



Business Dynamics applicata al BEER GAME

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AGENDA

- Il *Beer Game*
- Business Dynamics applicata al *Beer Game*
 - IL MODELLO DI SIMULAZIONE
 - I RISULTATI DELLA SIMULAZIONE

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IL BEER GAME

L'assenza di integrazione in una supply chain amplifica gli effetti della variazione della domanda.

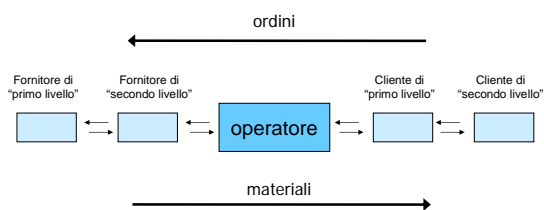
Una variazione semplice (a gradino) della domanda genera:

- grandi disservizi (picchi elevati di ordini inevasi)
- grandi overstock (scorte eccessive).

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COS'È UNA SUPPLY CHAIN

Una catena di operatori che soprassiede al processo di fornitura.



È caratterizzata da flussi fisici ...
... e da flussi informativi

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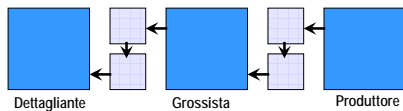
DETERMINANTI DELLA COMPLESSITÀ DELLA SUPPLY CHAIN

- Numerosità degli attori
- Differenziazione delle attività degli attori
- Grado di autonomia decisionale degli attori
- Localizzazione degli attori (ritardi)
- Variabilità della domanda

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IL BEER GAME: IPOTESI DI BASE (1)

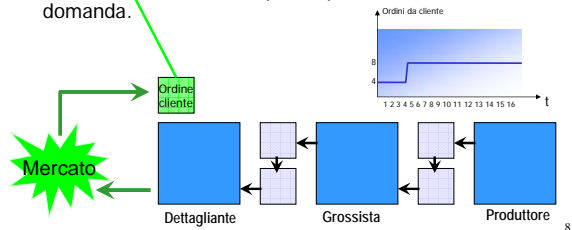
- Il gioco simula gli andamenti degli stock ed il livello di servizio della supply chain di una società che produce e distribuisce birra.
- Partecipanti al gioco: dettagliante, grossista, produttore.
- Ciascun partecipante ha a disposizione un'area di stock.
- Tra ciascun partecipante si ha un lead time di trasporto di 2 settimane.



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IL BEER GAME: IPOTESI (2)

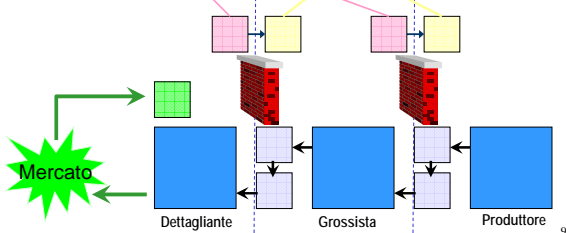
- La domanda è data dal mercato sotto forma di **ordini cliente** settimanali.
- Durante le 16 settimane del gioco la domanda sarà di 4 casse per le prime 4 settimane e poi di 8 casse per le settimane rimanenti. I partecipanti non conoscono la domanda.



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IL BEER GAME: IPOTESI (3)

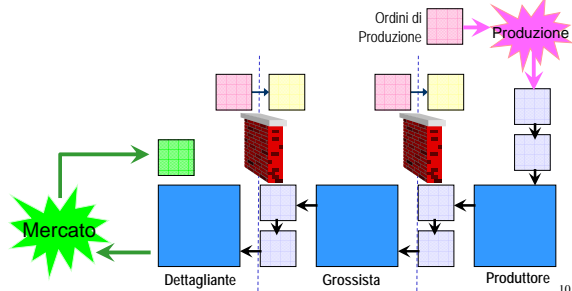
- I partecipanti interagiscono attraverso ordini di acquisto (ordini emessi).
- Gli ordini di acquisto vengono trasmessi e solo la settimana successiva il partecipante "a monte" li può vedere (ordini ricevuti).
- I partecipanti non possono comunicare tra loro in altro modo.



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IL BEER GAME: IPOTESI (4)

- A monte della catena si generano gli ordini di produzione.
- Il lead time di produzione è di due settimane.



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OBIETTIVO DEL GIOCO

L'obiettivo del gioco è di minimizzare i costi totali della supply chain.

I costi si distinguono in:

- costi di mantenimento delle scorte
- costi di stockout (ordini inevasi).

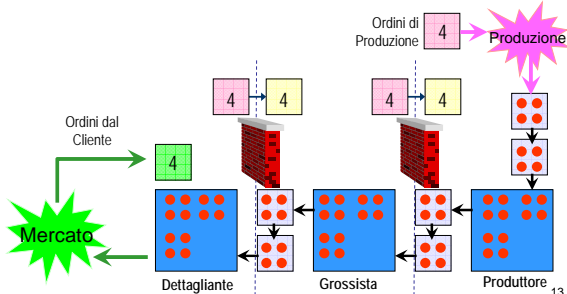
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IL BEER GAME: UN ESEMPIO

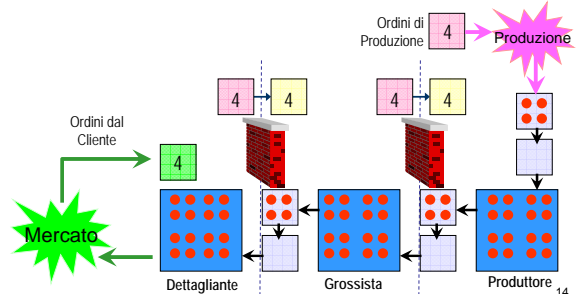
Di seguito riportiamo una partita di esempio...

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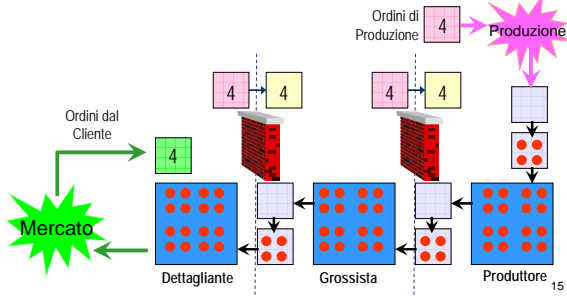
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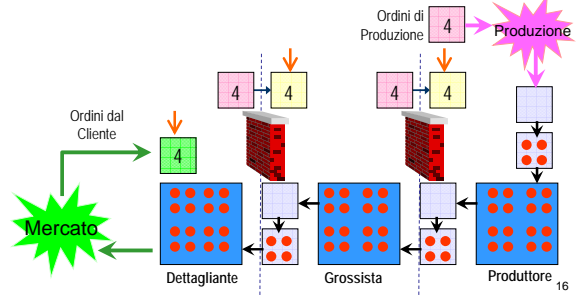
Week 1 - Step 1(1) Consegna la birra



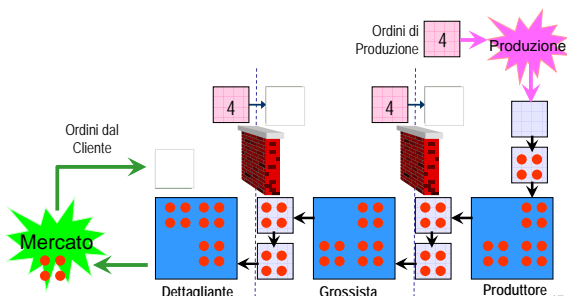
Week 1 - Step 1(2) .. e avanza la catena.



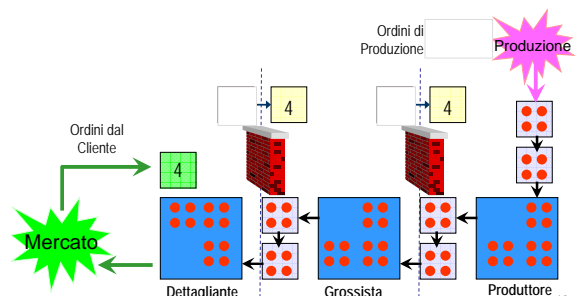
Week 1 - Step 2 (1) Leggi l'ordine in ingresso

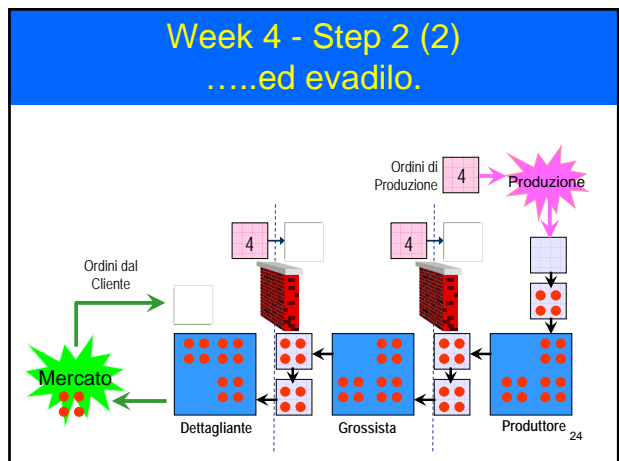
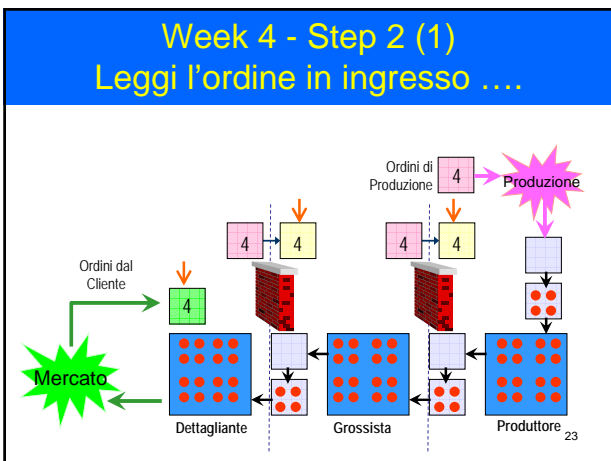
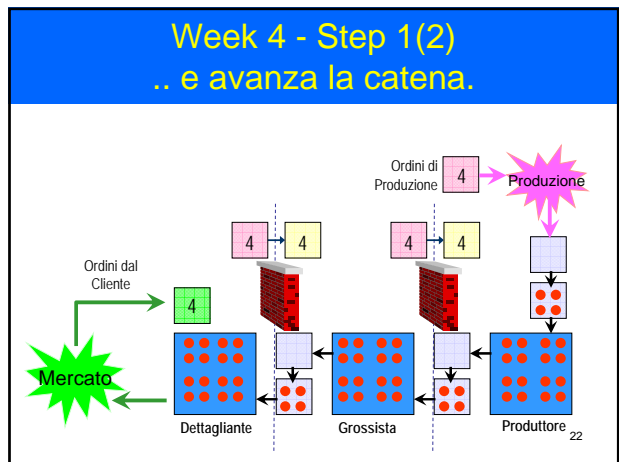
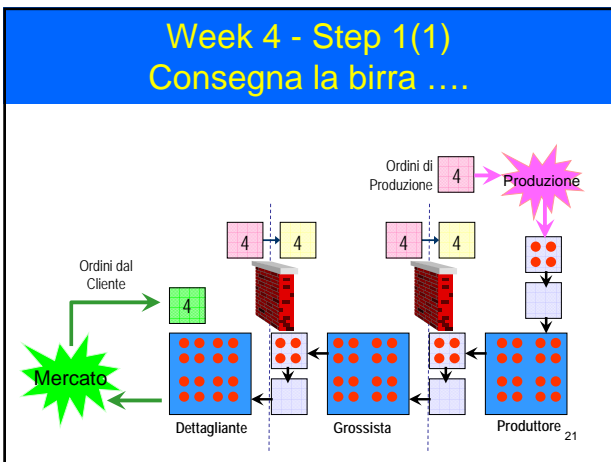
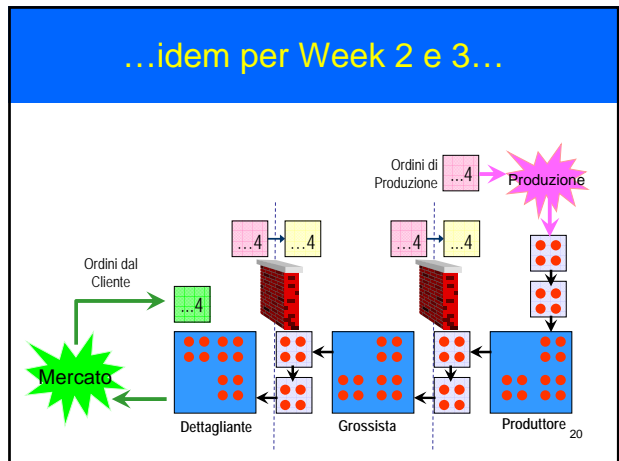
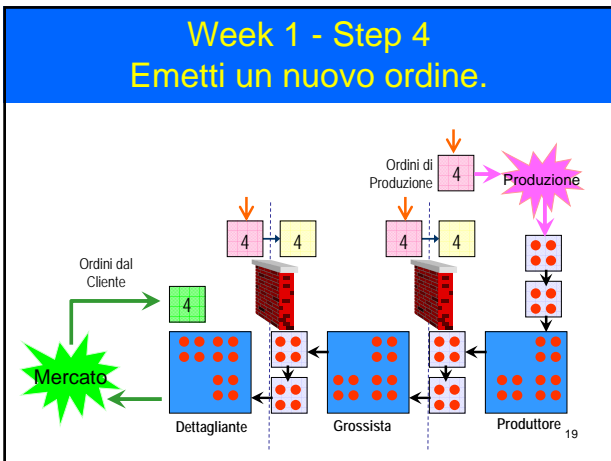


