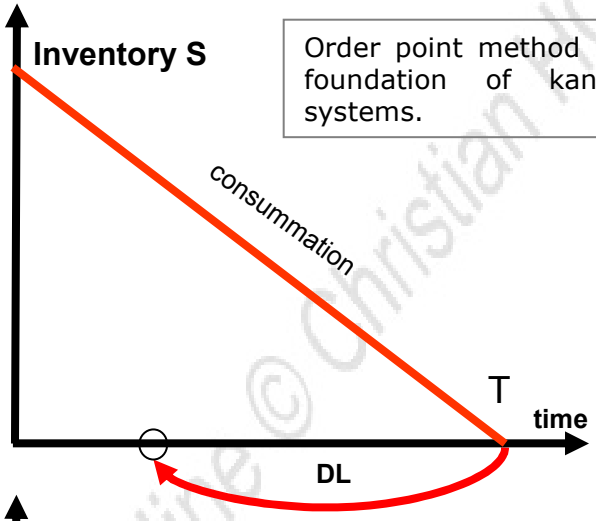
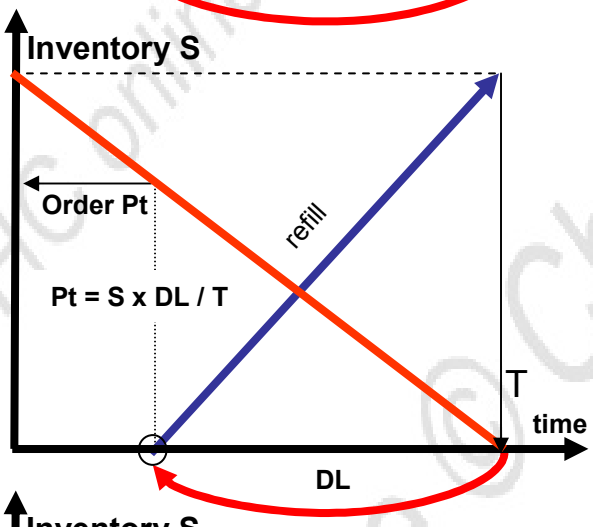
Kanban Basics
Order point



Order point method is a foundation of kanban systems.

A workstation consumes regularly in time parts or material from his inventory, set to the quantity **S**. To prevent stoppage, a new supply of **S** must occur at latest at **T**, at the very moment the last unit is drown out of inventory. To deliver just in time, the supplier must anticipate his refill in a time span equal to the delivery time **DL**.

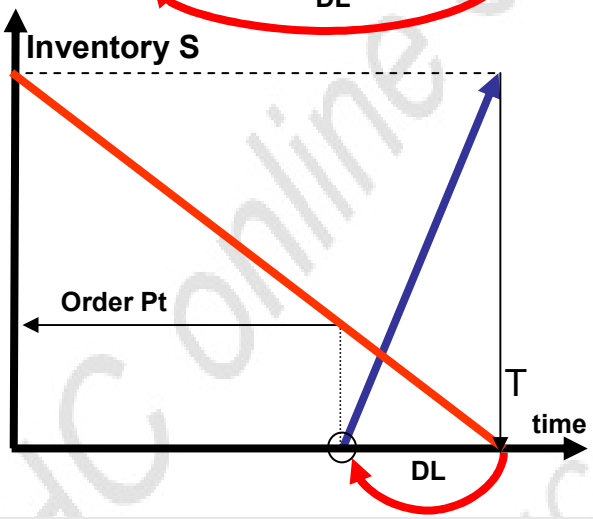


The delivery time **DL** must encompass all accumulated delays of all the necessary operations to refill the inventory:

- Put the order,
- Order taking at supplier's,
- Processing the batch (fabrication, preparation..)
- Delivery of new batch,
- Etc.

In a just in time delivery, **DL** allows supplier to make or prepare the required quantity (**blue line**).

The projection of the moment **T-DL**, which triggers the supply, onto the inventory quantity axis, is the **order point** (in units).



