Managing Processes & Systems & Projects

Deliver

Process flow & capacity (9)

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Process flow & capacity

Study guide section 10 (2009)

Supply chain management

- is management of relationships and flows between operations and processes that produce value in form of products and services to the customer
- Downstream flow
  - Product & Services to customers
- Upstream flow
  - Flow of information (Orders, Payments, Market research etc.)
- Business performance is a function of the whole chain of which the supply chain is part of

Manage flow influencing factors

- Process layout
  - Visibility & Control
  - Distance matters
- Process type
- Interfaces
  - Linkages between activities can be competitive advantage (PORTER)
- Variability & Utilisation
  - The higher the variability the higher the wait time
- Quality and flow
- Transforming resource capacity
  - is there enough capacity in the transforming resources?

Little's law = throughput time = work in process x cycle time

- Given throughput rate, the only way to reduce throughput time is to reduce work-in-process inventory

Reduction in cycle time (time it takes until 1 unit results as an output) helps business to be quicker, react faster, increase productivity etc.

Bullwhip effect

- Beer game --> Order up, not satisfied supply, more order, supply gets worse etc.
- Reduce bullwhip effect through
  - Share information through supply chain
    - Not only react to your customer, but have an overview of "supply chain"
    - EPOS = Electronic point of sale which is connected with IS system to plan demand upstream
  - Align all the channels of information and supply
    - Bring all operations in line with each other across the whole supply chain (not just information)
    - Vendor management Inventory VMI
      - Upstream supplier manages inventories of downstream customer e.g. Packaging supplier take responsibility for stocks of packaging materials by a food manufacturing customer
  - Increase operational efficiency throughout the chain
    - Reduce complexity
    - Reduce cost of doing business
    - Reduce throughput time
  - Improve forecast
    - Reduce Inventory holding
    - Reduce lead times --> need less forecast

Synchronised flow

- Lean synchronization
  - Toyota