

# No growth? Squeeze the lemon!

Dr. Yvo Saanen, TBA b.v., Delft, The Netherlands

It appears that everything is coming to a standstill due to the economic panic all around. The reality of the here and now is a drop in container handling volume to levels of 2006/2007. Most terminals will end 2008 still at par with 2007 as the first nine months showed steady growth. However, the dramatic drop since October has undone this increase. Thus, today's reality has changed, and this downward trend is likely to continue for at least the coming year or two. What shall we do?

## Doing more with less

In the training session TBA give to various customers, we preach the mantra "doing more with less" or "squeezing the lemon". Not only in times where cost cutting is key, but also as common practice. However, many terminals have been so overwhelmed with volume increases over the last decade, that the focus has been on accommodating growth rather than streamlining operations. As greater volume typically outweighs (financially) the benefit of cost cutting, i.e. more volume contributes more to the net profit than focussing on efficiency – due to the significant margins in terminal operations – we have become sloppy, in the sense that there is waste, much waste in terminal operations. Now it becomes of utmost importance to keep the result above water level, we have to see where we can save, and improve the balance between performance (throughput, berth productivity, quay crane productivity) and operational cost. Also, lower volumes mean that the yard is less occupied, providing room for an increase in equipment productivity: less shuffling leads to a higher productivity of equipment, at least if we also adjust deployment to proper levels. This, however, can result in conflicts with the labour unions, not willing to reduce resource utilisation.

So "doing more with less" requires different thinking than just expansion, trying (desperately in some cases) to accommodate the volume.

In past times TBA has worked on several of these types of projects, getting the terminals to produce a better balance between their customer service and their operational expenditures, analysing resource deployment, yard strategies, layouts, operational procedures, etc. These projects typically contain quite some (time consuming) change management, as change is necessary to make the improvements. However, the results so far have been very promising. Increased capacity on same footprint, lower driving distances, less equipment waste, less unproductive moves, and so on. Not uncommon are cost reductions (without impact on service levels) of 10-20 per cent of operational expenditure. We are talking big money; enough to bring operations back into the black.

## Productive and systematic

So how does one tackle this lemon squeeze in a productive, systematic way? If you delve into the various departments of a container terminal (e.g. operations, maintenance & engineering, marketing, IT, human resource management, terminal management), you will typically find very different opinions about what is wrong, and what can be improved. Here we have to deal with perceptions and coloured opinions, which should be transformed into root causes of terminal inefficiency. Only then, when we have done a proper diagnosis, can we, and should, make the step towards the solutions. And not just any solutions, but ones that actually solve the true problems, not counteract symptoms of the problem. It is then that we need to find out which solutions are actually worthwhile to implement. By means of categorising the solutions, after proper