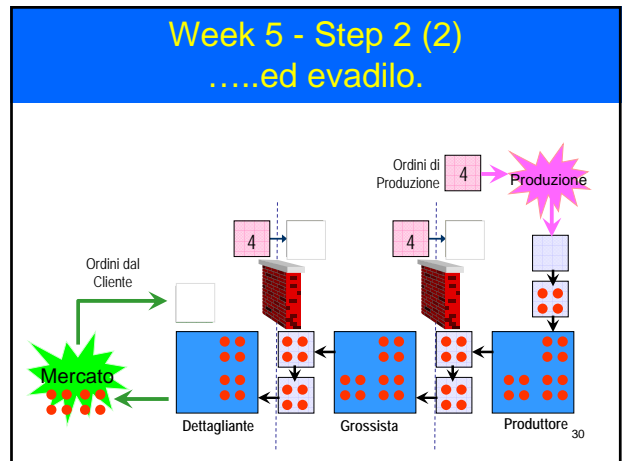
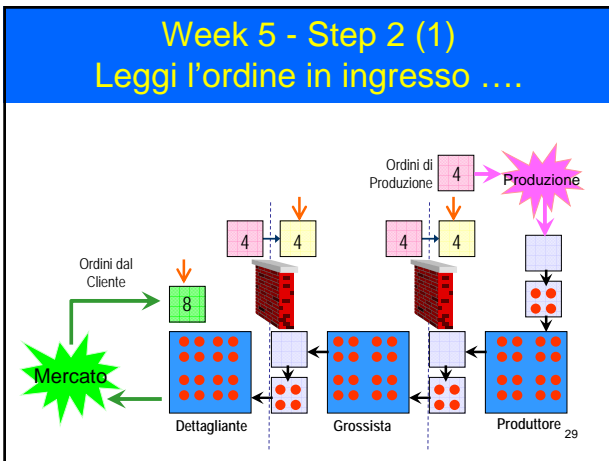
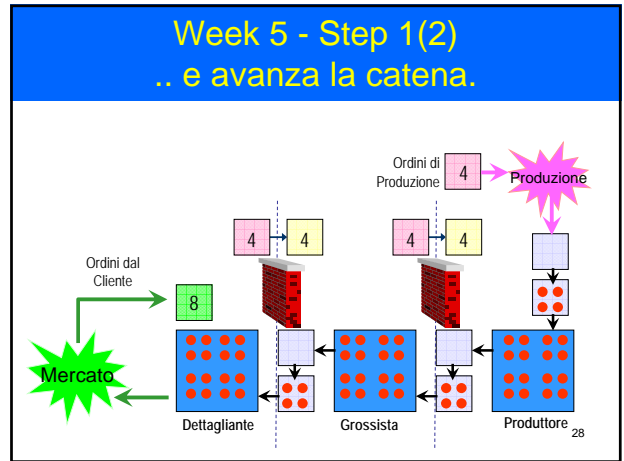
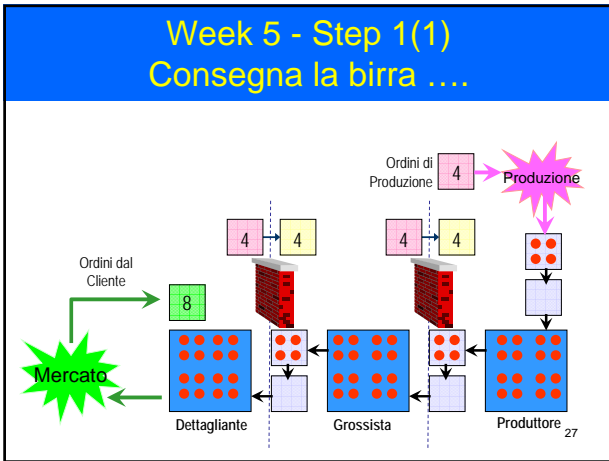
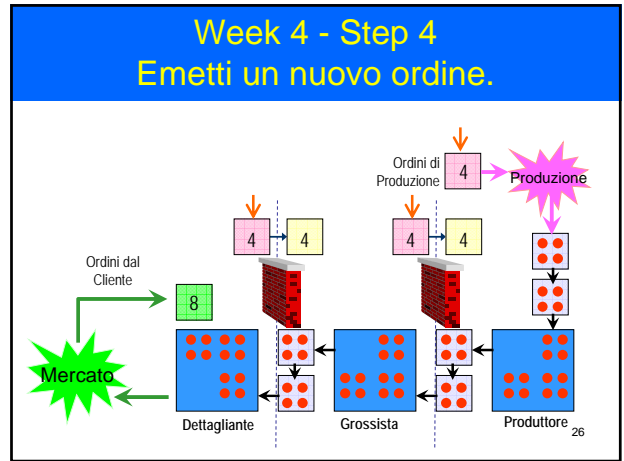
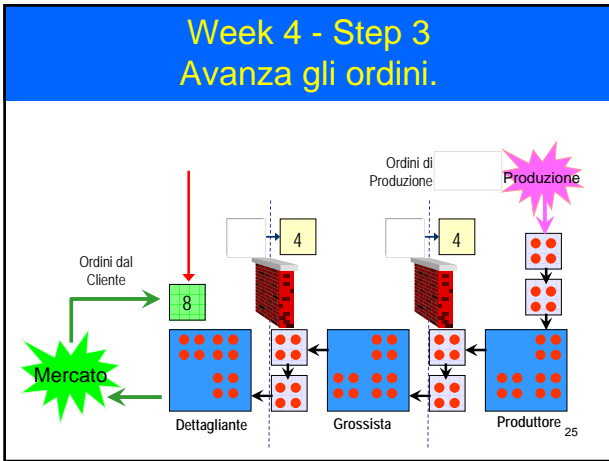
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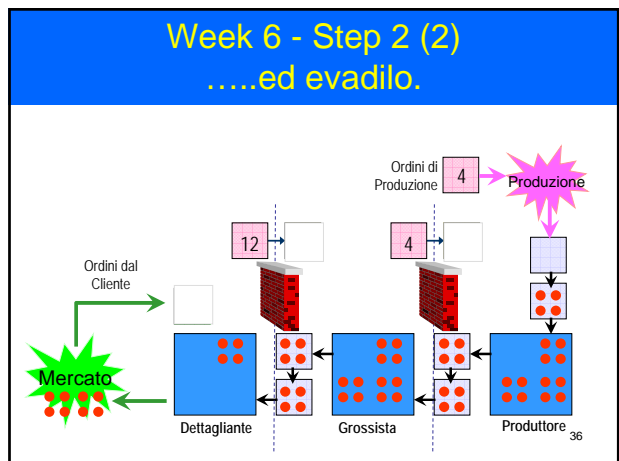
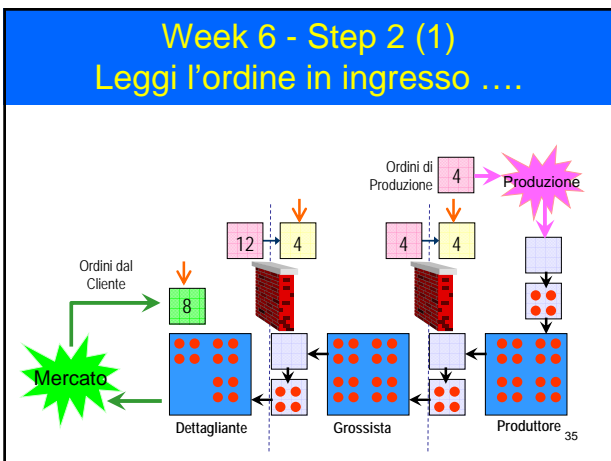
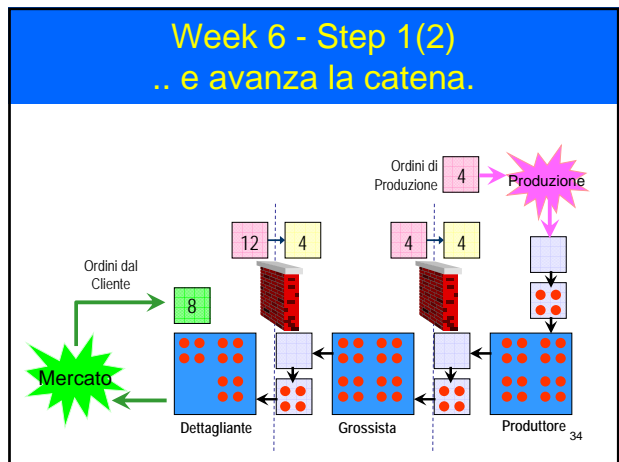
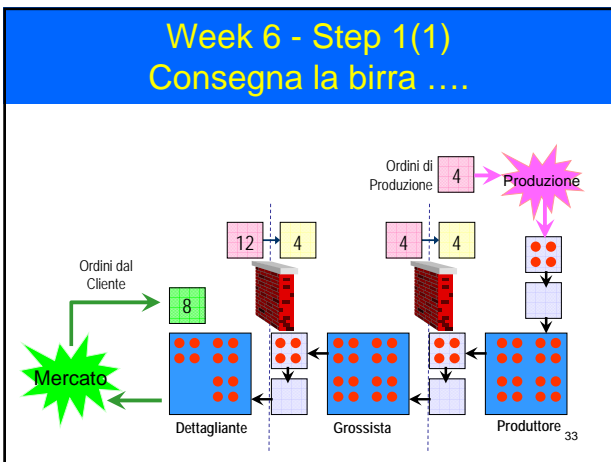
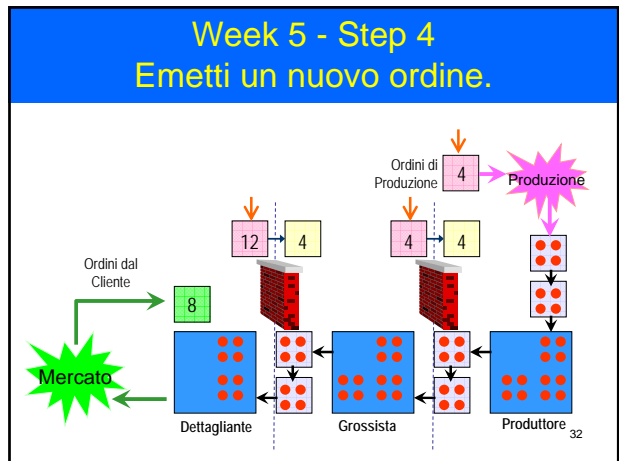
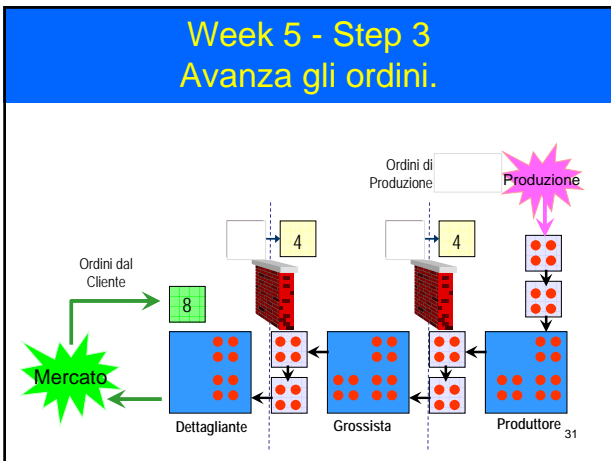


