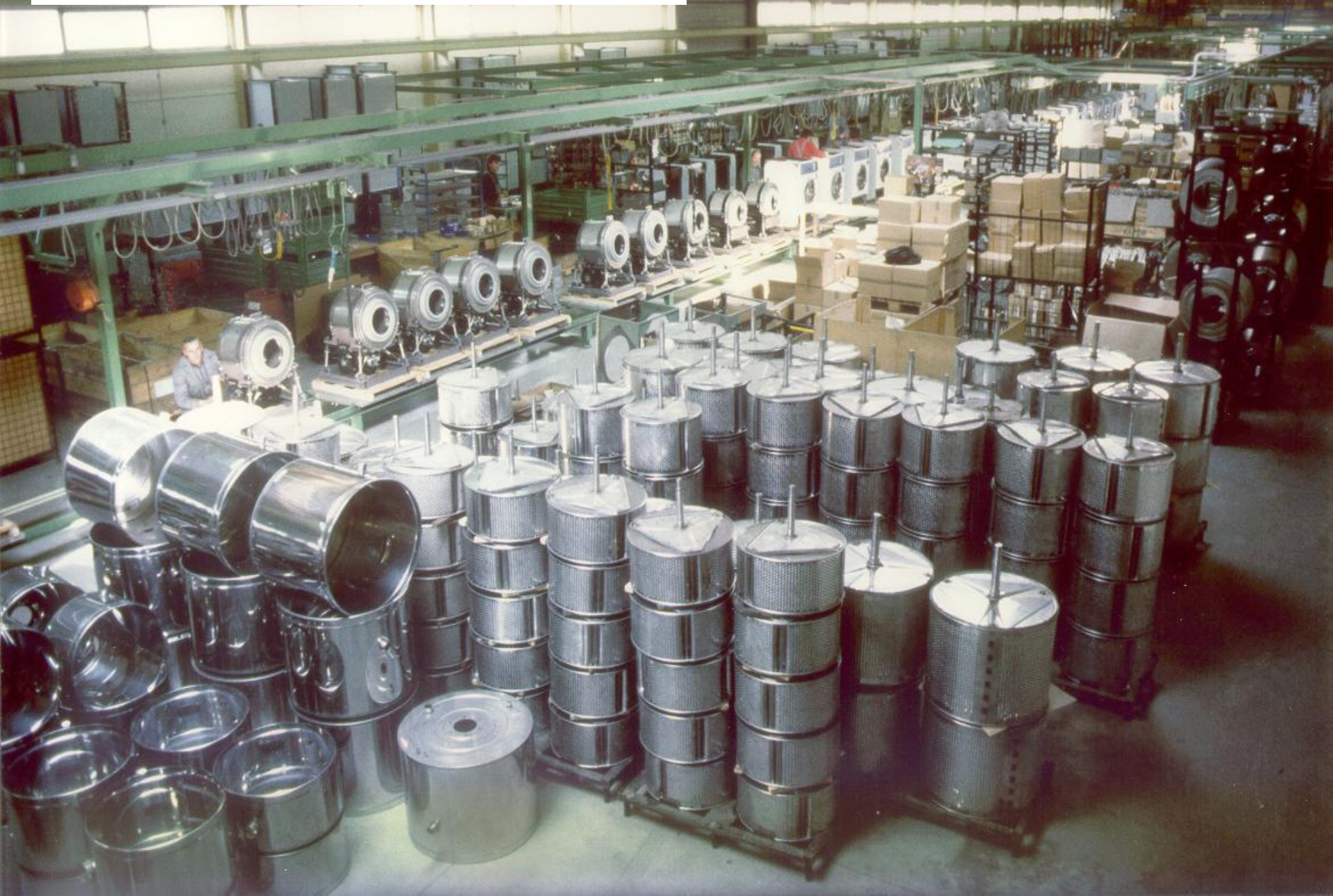
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# Washing Machine Manufacturer

