

The Production Game

- *Session 3* -

Company

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YEAR	ROI (%)
0	10.3
1	5.8
2	14.5

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- Changes in the production:

WORKSHOP 1 → Process layout (OP10-30):

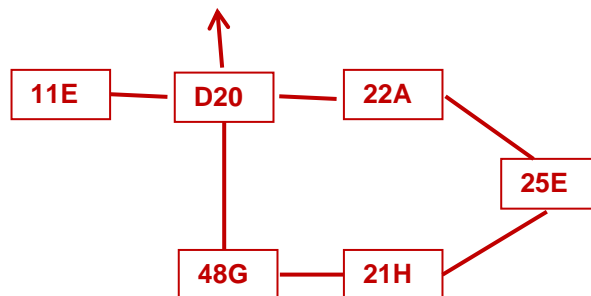
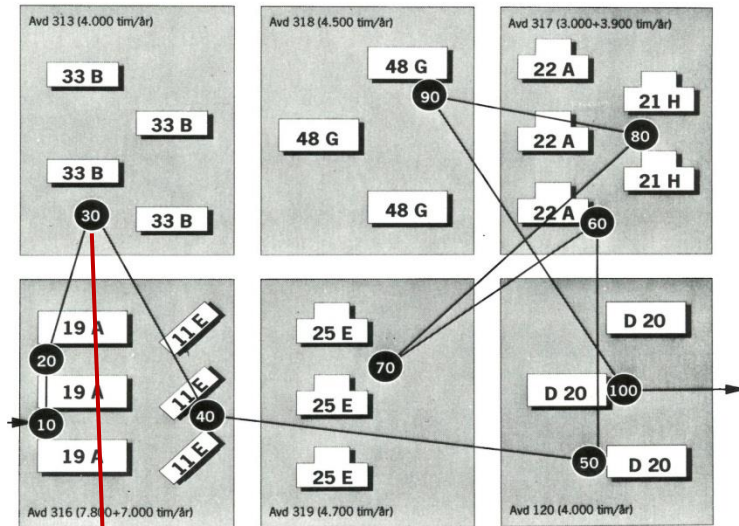
Every operation is one planning point

Lead time: ~1 week/operation (10 weeks)

WORKSHOP 2 → Cell layout (OP40-100):

Every order is one planning point

Lead time: (set up time = 0) machining time x batchsize (EOQ)



OPERATIONS CARD

Instructions

Dept	Machine	Operation				Not
		Nr	Description	Set up time	Stycktid	
316	19A	10	Turning, side 1 and diameter	150	12	CNC-lathe
316	19A	20	Turning, drilling, brotsching	15	11	CNC-lathe
313	33B	30	Drilling, threading	60	6	3 axis
316	11E	40	Turning, sides	60	12	Revolution
120	D20	50	Inspection	-	-	
317	22A	60	Balance adjusting, milling	60	10	Vertical
319	25E	70	Hobbing, washing and deburring	150	12	Hobb
317	21H	80	Slot Milling	100	6	Horisontal
318	48G	90	Deburring, brushing and washing	30	16	Brushing machine
120	D20	100	Inspection	-	-	

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Game **3**:

Manufacturing controlled by KANBAN and OP (Order point)
Assembly controlled by make to order



Increasing ROI...

Owner

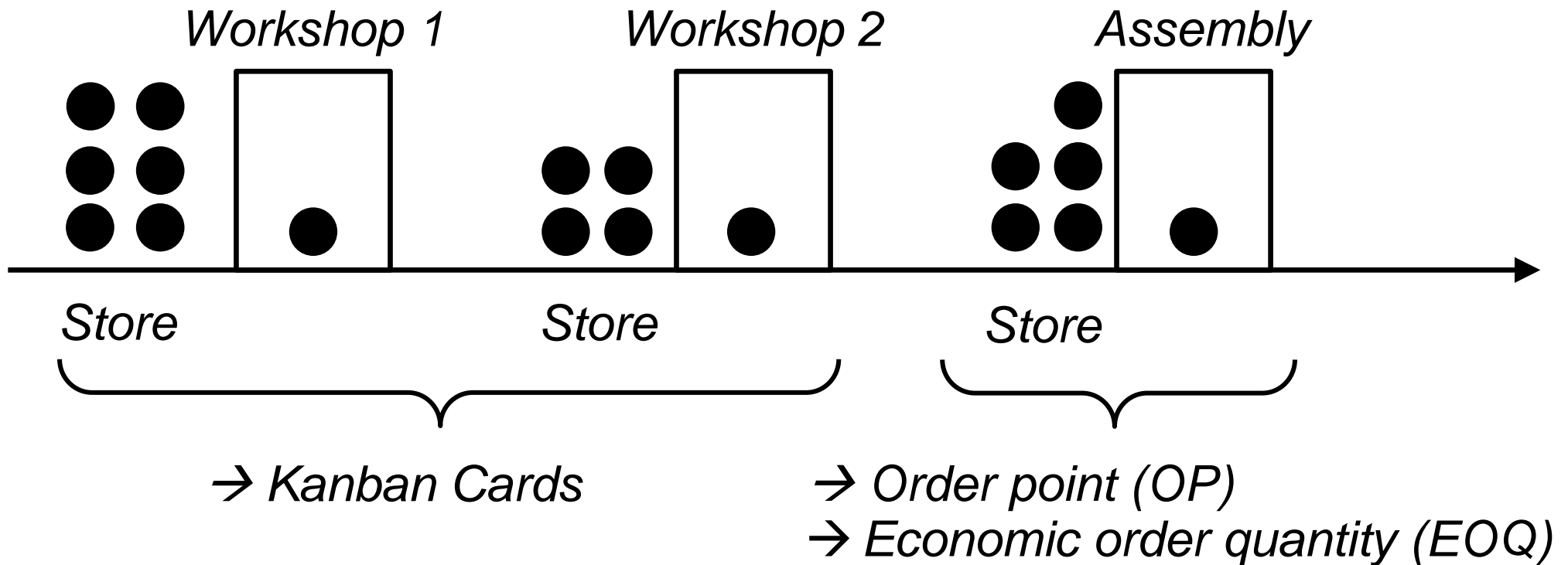


Reduce inventory assets.
High delivery capacity

Production manager

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Production flow - Influence



Initial game setup (round 3)

Manufacturing planning (Detaljplaneringen):

Orders: 3 Kanban (3 empty tubes+Kanban)

Buffer (Funktionell verkstad 2):

Gear X: 5 (5 tubes, 2M in each+Kanban)

Component store 1 (Komponentförråd 1):

Gear A: 3 (3 tubes, 3M in each)
Gear E: 2 (2 tubes, 3M in each)
Gear I: 2 (2 tubes, 3M in each)

Raw materials store (Råmaterialförrådet):

Blanks: 7 (7M)

Workshop 1 (Funktionell verkstad 1):

Gear X: 2 (2 tubes, 2M in each + Kanban)

Gearbox storage (Färdigvarulager): CLOSED

Component storage 2 (Komponentförråd 2):

Shaft K: 8 (8M)
Shaft L: 8 (8M)

Customer (Kund): 160M (ALL EXTRA)

Cash-department (Kassa): 20M

→ Add order points (post-its)

In your group appoint:

*Who is in charge of **raw material** inventory, **buffer 2** and **purchasing** activities*

*Who is in charge of **production**, **assembly**, **deliveries** and **payments***

*Who will ensure what you stick to your **plans***

*Who is responsible for the **cash**.*