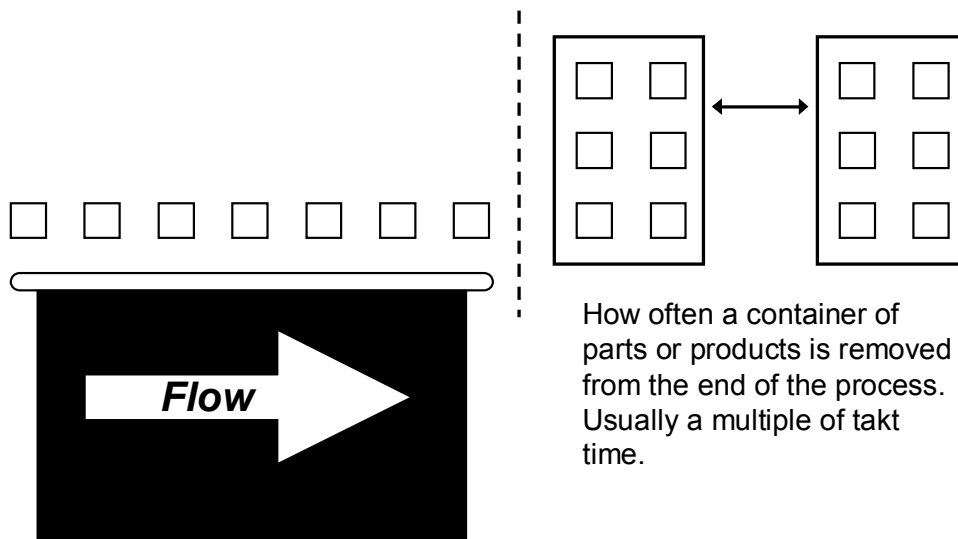




LEAN: USING PITCH TO CUT UP TIME TO SMOOTH THE WORKLOAD AND ACCELERATE THE FLOW

Among the 4 Lean intervals used by Toyota to regulate the consumption of our most precious resource, time, pitch appears to be the modest one. Usually a multiple of takt time, pitch defines, among other things, the schedule of deliveries and pickups by the automatic wire-guided vehicles at work stations.

Definition of Pitch



***In this example, if takt is 8 minutes,
pitch will be 48 minutes.***

Drawing inspired by Lean Enterprise Institute, www.lean.org

However, pitch does much more than that, because it cuts up time into small equal slices in which the work must fit, without running over. Pitch turns the old Kanban boards into dynamic time managers called Heijunka boards (the term means smoothing in Japanese). Whereas Kanban boards simply show the cards (signals) sent back by the client, the Heijunka board is divided into columns or slices of time equal to the pitch interval, with the rows representing the production resource to be used:



At the ESCO Company in Portland, Oregon, a manufacturer of earth-drilling tools, the above Heijunka box has columns across the top representing the pitch of 35 minutes. Jobs totalling 35 minutes are placed in the slots in the row of the machine they run on. If the job is more than 35 minutes, it is split up in portions able to be completed in the pitch interval of 35 minutes.

Pitch applies to other work as well as to production. At Xomed, a maker of medical equipment, withdrawals from the finished-goods stockroom are regulated in the same way.

In the stockroom, a Heijunka box indicates the products to be withdrawn to serve customer orders. Eight order lines can be served in a pitch interval of 15 minutes. A customer order for 14 lines will be spread over two pitch intervals, the second interval being filled by an order with two lines, for example, which will give a total of 16 lines for the two intervals.

In a Lean implementation, pitch and the Heijunka box come after obtaining the Voice of the Customer and mapping the value stream. They nonetheless play an essential role in regulating product flows.