**BEFORE: total lead time = 2 weeks**





# Washing Machine Manufacturer

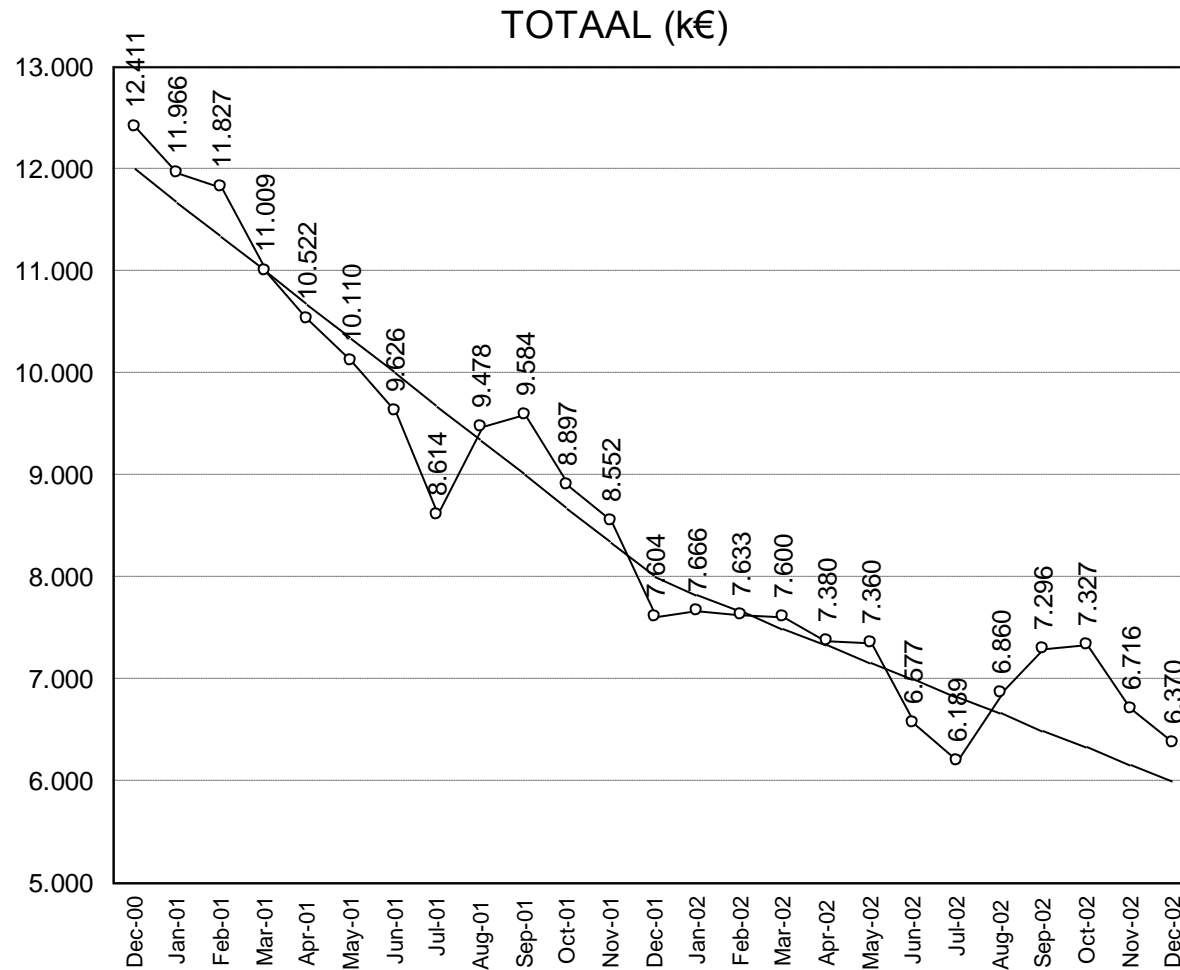
**AFTER: Total lead time = 8 hours**





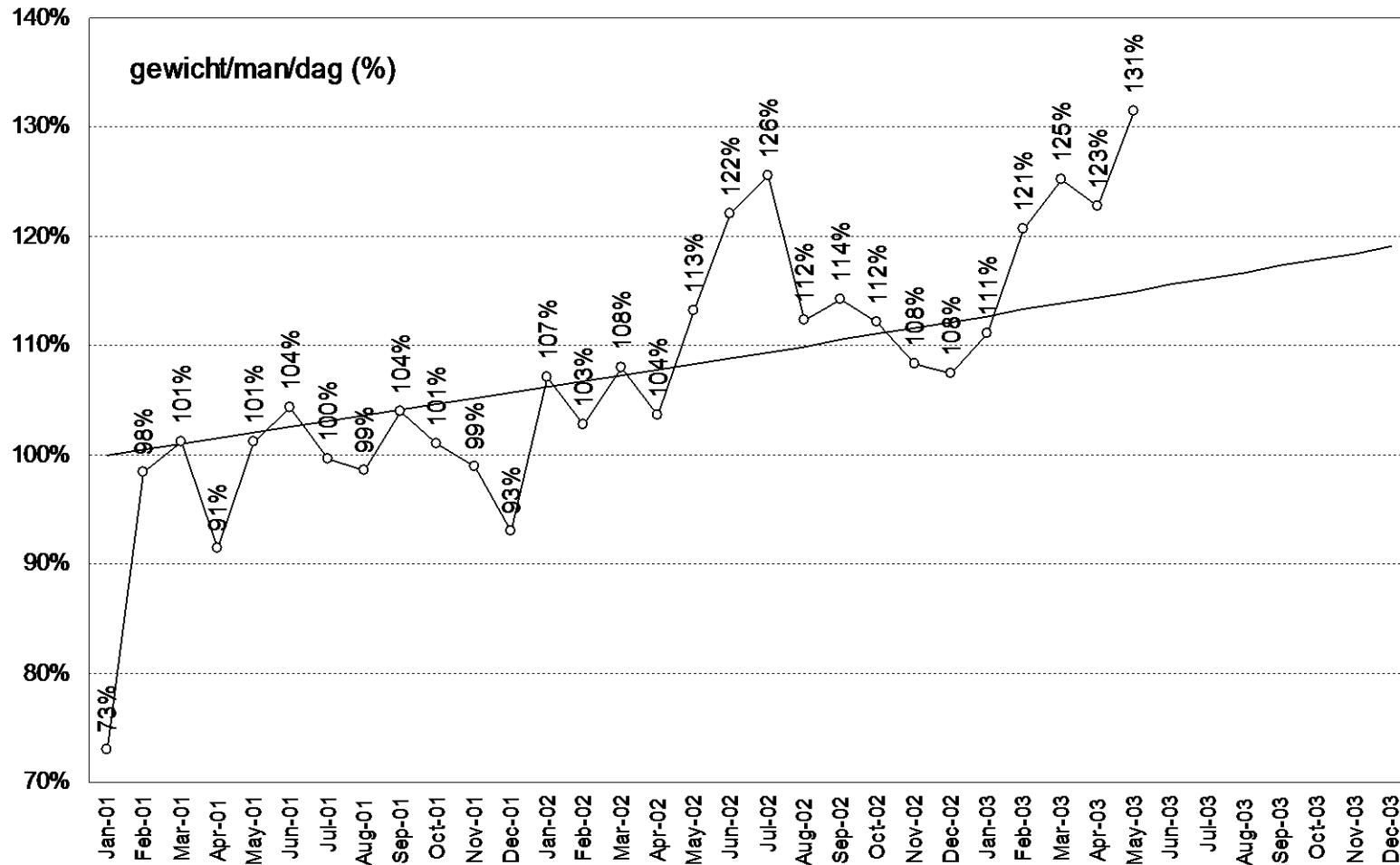


# Inventory reduction 50%





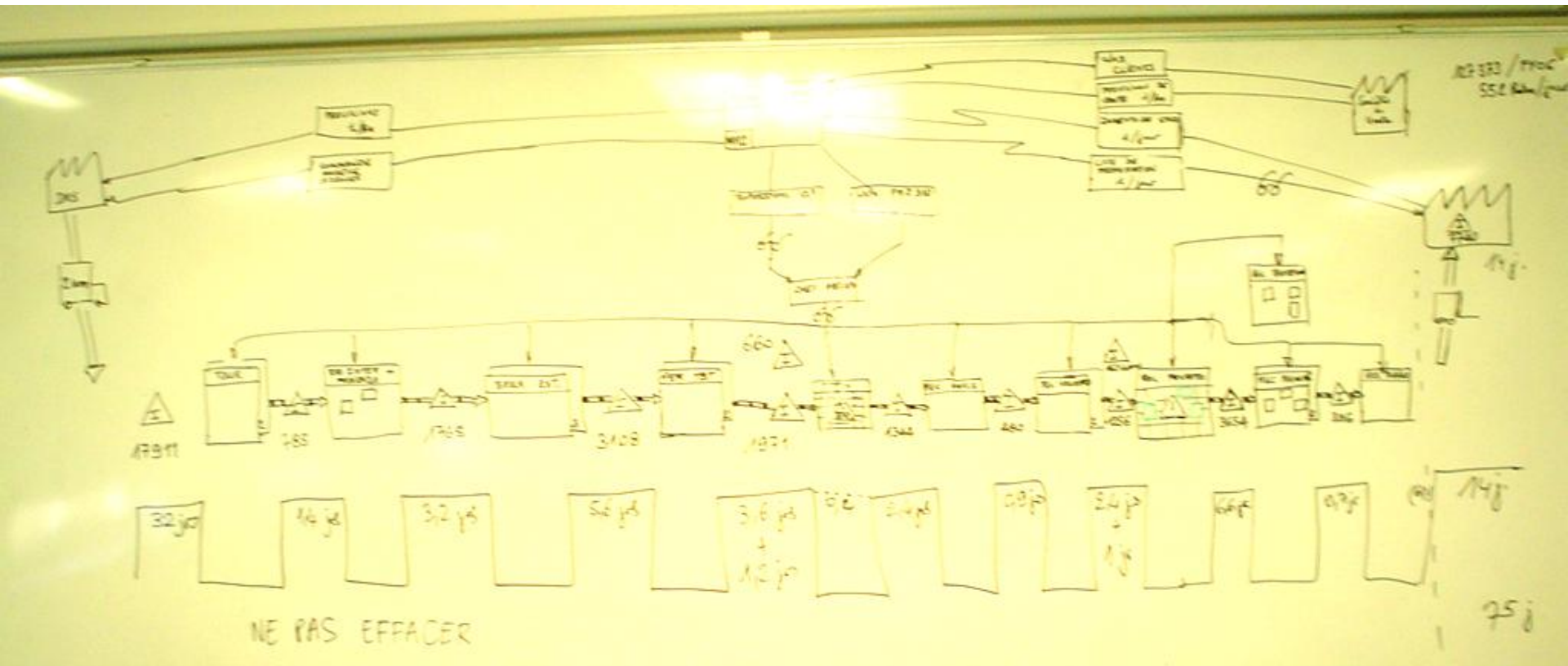
# Productivity improvement 31%







## Hydraulics factory in France (VSM)







**Hose Manufacturer  
BEFORE: Inventory  
in the workplace**







## Future state → one piece flow







## Realised Improvements : Pre-assembly TF

### ■ *BEFORE :*

- ☞ Working in batches with WIP between stations



### ■ *AFTER :*

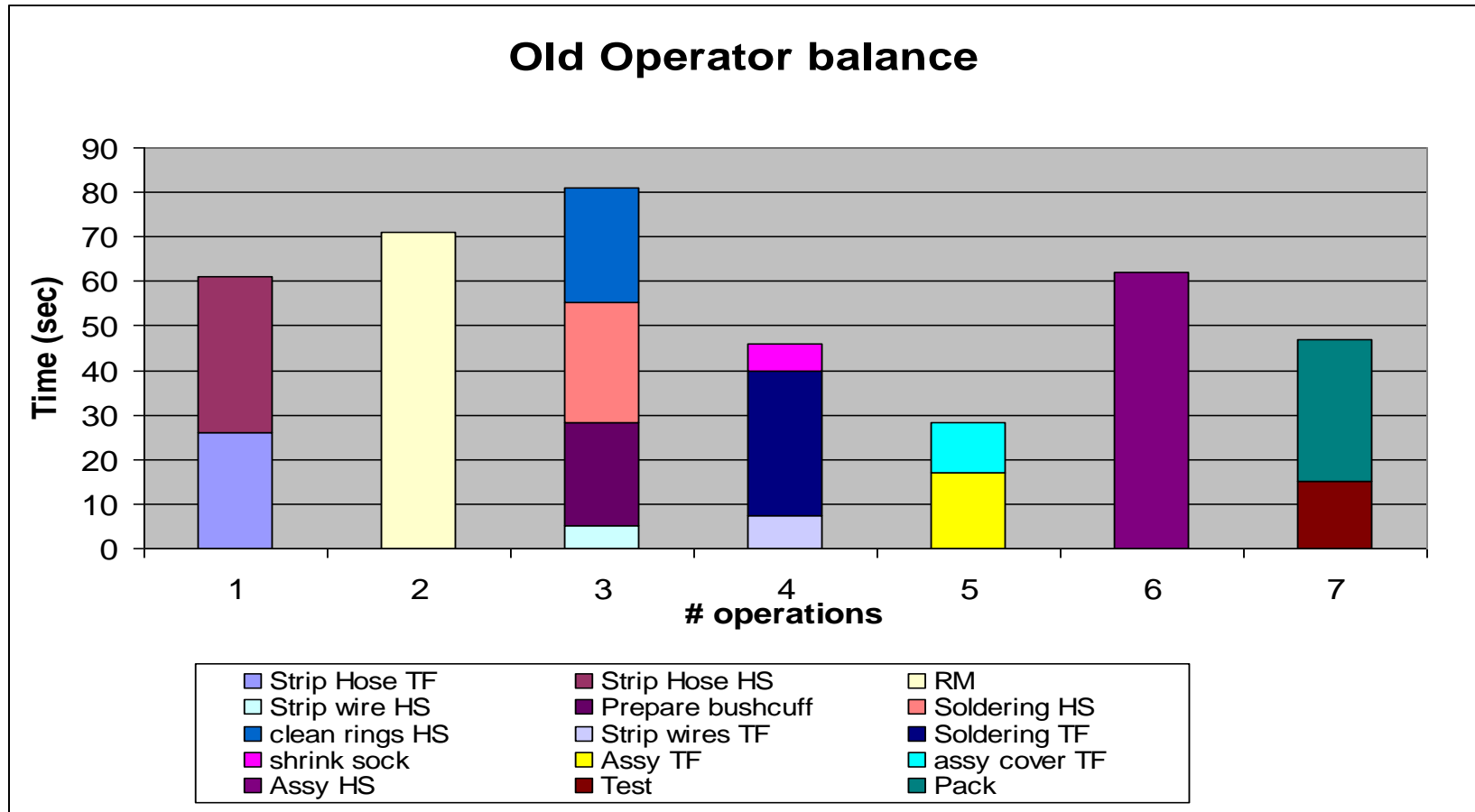
- ☞ Single piece flow (piece per piece)