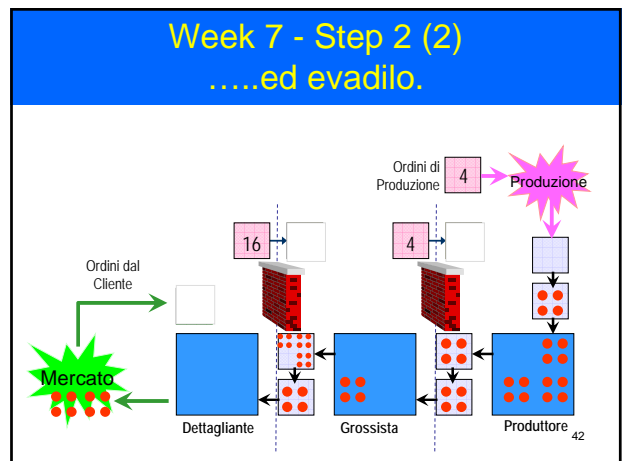
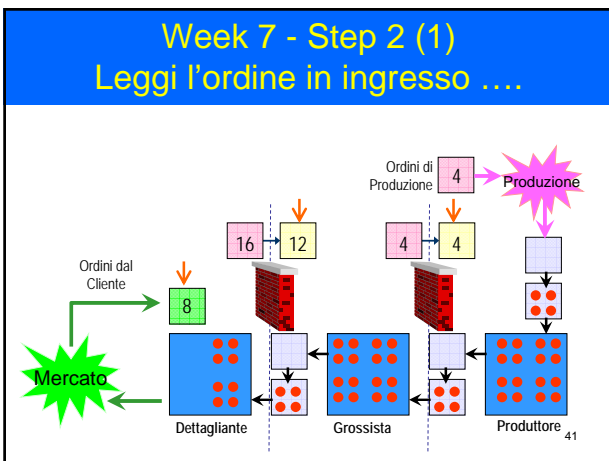
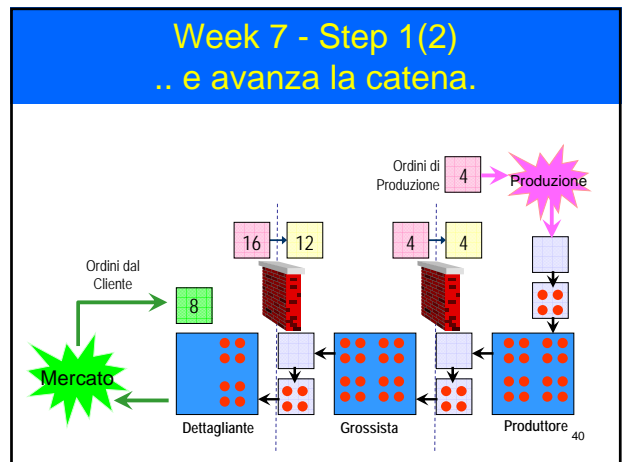
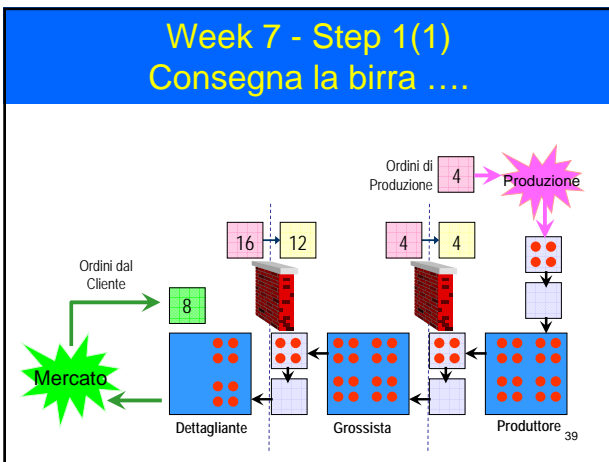
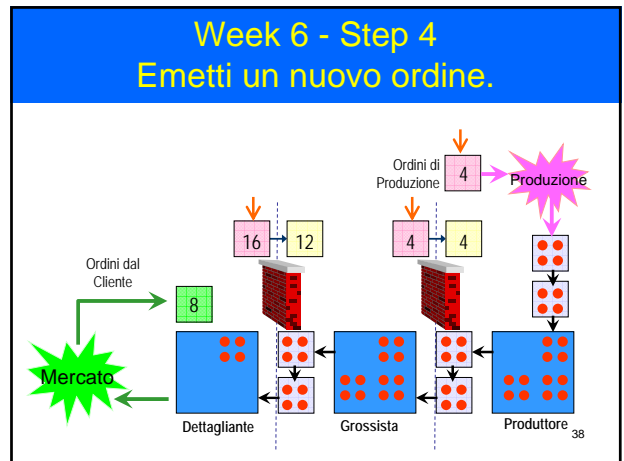
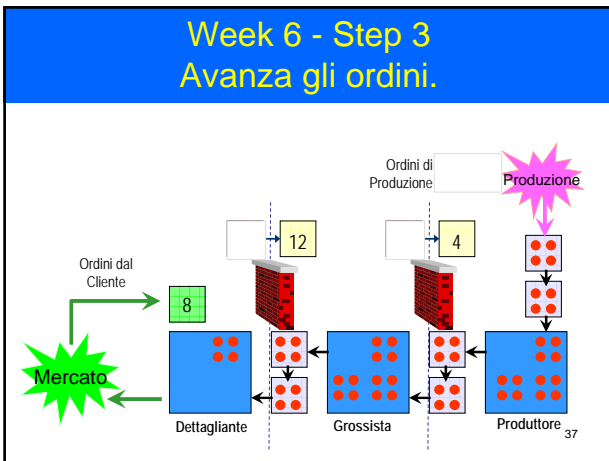
Week 1 - Step 3 Avanza gli ordini.

