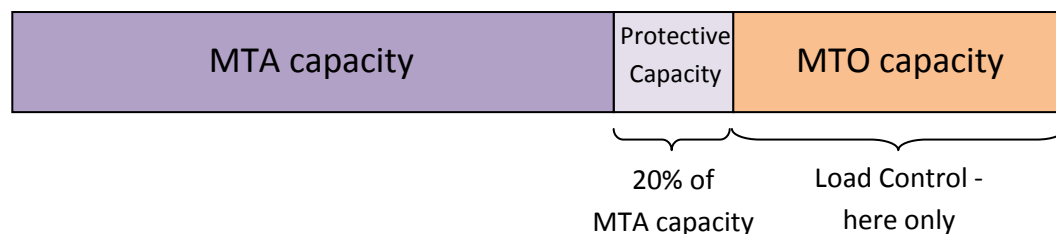# Efrat's Nuggets

By: Eliyahu M. Goldratt and Efrat Tal

Efrat's nugget -10: MTA+MTO Mixed environment:

In many companies,, some SKUs are consumed on a regular basis, whether by one or multiple clients, while other SKUs have a sporadic consumption pattern, either because the demand is rare, or because the SKU is customized for a particular order of the client. In these environments, regular consumption should be supplied immediately from stock (MTA), while sporadically consumed SKUs (as well as exceptionally big orders of regular SKUs[1]) should be made only to clients' orders (MTO); in other words, they should operate as a partly MTA, partly MTO environment.

The mechanisms to control both the MTA and the MTO in a mixed environment are the same mechanisms used in an environment of pure MTA or pure MTO. The only difference is that when using load control for providing promised due-dates and for determining the time to release the material for MTO, we regard only the MTO production segment instead of taking into consideration the total capacity and load. More explicitly, the way to allocate the capacity in such mixed environments is as follows: first assign capacity for MTA based on the current coverage; then add 20% protective capacity (Note: The needed protective capacity is not 20% of the total capacity, but only 20% of the capacity required by MTA). The capacity remains is allocated for MTO.

MTA capacity	Protective Capacity	MTO capacity
	20% of MTA capacity	Load Control - here only

Some companies already operate in two parallel modes of operation: producing to orders on the one hand, while producing to stock (MTS) on the other. But this is not always the case, for some companies produce only to orders, even when a considerable portion of their demand is for SKUs that are consumed on a regular basis. Of course, these companies should be turned into combined MTO+MTA mode

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[1] See "Efrat's nugget 2: Stray elephant".

of operation, but such a conversion is a huge paradigm shift for them. It is better to make the transition in two steps - first, implement the solution for MTO for the entire company, including the R(RR) offering, and only when "the clock" is in place and the operation is working properly, convert the relevant section into MTA (including IT offering or VMI offering).

* Note: In cases when the operation is almost totally MTA or MTO (90% or more), there is no justification for investing time and efforts in setting a combined MTA+MTO mode of operation; the benefits of implementing two different modes of operation is very small compared to the distraction that would impair the full capitalization of the main mode.