# OLD OPERATOR BALANCE





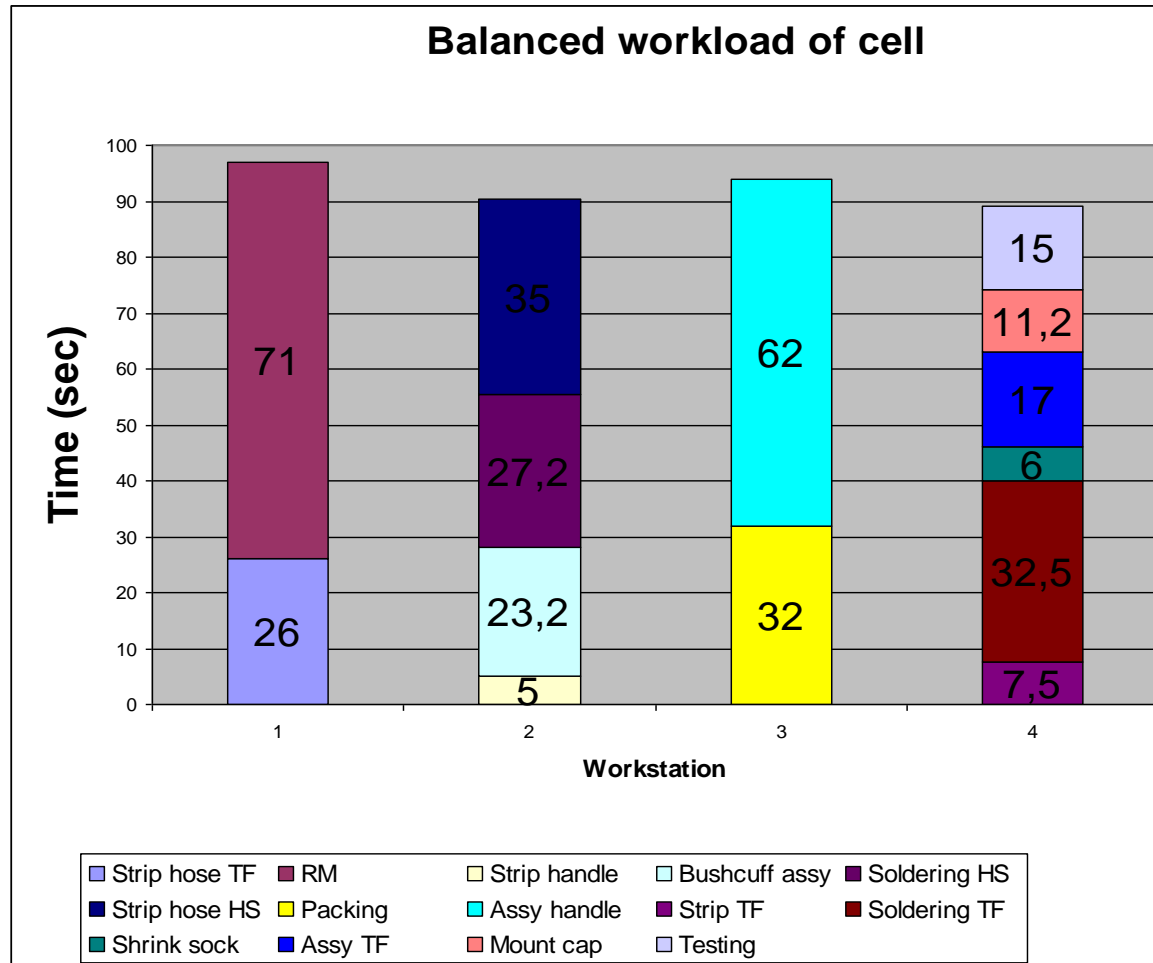
## OLD LAYOUT :







# NEW OPERATOR BALANCE :





## NEW LAYOUT:







## Ikea supplier: before and after in 1 months' time!





## Electronics company

Balanced workcells are now part of the everyday picture. It took 1h 30' to implement a 6-person workcell from zero to balanced functioning.





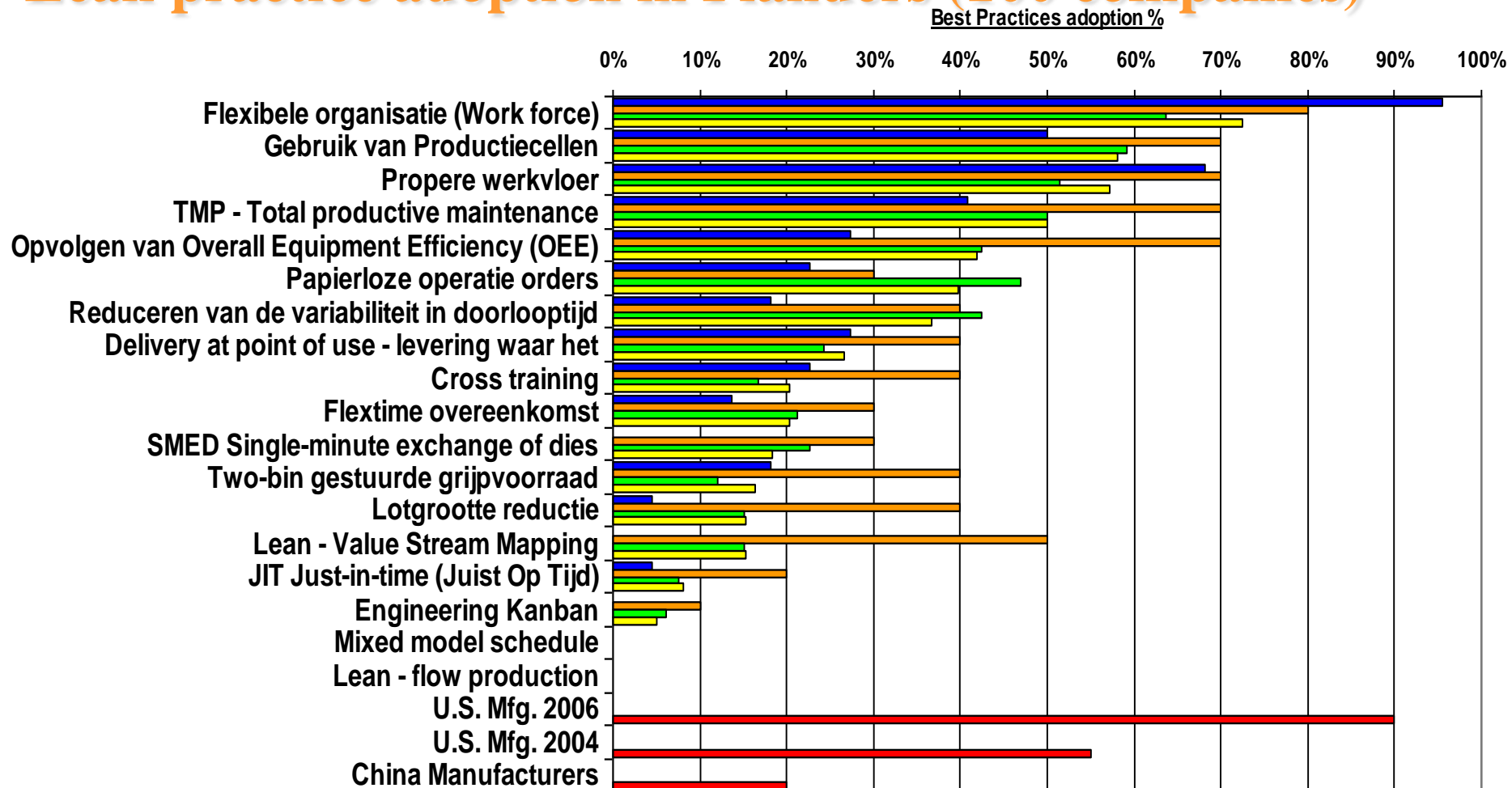
## Electronics company: “Low cost, No cost” solutions