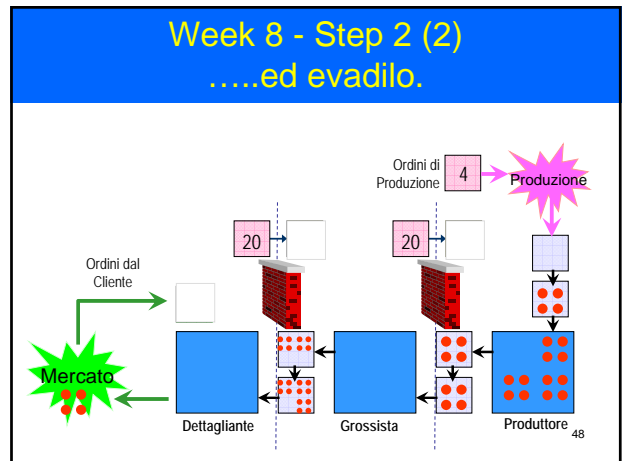
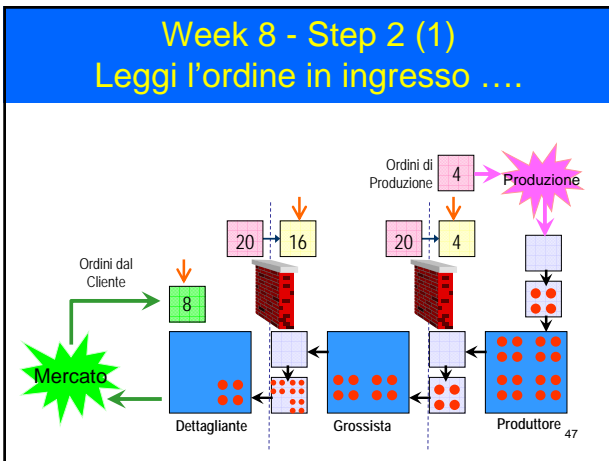
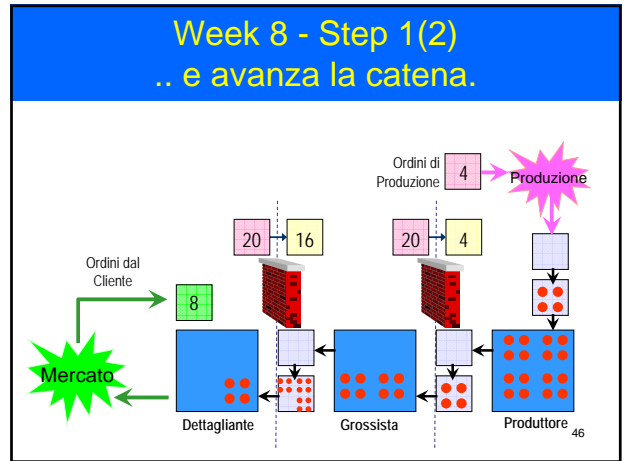
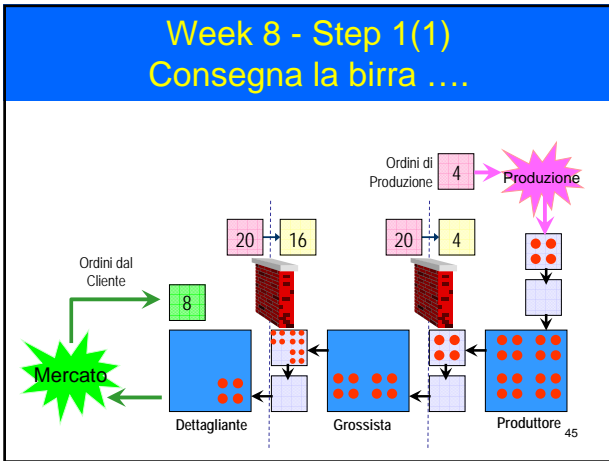
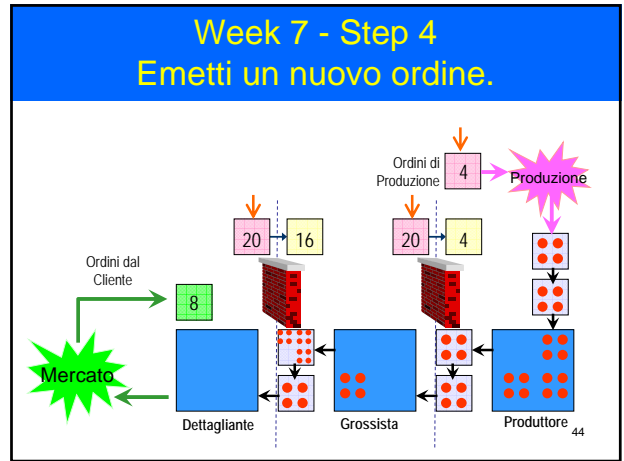
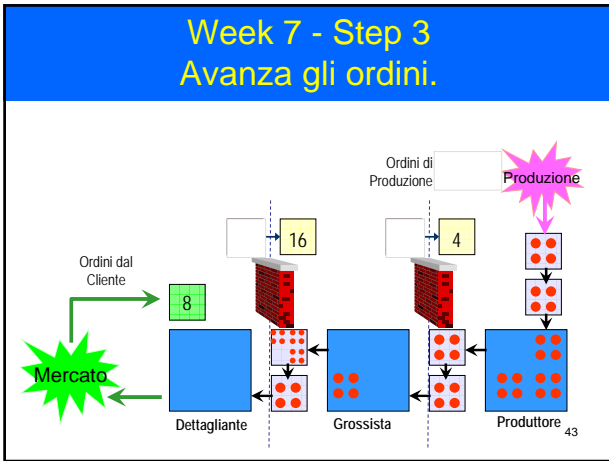


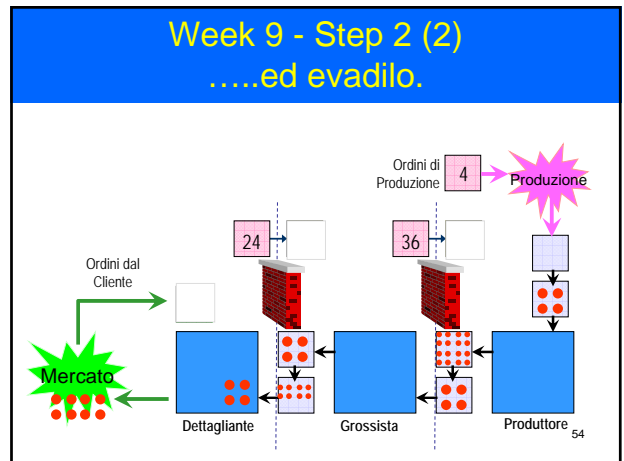
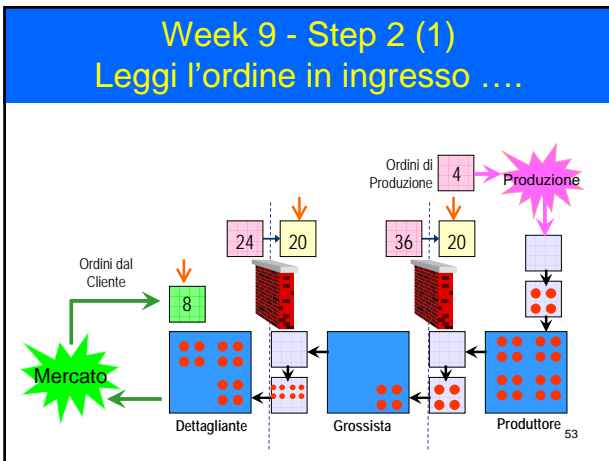
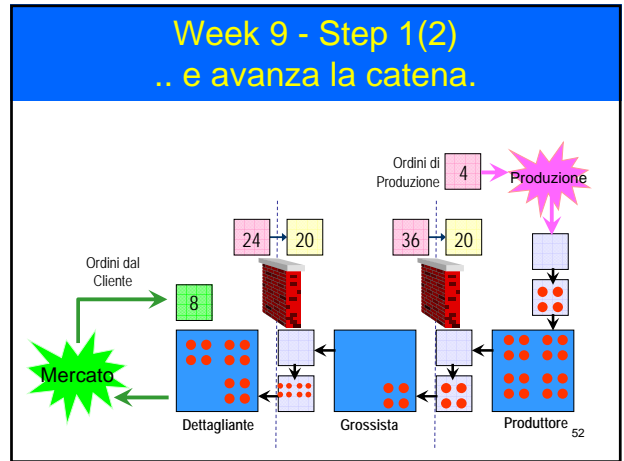
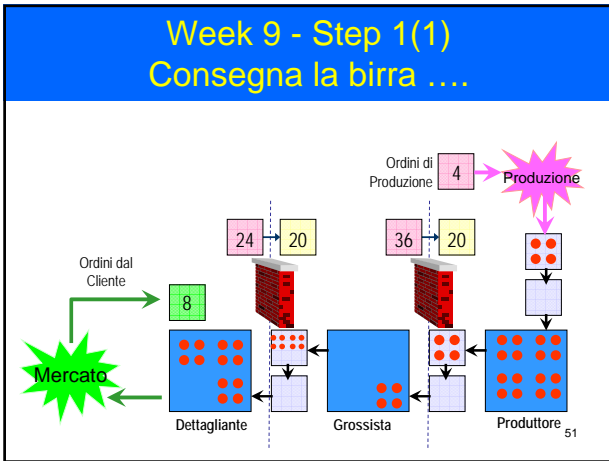
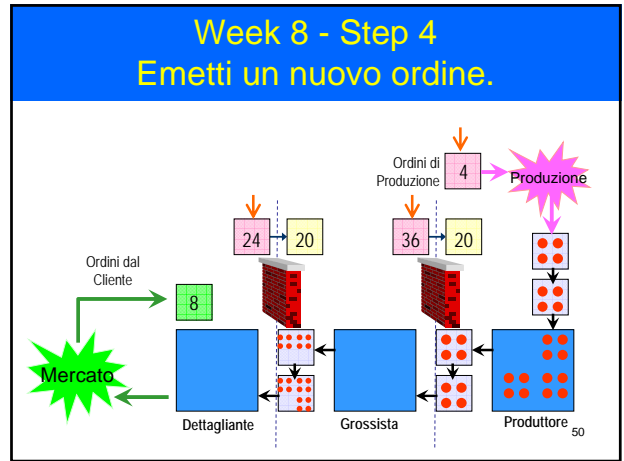
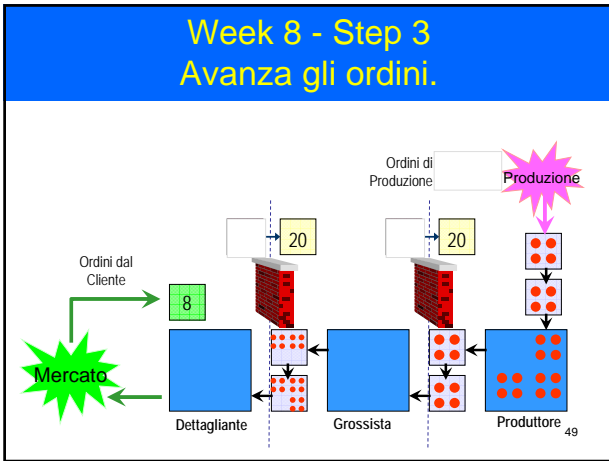


