Efrat's Nuggets

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Efrat's nugget -1: Evergreen elephant:
(MTA; Production)

Sometimes it is required to increase the buffer target by 1/3 – this means the floor gets a very large production order (i.e. an elephant). For as long as this order stays green, we have no problem: the yellow and red orders in the pipe by-pass it, while our elephant patiently waits. But what will happen as time passes, and our elephant turns yellow? It is not very patient anymore: the minute the floor started processing this large yellow order, all other (relatively urgent) yellow orders behind it in the pipe line will have to wait for this massive bulk to be finished. Only when enough time has passed and the waiting orders turn red, they will get priority and by-pass the elephant. This yellow elephant actually turned into a red-orders generator: it's likely to make other yellow orders wait long enough till they turn red. Needless to describe the effect of such an elephant turning red: this might lead to peaks of reds and blacks.

The situation of orders for the same SKU as the elephant's is even worse: work orders that were triggered by consumption that occurred after the buffer enlargement will, by definition, have a lower priority than that of the elephant. That means that these, relatively small orders will stay stuck behind the elephant leading to two bad ramifications. The first is that due to the longer lead time of the elephant relative to the lead time of daily consumption orders, the inventory in the buffer is likely to decline and soon the buffer will be again in red (or even black). The other bad ramification is that as a result, our elephant turns red unnecessarily.

In solving the exposure of a red situation in the buffer by raising the buffer target we, in fact, escalated the exposure for the short term and created a disruption for other SKUs. The solution is very simple – since we don't want this elephant to take priority over the other orders, we just need to keep its priority constantly low: every buffer enlargement order will be constantly green by definition, turning it to an evergreen elephant.