**Empowered workers found a clever arrangement for one machine (reflow oven) to minimize transport, increase lighting without extra lamps and create better work conditions.**





# Lean practice adoption in Flanders (100 companies)



Source: Webscan, 2005-8





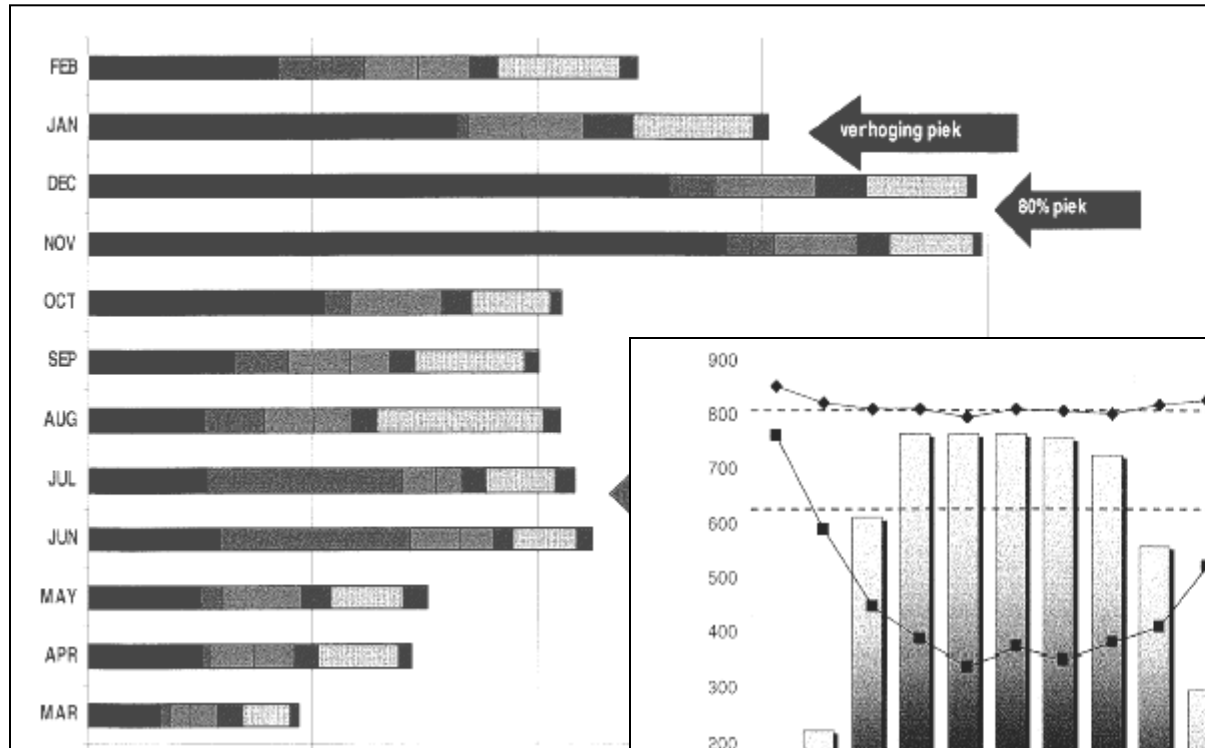
## Insurance company: work cells



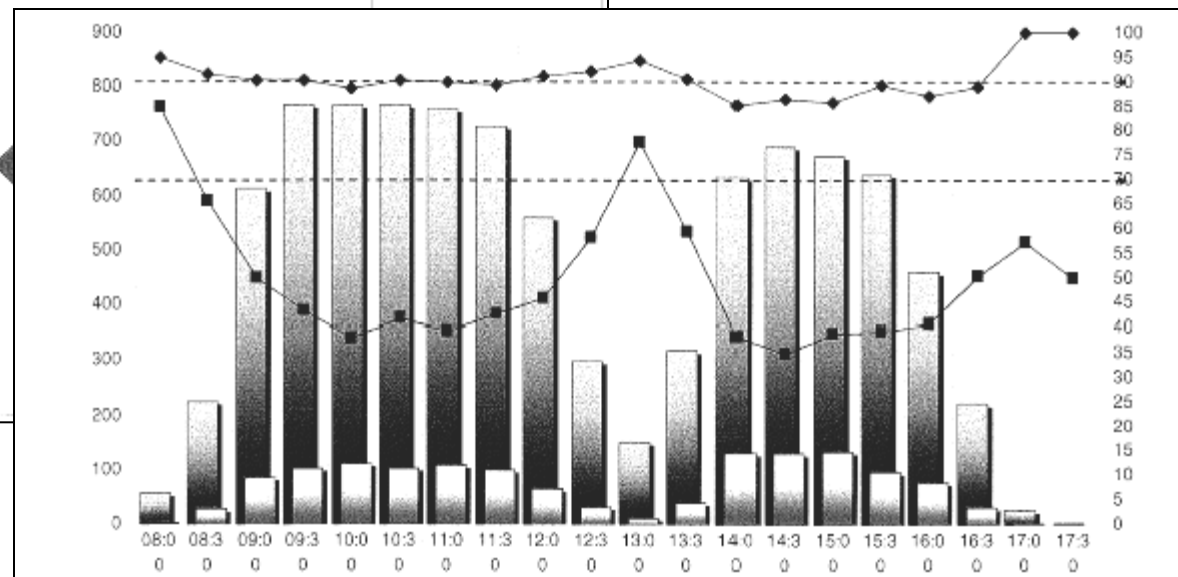
- Operates on a takt time
- Without interruptions
- FIFO between stations
- One entry, one exit for work
- Visual indicators



