



SNS COLLEGE OF TECHNOLOGY

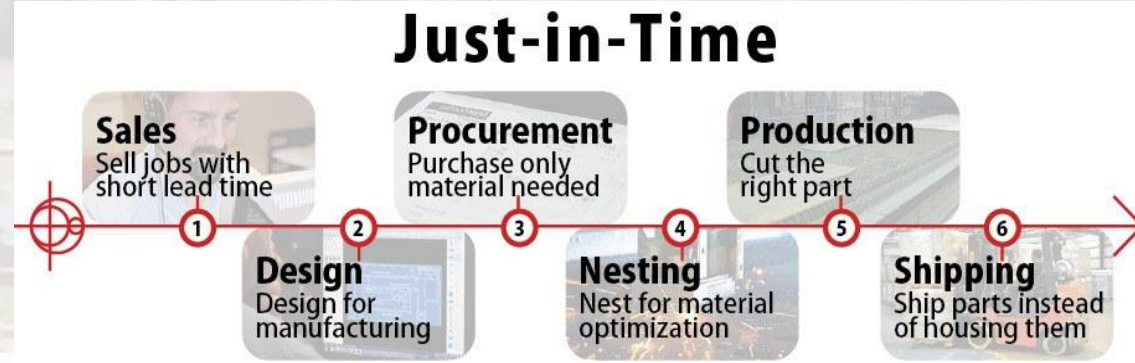
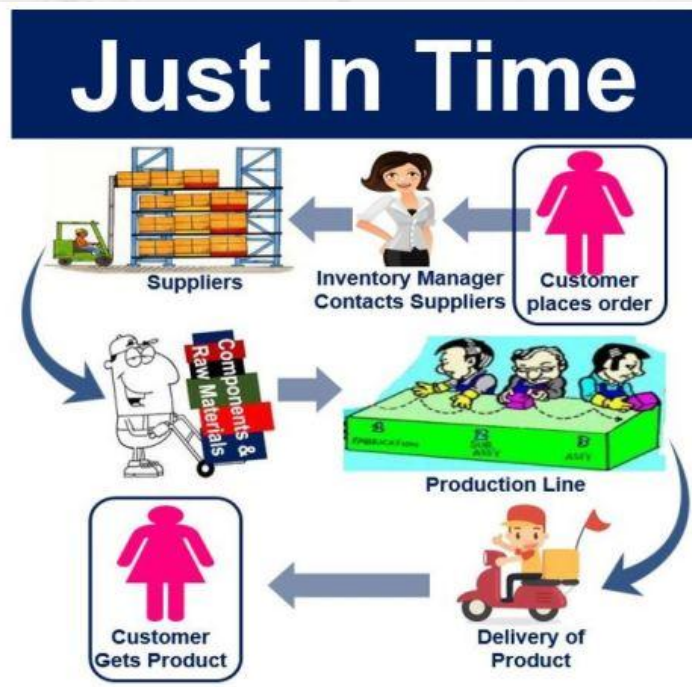
(AN AUTONOMOUS INSTITUTION)



Department of Mechanical Engineering

19MEB301-CADA

Just In Time Production



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Just-in-time Production Systems



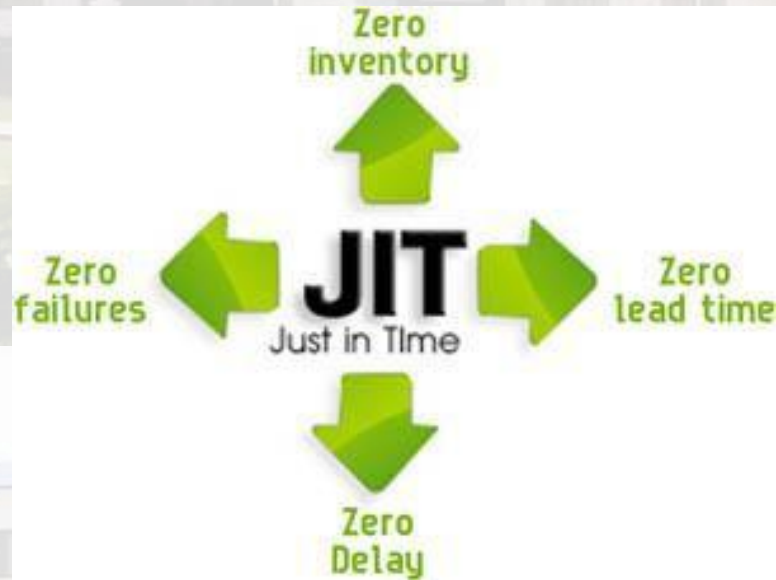
- *Just-in-time* (JIT) production systems were developed in Japan to minimize inventories, especially WIP and other types of inventory are seen by the Japanese as waste that should be minimized or eliminated.
- The *ideal just-in-time production system* produces and delivers exactly the required number of each component to the downstream operation in the manufacturing sequence just at the time when that component is needed. Each component is delivered "just in time."
- This delivery discipline minimizes WIP and manufacturing lead time as well as the space and money invested in WIP.
- The JIT discipline can be applied not only to production operations but to supplier delivery operations as well