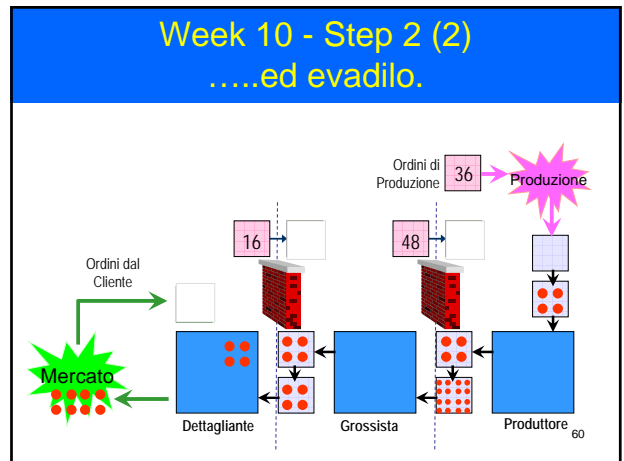
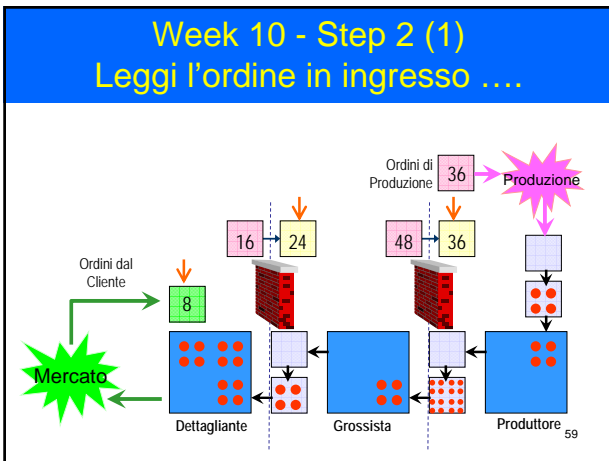
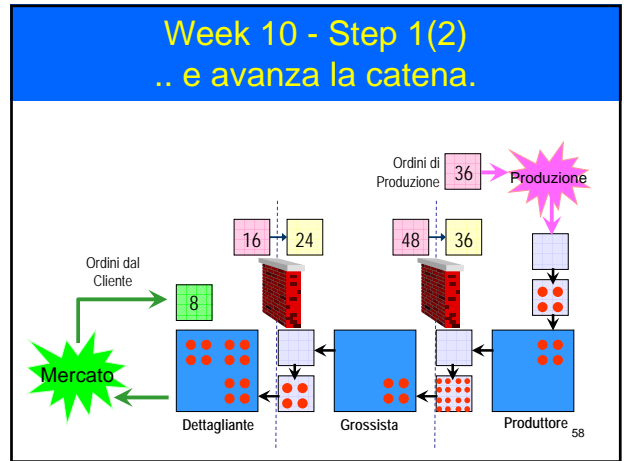
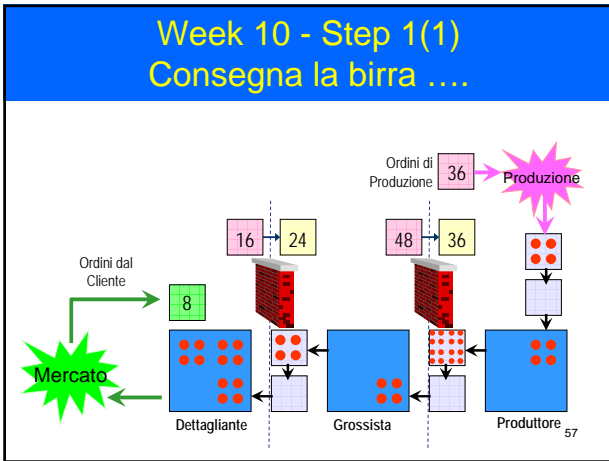
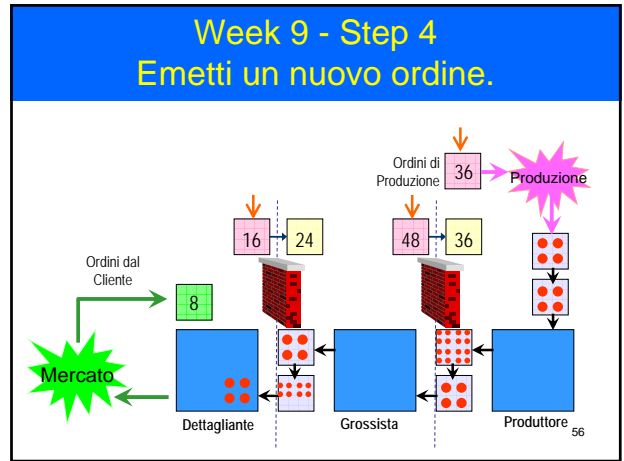
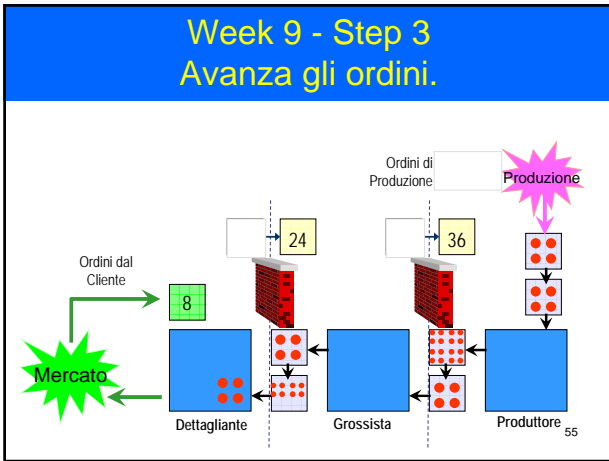


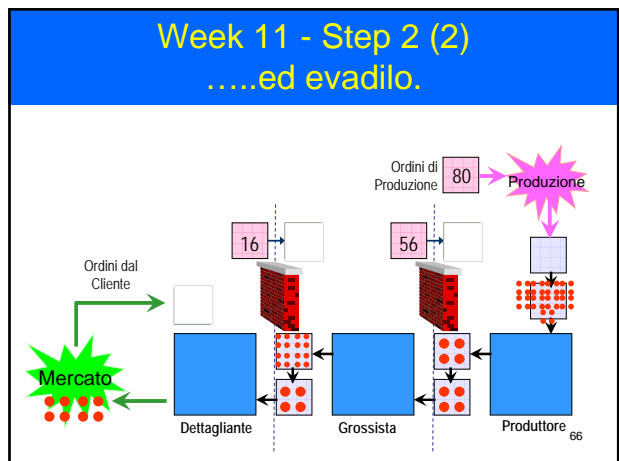
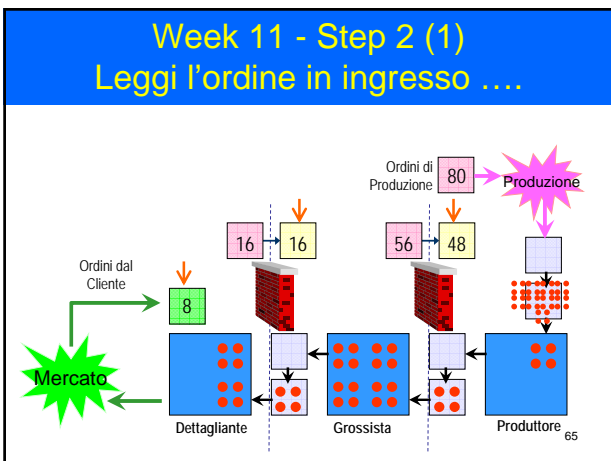
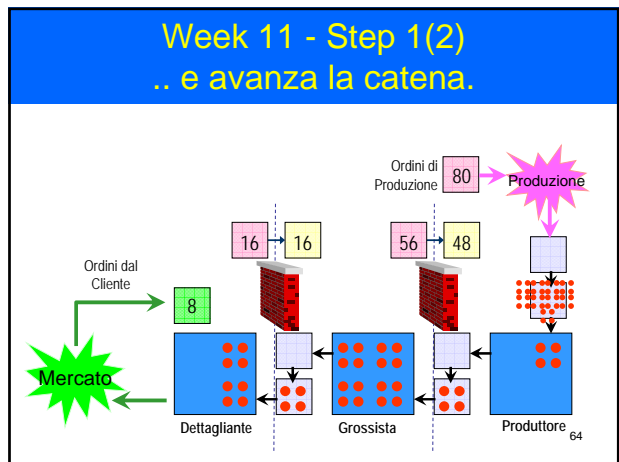
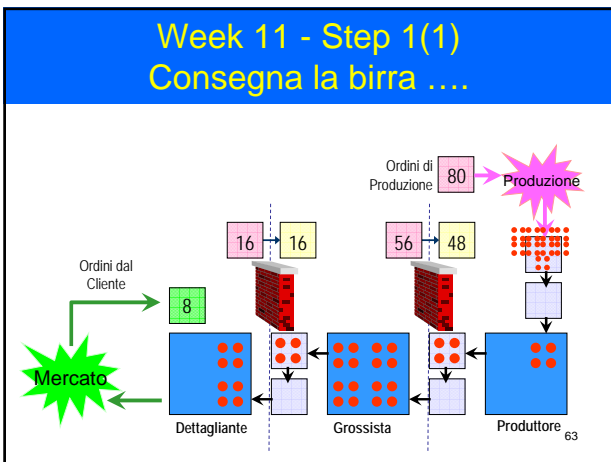
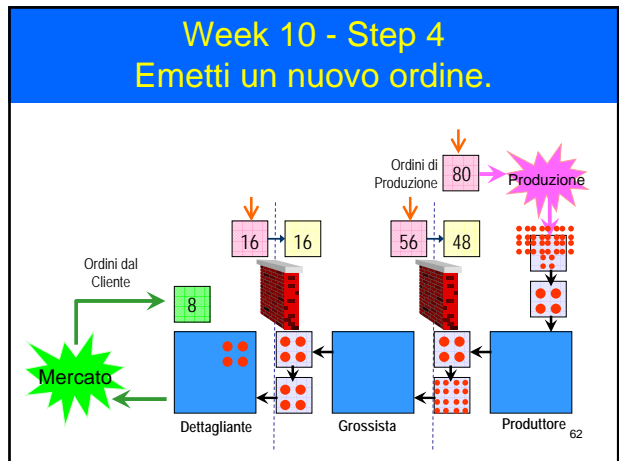
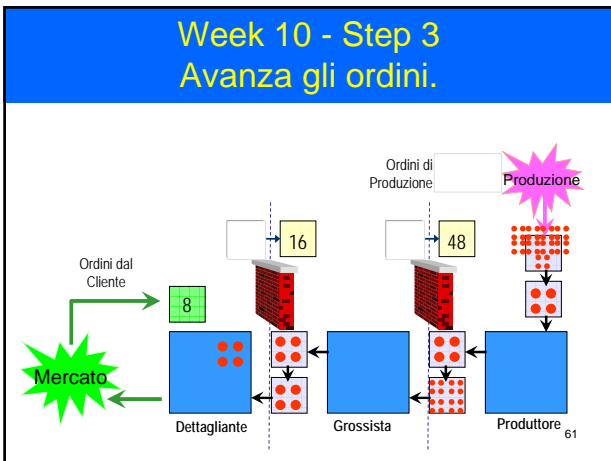