## Insurance company: workload intake



By month

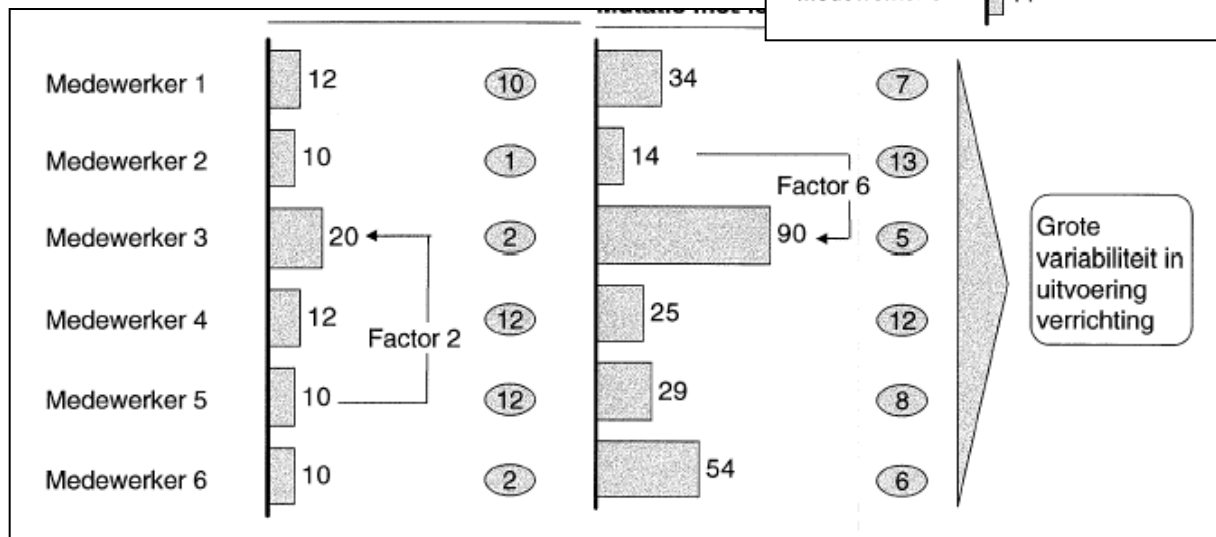
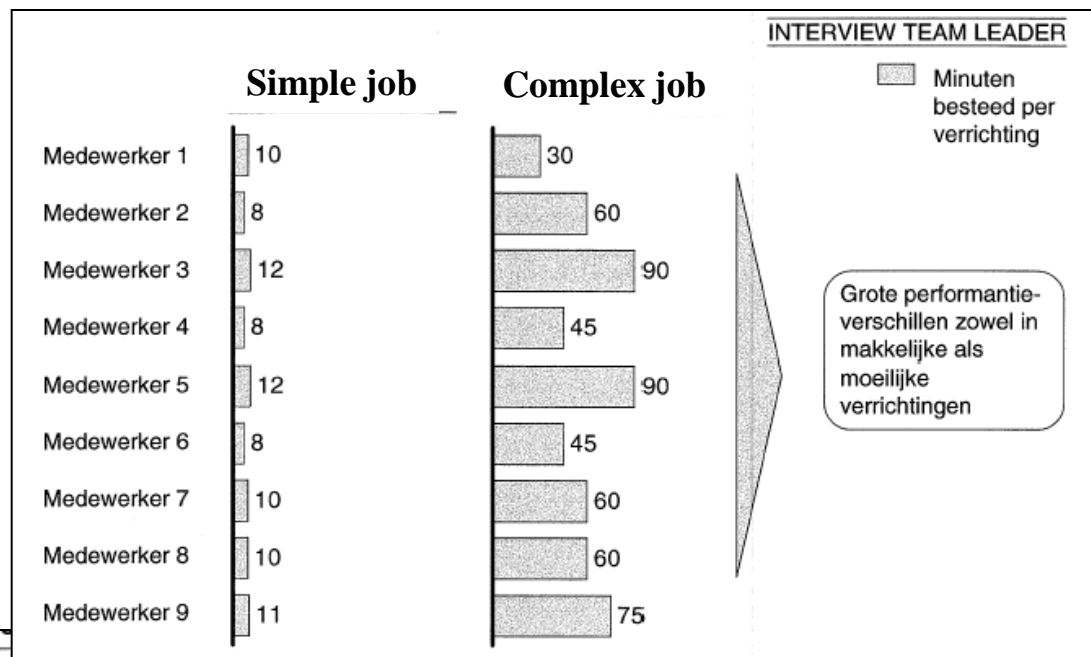