Just-in-time Production Systems (Cont..)



- JIT is based on a **pull system** of production control, in which the order to make and deliver parts at each workstation in the, production sequence comes from the downstream station that uses those parts.
- When the supply of parts at a given workstation is about to be exhausted. that station orders the upstream station to replenish the supply. Only on receipt of this order is the upstream station authorized to produce the needed parts.

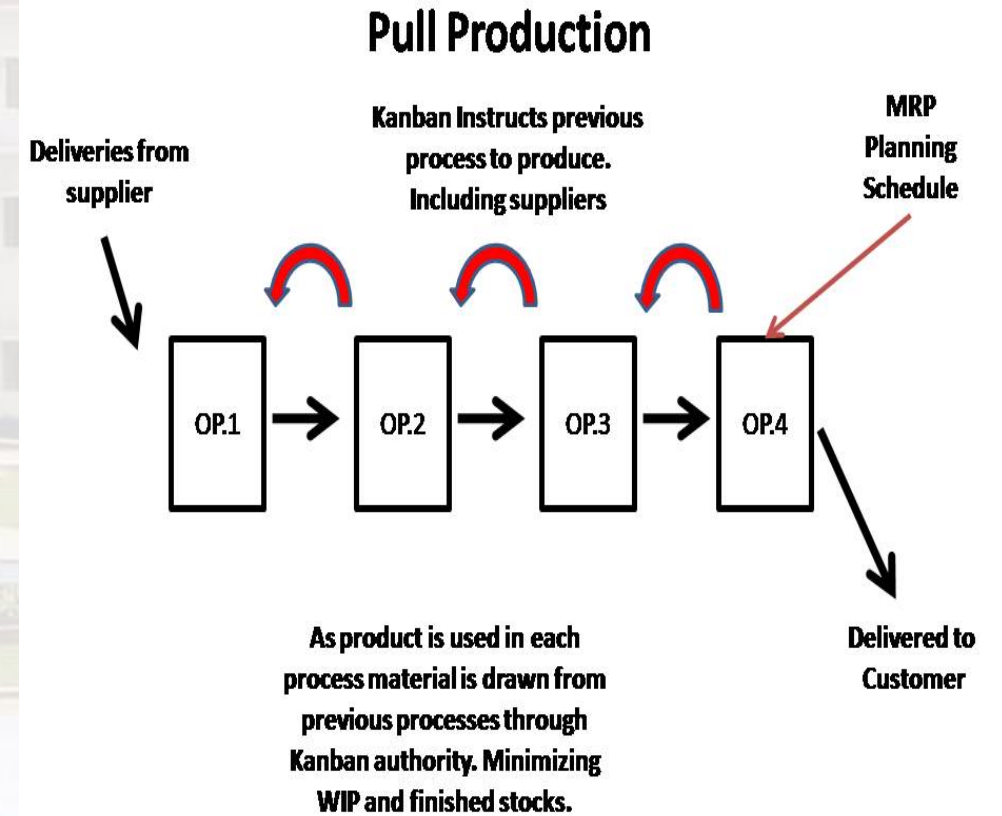


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Pull Systems

- Pull system is repeated at each workstation throughout the plant, it has the effect of pulling parts through the production system.
- By comparison, in a **push system** of production control, parts at each workstation are produced irrespective of the immediate need for the parts at its respective downstream station.
- In effect, this production discipline pushes parts through the plant. The risk in a push system is that more work gets scheduled in the factory than it can handle, resulting in large queues of parts in front of machines.