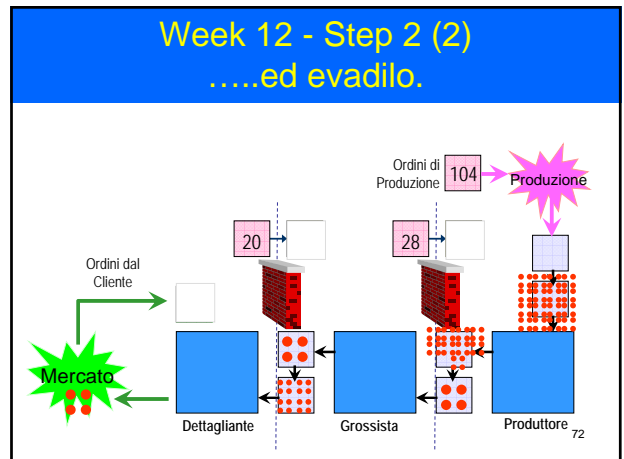
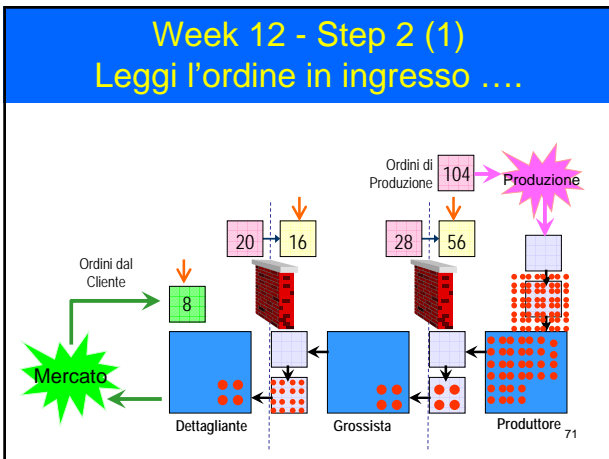
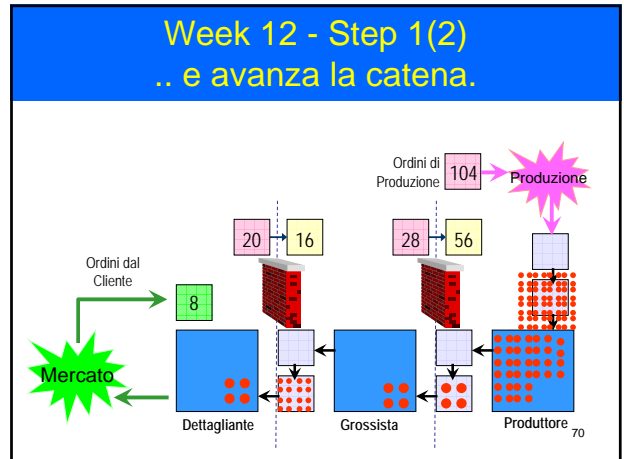
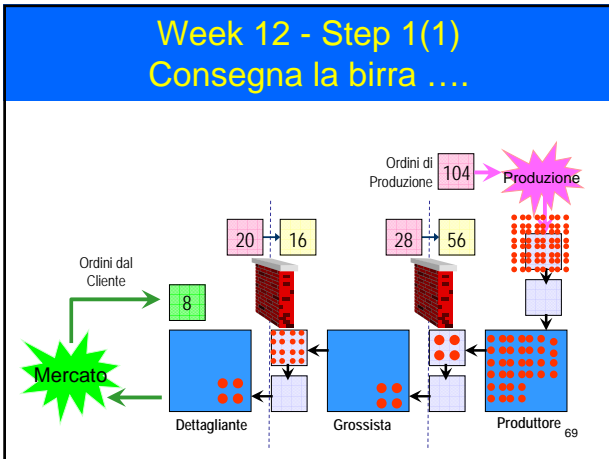
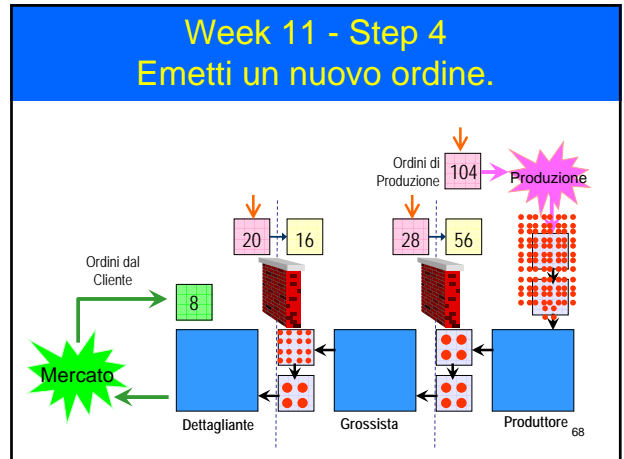
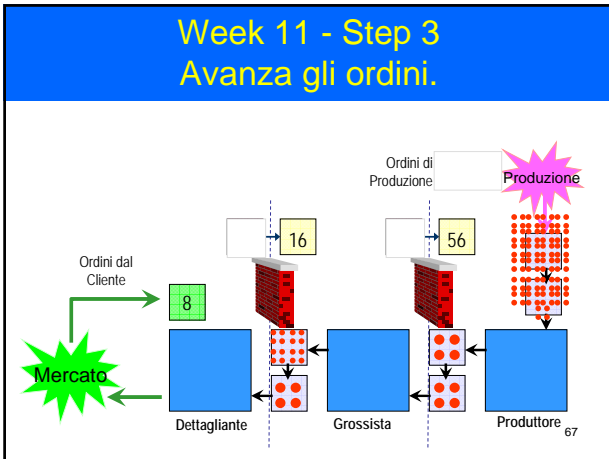


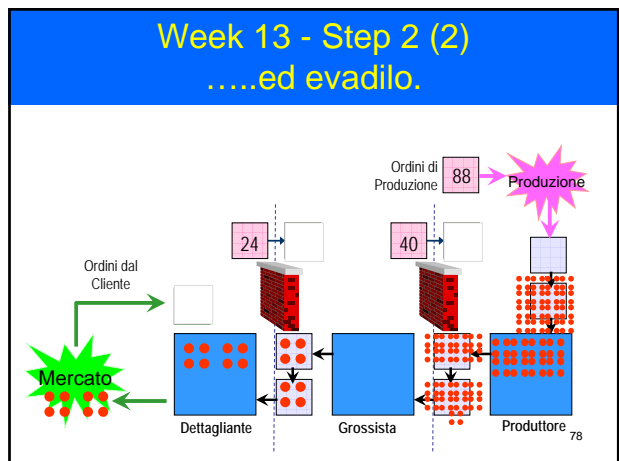
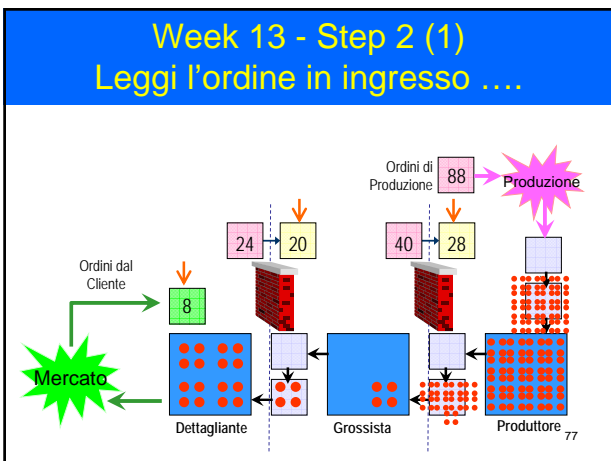
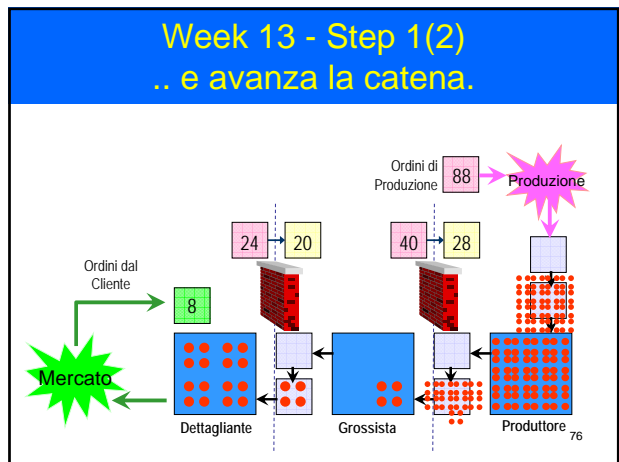
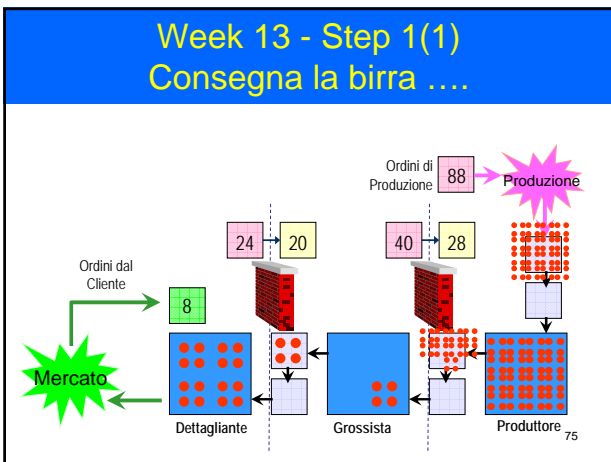
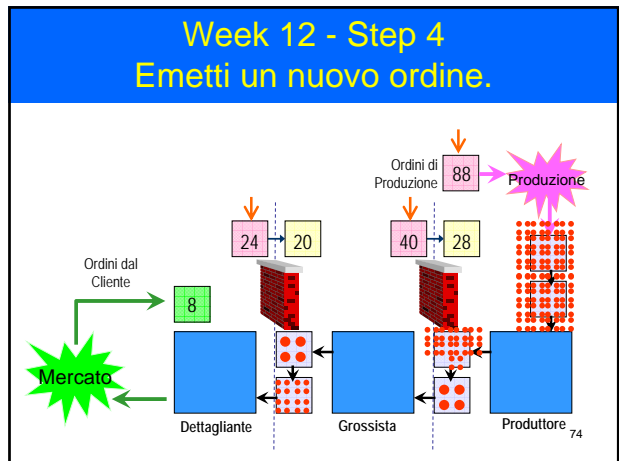
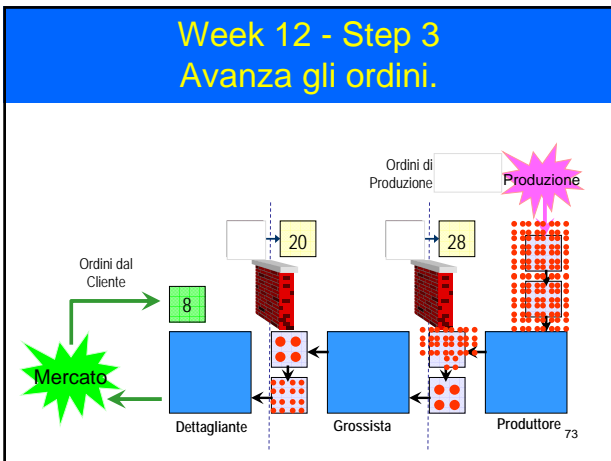