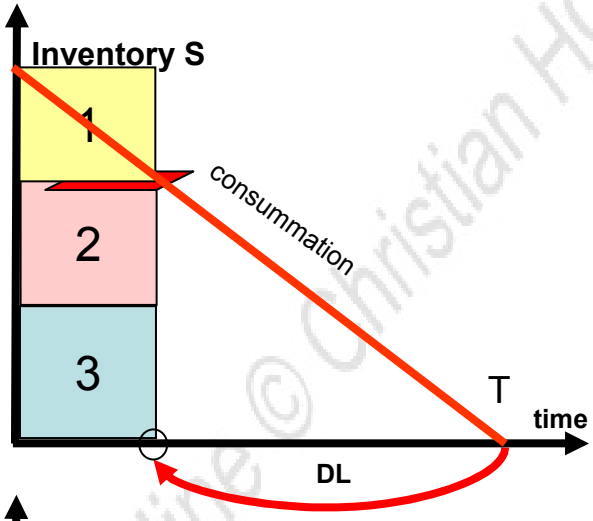
The shorter **DL**, compared to consumption time **T**, the lower the order point and the less the supplier will be asked to refill by this consumer.

This allows supplier to serve more than one customer as long as deliveries / consumption combinations remain manageable.

Condition of feasibility:

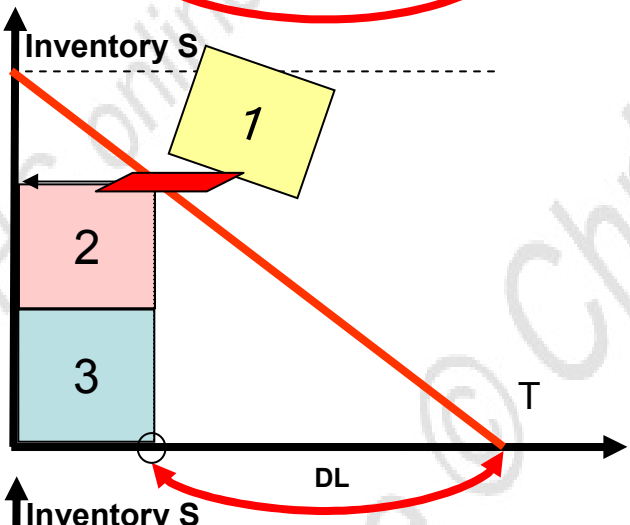
$$\sum DL < \sum T$$

Order point label

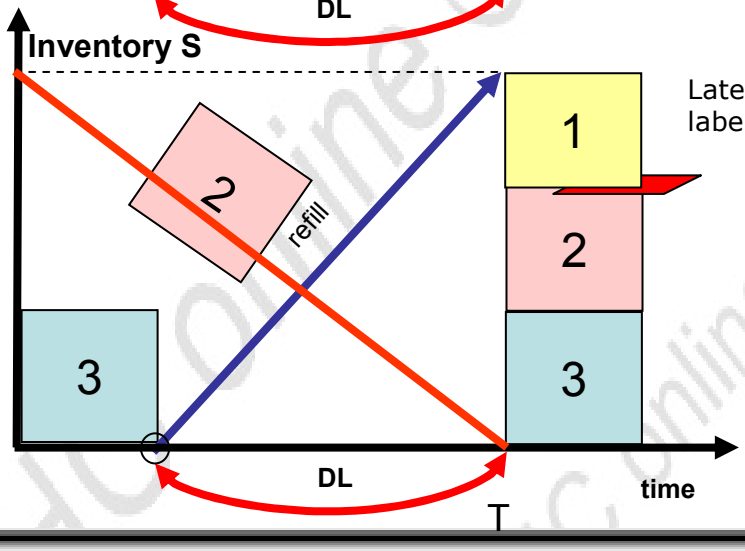


Let's assume Inventory **S** is delivered in three bins 1, 2 3. The consumption will empty regularly bin 1, than bin 2 and finally bin 3.
Let's assume a red label is set under bin 1, with the rule:

"*When removing empty bin 1, uncovering the red label, bring this label to warehouse to get a new batch of three bins delivered, and meanwhile, use the content of bin 2 and 3.*"



The red label is placed at the "order point" level, with the advantage that all calculations having been done, user follows a simple rule.



Latest at T, a new batch of 3 bins and a red label are delivered.

Author, **Christian HOHMANN**, is manager and consultant in an international consulting firm.