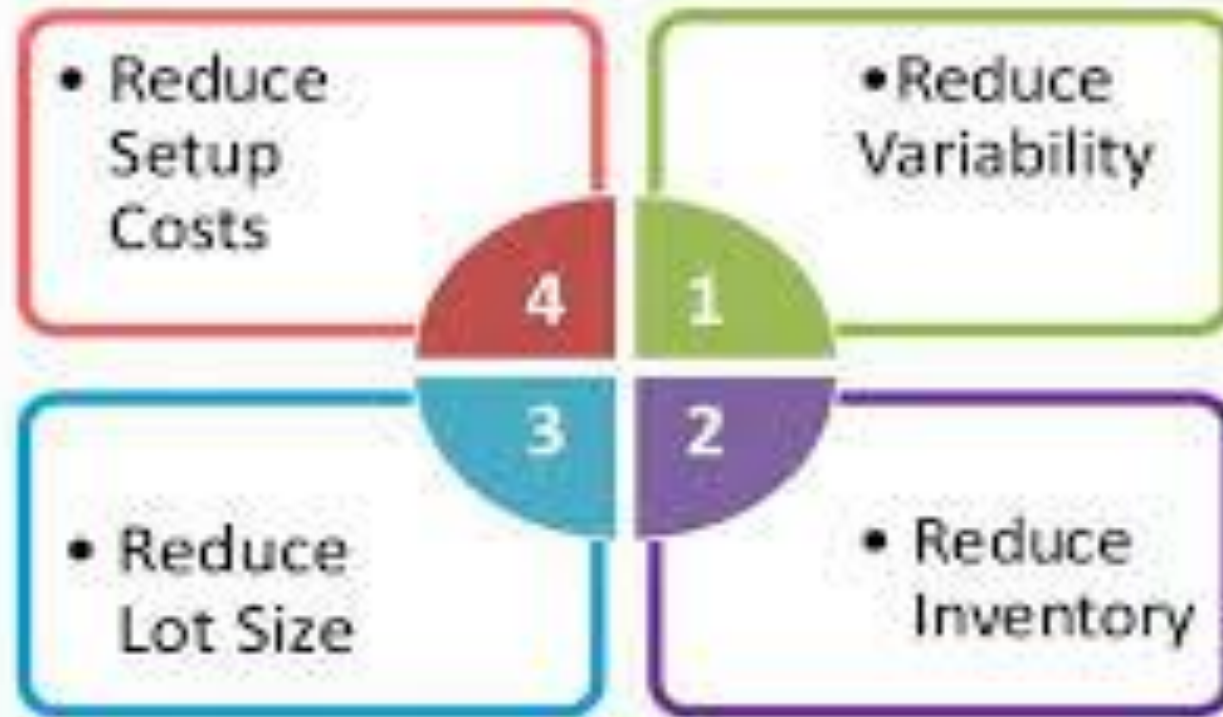


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JIT Inventory

- JIT Inventory Tactics
- Four tactics

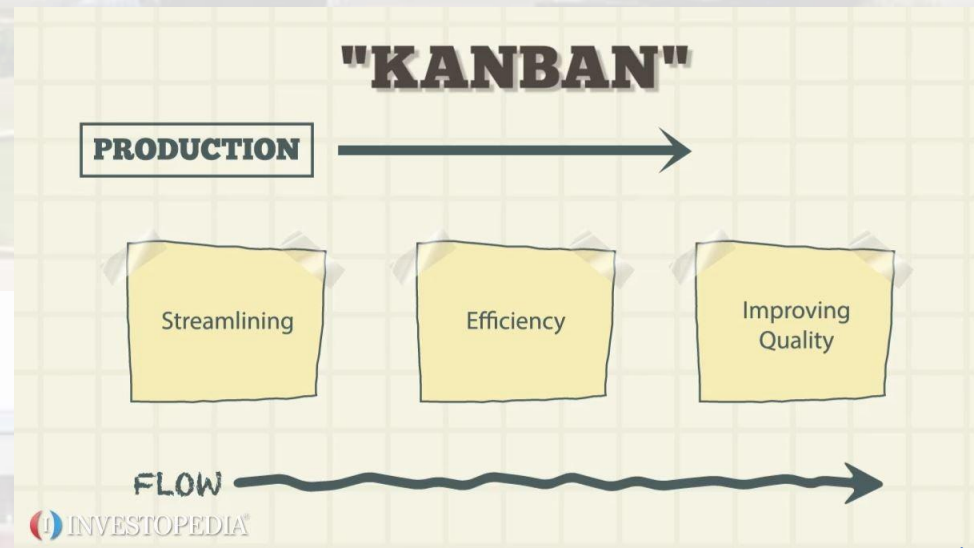


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Kanban

- One way to implement a pull system is to use kanbans, The word *kanban* (pronounced kahn-bahn) means "card" in Japanese, The *Kanban system* of production control, developed and made famous by Toyota, the Japanese automobile company, is based on the use of cards that authorize
 - (1) parts production and
 - (2) parts delivery in the plant.

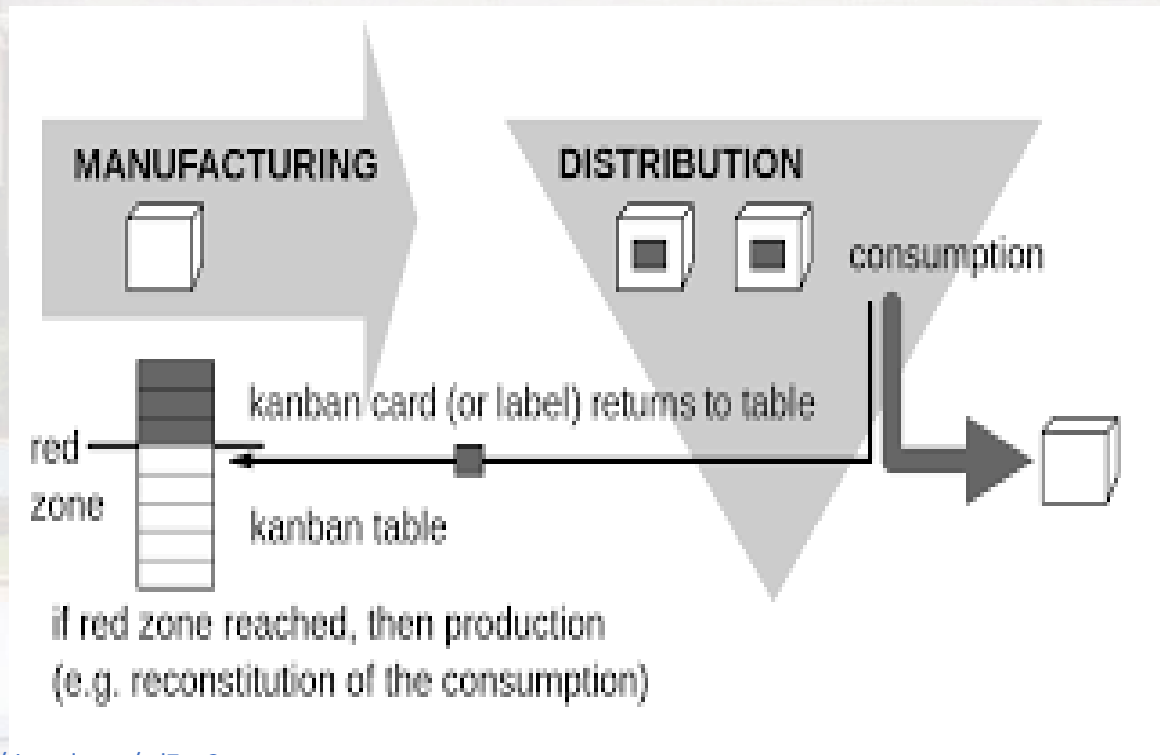


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Types of Kanban

- A *production kanban* (P-kanban) authorizes the upstream station to produce a batch of parts. As they are produced, the parts are placed in containers, so the batch quantity is just sufficient to fill the container. Production of more than this quantity of parts is not allowed in the kanban system.
- A *transport kanban* (T-kanban) authorizes transport of the container of parts to the downstream station.



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THANK YOU

Assessment

<https://create.kahoot.it/share/quiz-on-csg/5929c3cf-6a07-427d-ad01-23cc06ac1b38>