By week





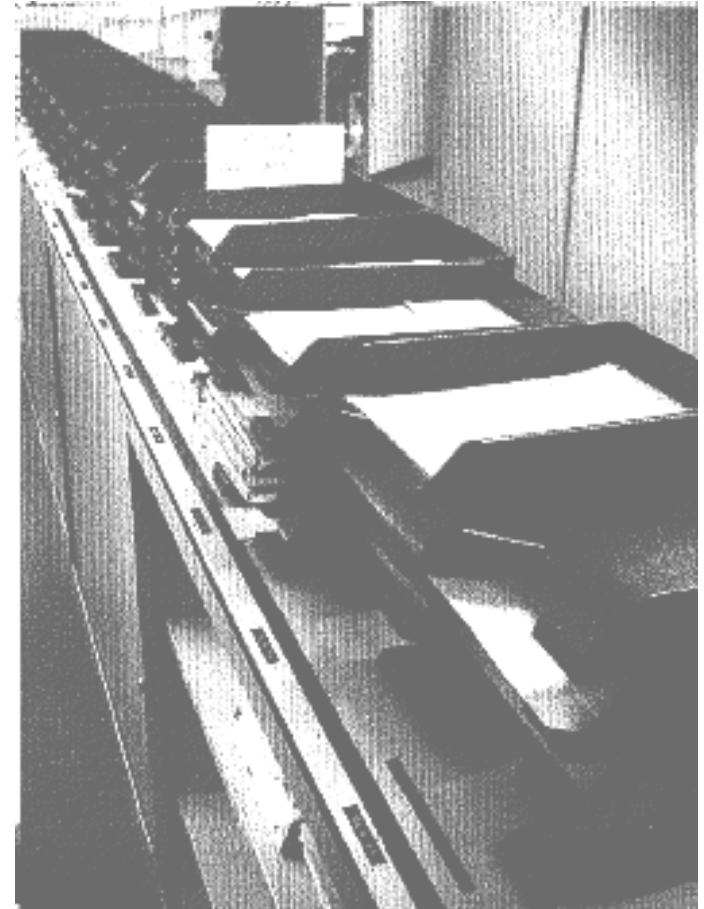
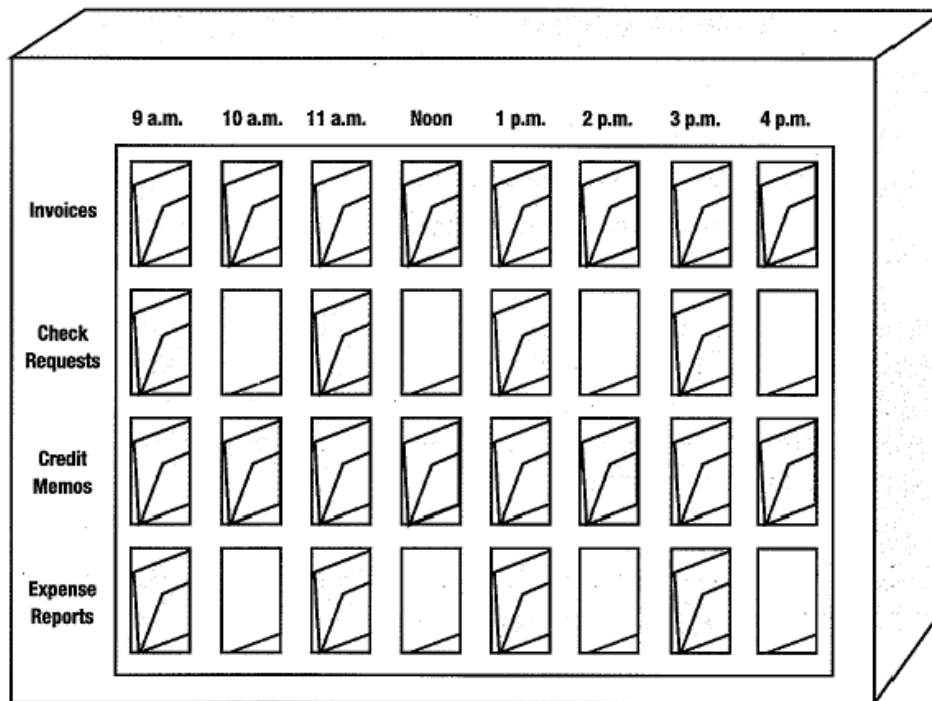
# Insurance company: performance measurement





## Insurance company: work control

Heijunka Box – Accounts Payable







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## Lean failure examples

### ■ *Large carpet producer*

- ☞ two succesful Lean pilot cases changeover
- ☞ union opposition + management removes Lean Champion
- ☞ Lean buried after 1 year

### ■ *Small mattress ticking manufacturer*

- ☞ Lean supported by CEO and CFO, Lean Sensei in place (mfg. director)
- ☞ Successful introduction and roll-out in 3 years
  - lowest cost in 5 year, delivery in 5 days i.o. 6 weeks
- ☞ Romanian subsidiary also picks up Lean
  - cost difference leads to downsizing Belgian site
  - Lean Sensei quits







## Lean cannot be taught easily nor quickly

### ■ *Students: basic skills*

☞ time & method study, operational management, simulation, operations research, cost models, investment analysis

☞ Lean toolset

### ■ *Company operators:*

☞ learning by doing

☞ driven by lean champion

### ■ *Management:*

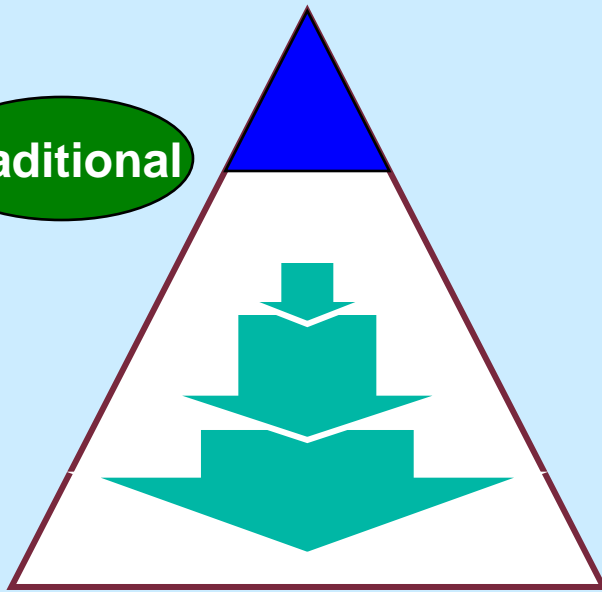
☞ must drive change

☞ embrace the change in management style/method



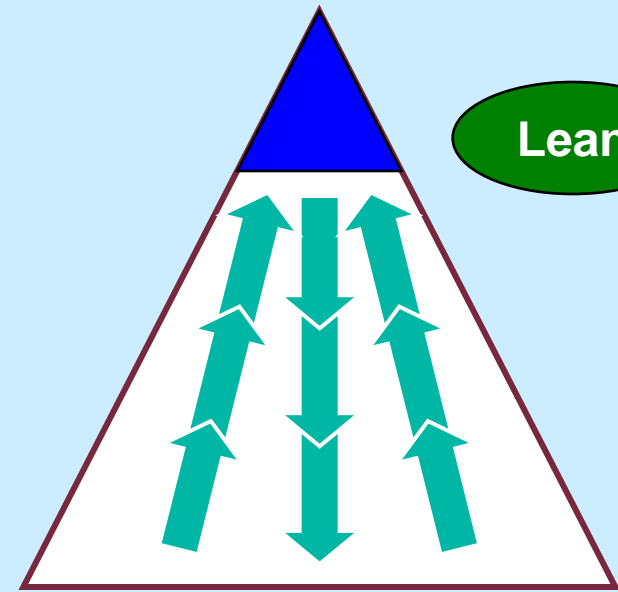
## Lean is a radically different management philosophy

Traditional



- Knowledge only at the top
- Unilateral Management Directives
- Rewards for a limited staff

Lean



- 100% Employee training
- People Empowerment
- Management coaches
- Broad Participation in benefits