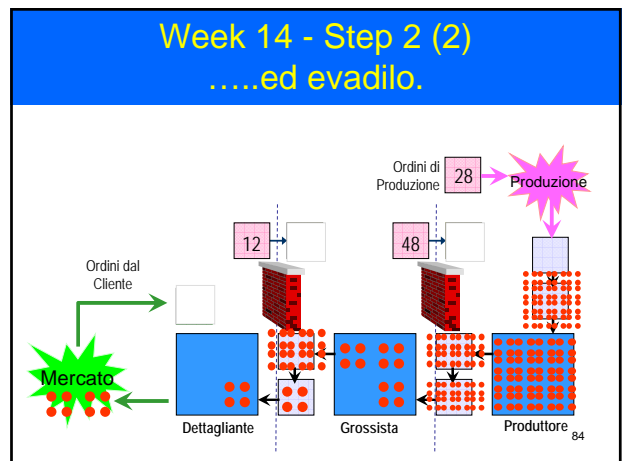
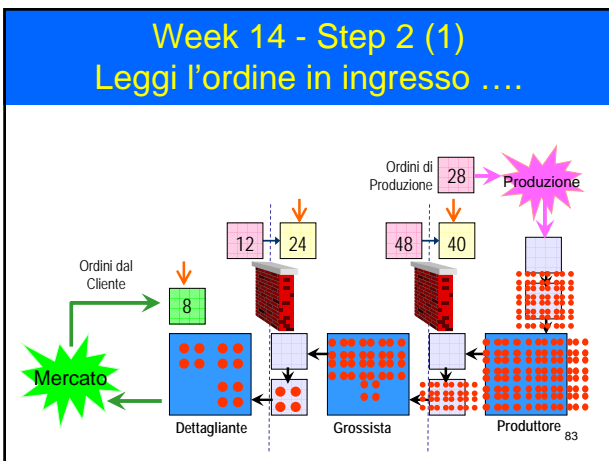
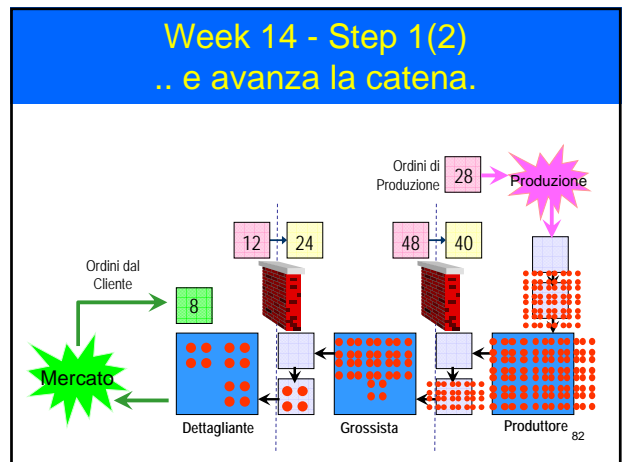
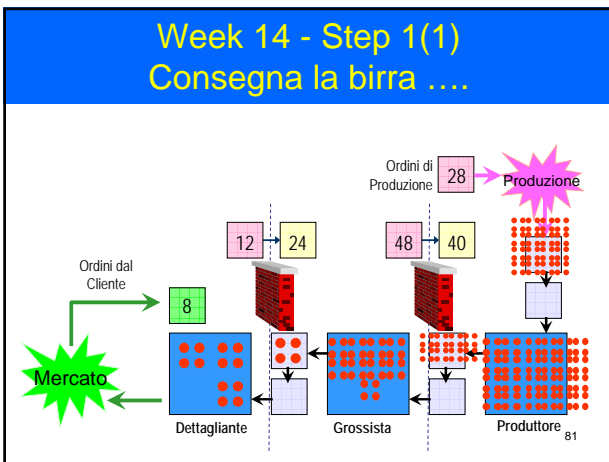
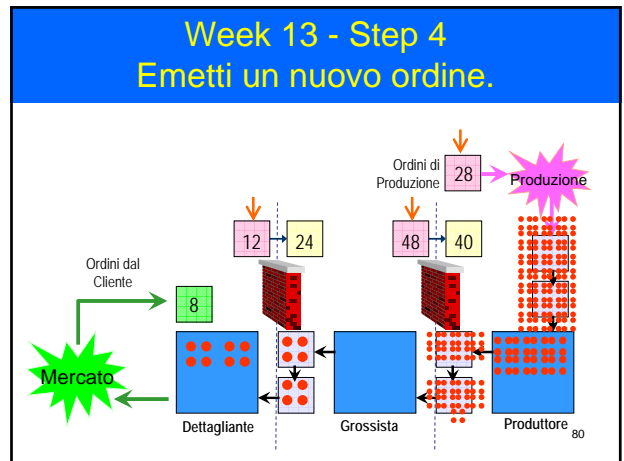
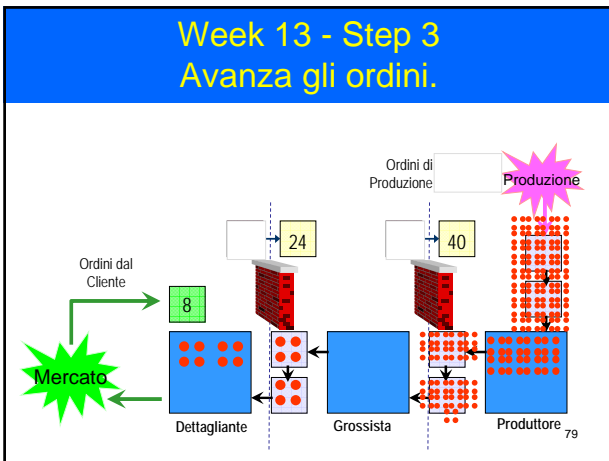


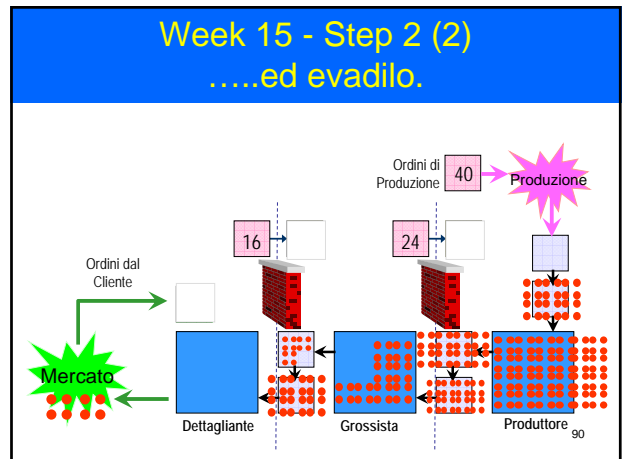
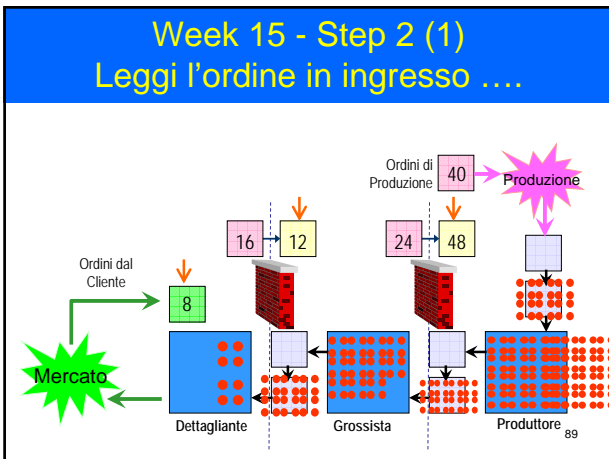
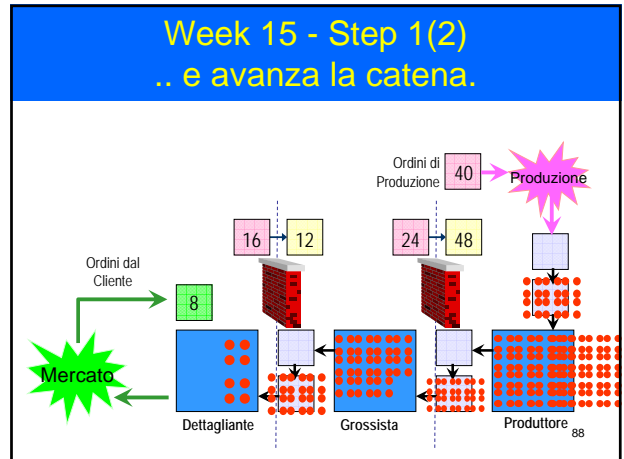
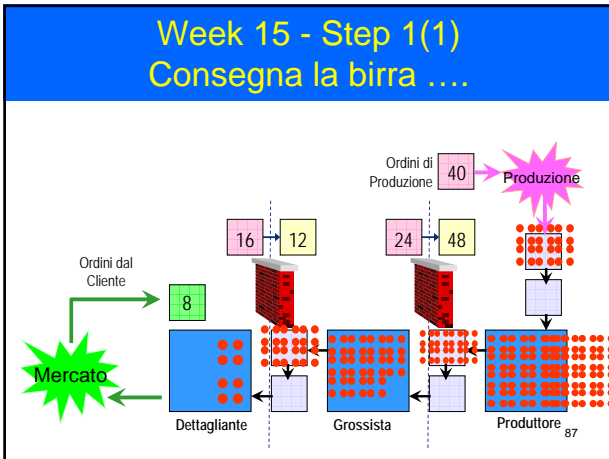
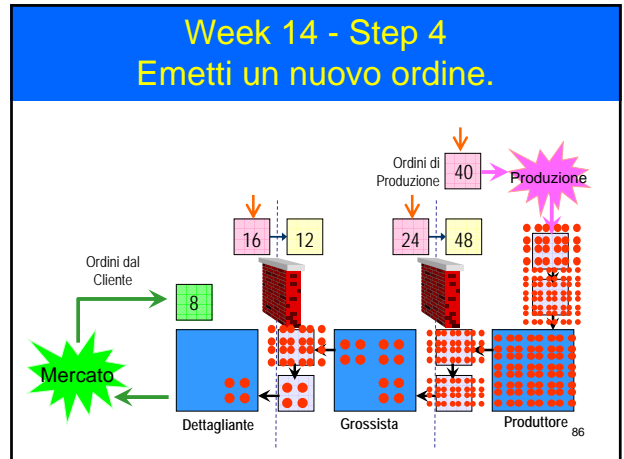
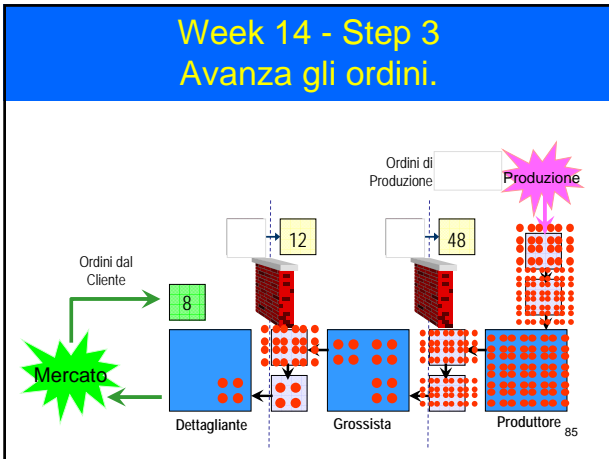


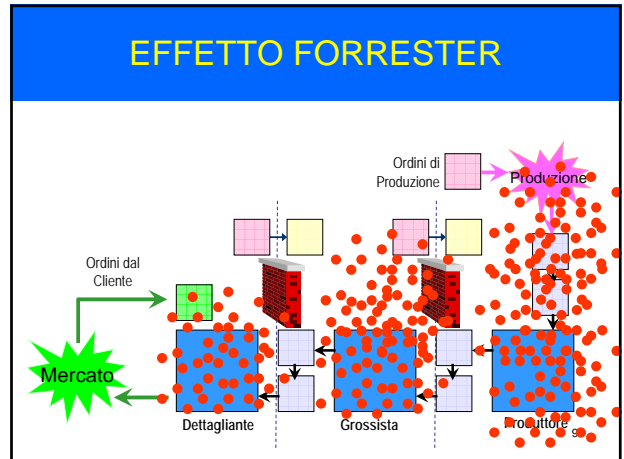
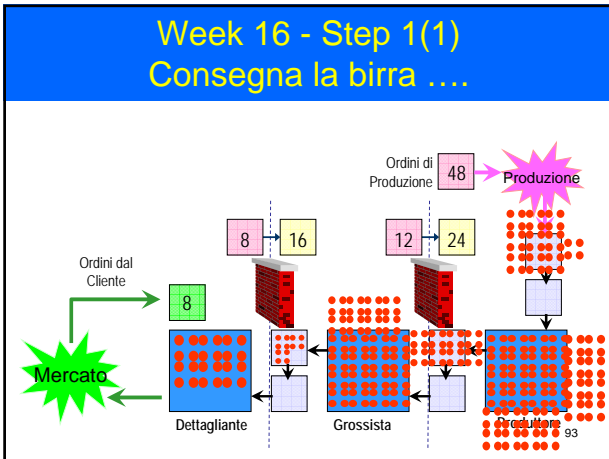
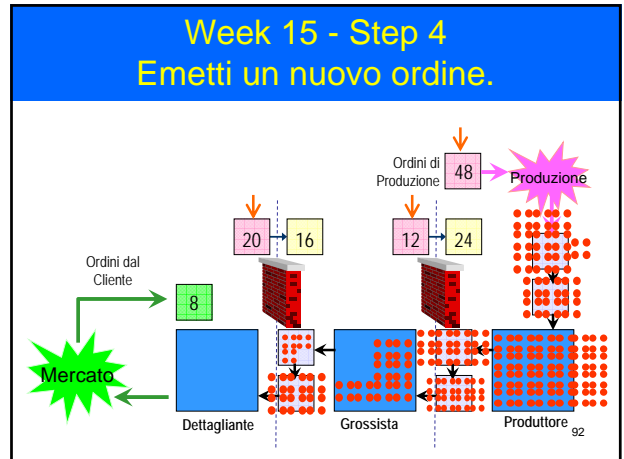
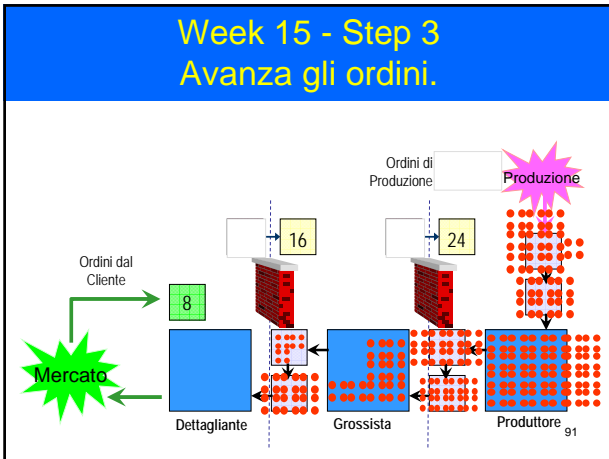








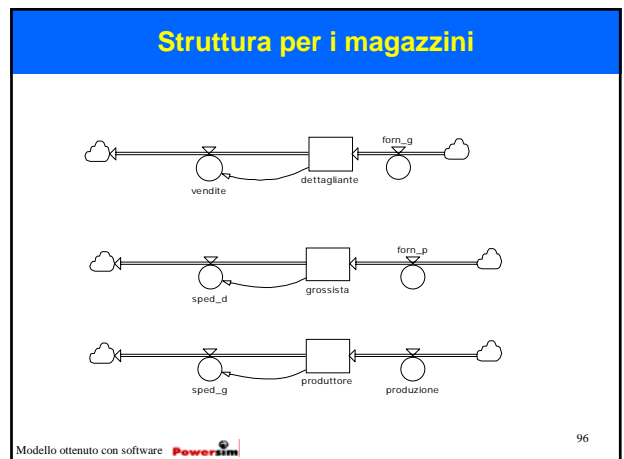


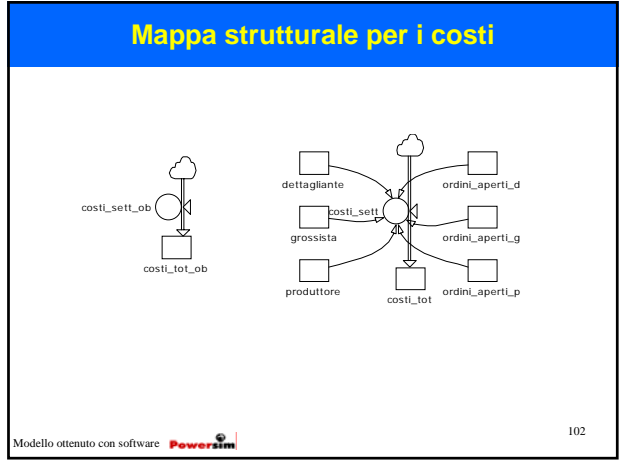
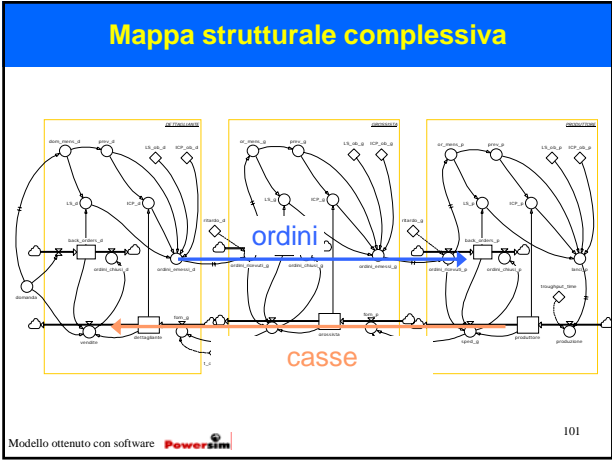
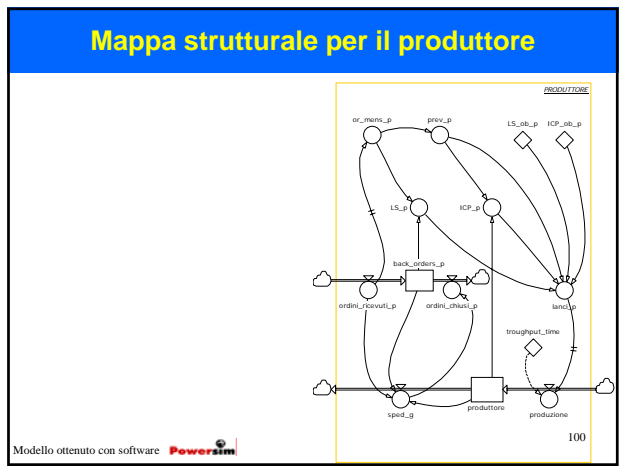
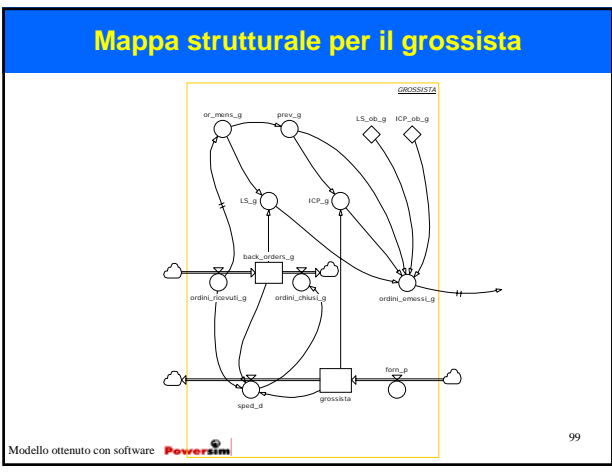
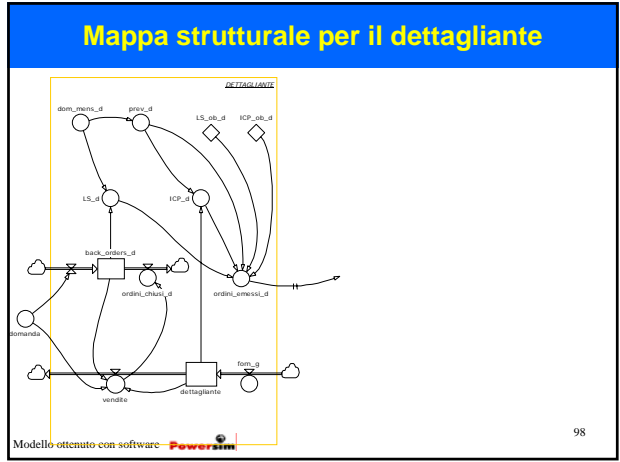
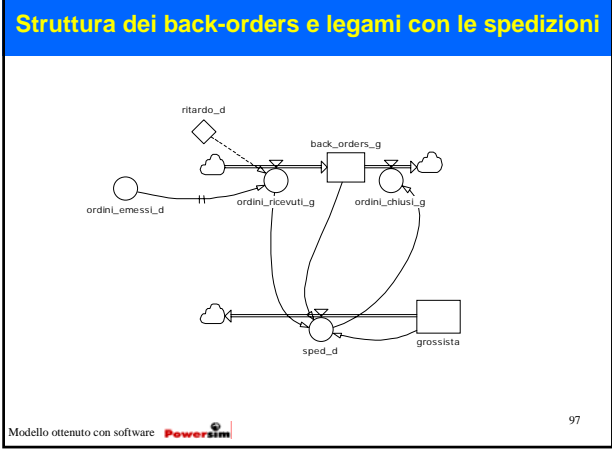


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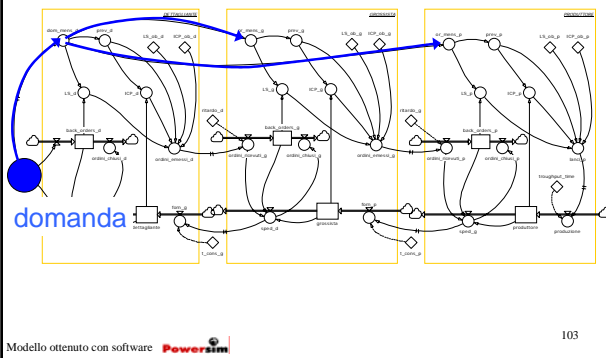
- Il *Beer Game*
- Business Dynamics applicata al *Beer Game*
 - IL MODELLO DI SIMULAZIONE
 - I RISULTATI DELLA SIMULAZIONE

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Scenario: condivisione delle informazioni

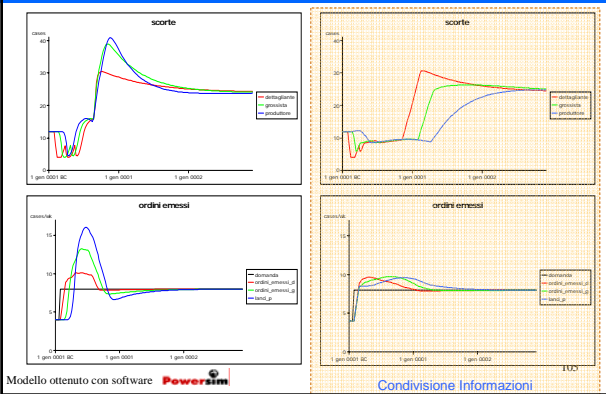


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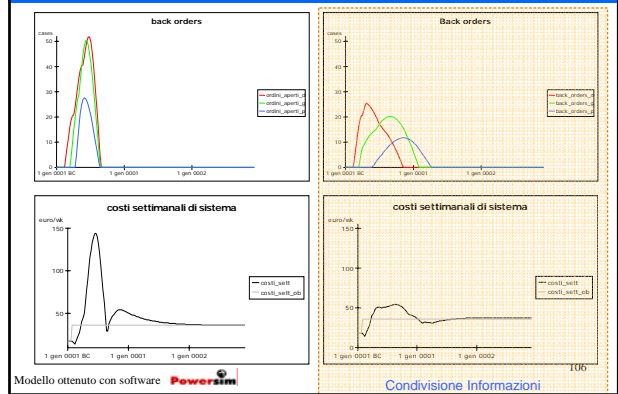
- Il *Beer Game*
- Business Dynamics applicata al *Beer Game*
 - IL MODELLO DI SIMULAZIONE
 - I RISULTATI DELLA SIMULAZIONE

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Confronto tra scenari (1)



Confronto tra scenari (2)



Confronto tra scenari (3)