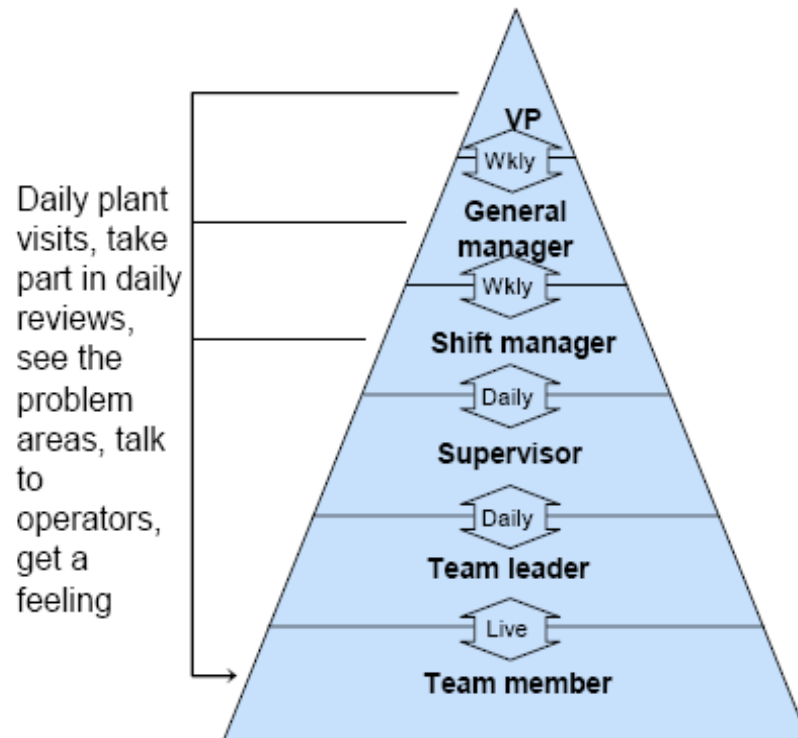




## Managers role model appropriate behavior

### TOYOTA EXAMPLE

#### Performance dialogues



#### Dialogue standards

- *Kaizen*
  - Make sure what you are communicating is in line with Toyota CI philosophy
- *Challenge*
  - Clarify the challenge you are setting through your communication
- *Go and see*
  - Don't talk about problems you have not seen or experienced yourself
- *Teamwork*
  - Do not give an order, talk about what you will do as a team
- *Respect of people*
  - What you are communicating and your style should be respectful to the individual



## Meeting leaders ask the right questions to challenge reasons for underperformance



**What is happening?**

What are the gaps to target?  
Are any trends causing concern?

**Why?**

What has happened to cause the performance gap?  
Do we understand the true root causes?  
Do we have to investigate further to really understand the problem?

**What needs to be done?**

Do we have to take any short-term containment action?  
What should be done to correct the problem and prevent this happening again?  
Will these actions completely resolve the problem or must we do any additional things to close the gap?

**Who is going to do it?**

Who will take responsibility for completing the action?  
Does the owner need support from any of the other team members?

**When is it going to be done?**

Is it a priority action?  
What is the deadline for completion?  
When are the intermediate milestones?

**How is progress to be tracked?**

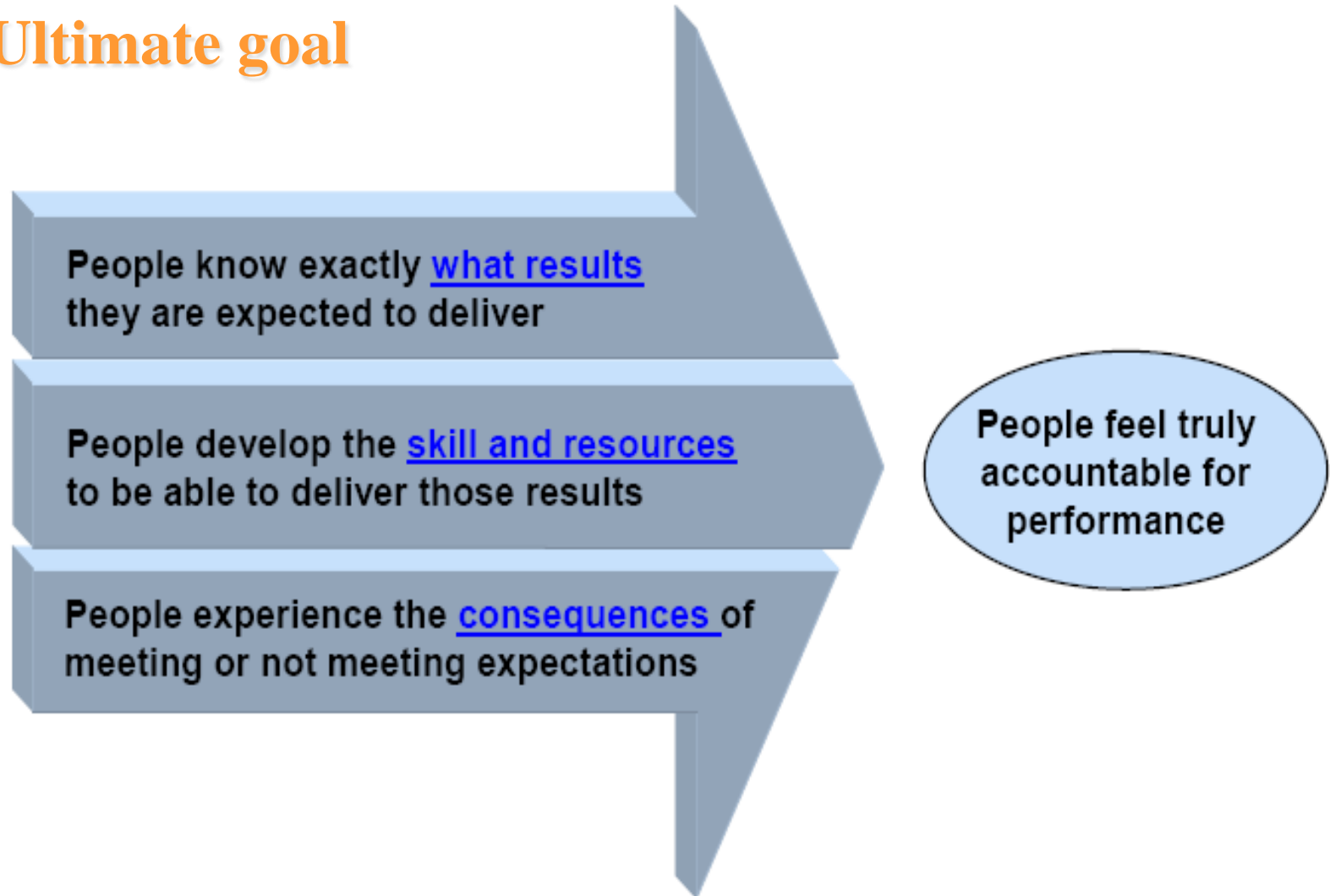
Will it be solved immediately?  
Is it necessary to use a T-card?

*But they never give the “right” answer themselves!*





## The Ultimate goal





Thank you for your attention





## A small exercise before lunch (find 10 elements of waste)