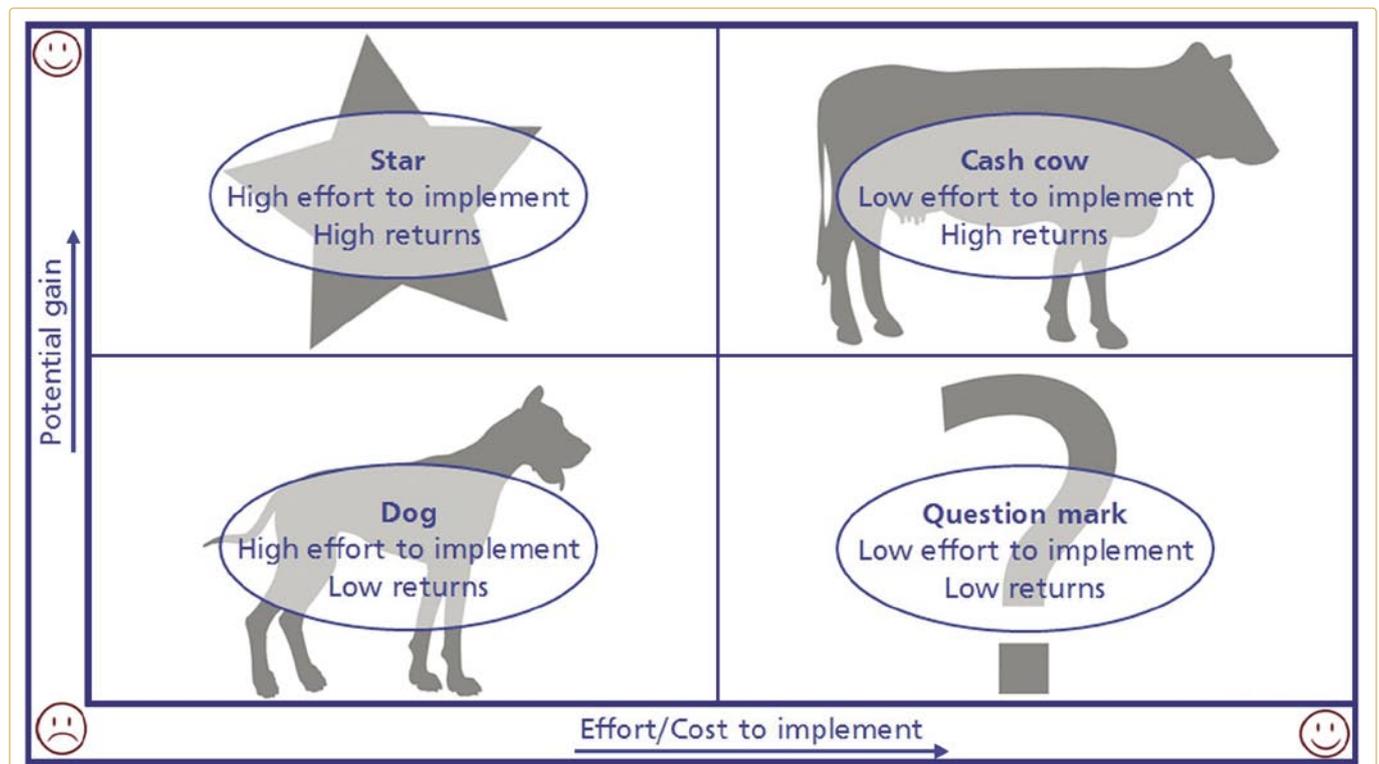


Figure 1. TBA's improvement matrix (free after the BCG matrix).

Copyright: TBA.



While terminals experience slowdowns, operators should use this time to revisit their own processes, and see whether they can be better prepared for the future.

evaluation of course, we come to a priority list; one that can be executed step by step, starting with the ‘cash cows’, followed by the ‘stars’, and possibly also by the ‘question marks’ (see Figure 1). The ‘dogs’ we should not burn our fingers on.

When we have determined which solutions are worthwhile to implement, we should act, carefully, with a dedicated team, and whilst measuring before and after. This is to ensure that we are accomplishing our goals, and can steer when necessary. We have to keep in mind that change is not easy, but if we do not persist, we have a problem in the long term. Therefore, support from terminal management is essential. Sometimes, unpleasant measures must be taken, and there are always reasons why not to take them. An external group that performs the analysis has the advantages of fresh eyes, no bindings with the staff, but with the experience of (preferably many) other terminals.

### Reliable numbers

The way we tackle the improvement process, and trying to convince the management and the other departments, is by using reliable numbers. This highly quantitative approach (using detailed simulation, replaying four to six weeks of real operation, with an accuracy of beyond 95 per cent), leads to the ability to objectively assess the contribution of an improvement measure. Instead of perceptions, opinions, strong opinions, beliefs, gut feelings, pessimism (or optimism for that matter), we have comparisons

of the contribution to performance and cost of every single improvement measure, or combinations of them. Although this approach can be time-consuming (typically we spend 6-12 months on a process like this), the results are solid, and there is afterwards no time lost on working on measures that have no contribution. Besides, the things that are clear from the beginning (the so-called low hanging fruit), can be solved immediately, but in most self-respecting terminals, this waste is merely gone, or still there because of other – more difficultly solvable reasons.

What’s the premise of all this? Well, I’d say on average:

- More volume (10-15 per cent) without additional investments, even when the yard is considered “full”
- Less equipment deployment (10-25 per cent) without lesser “performance” or service levels
- Higher performance or service levels (5-10 per cent) without additional equipment

So even though terminals are not so busy these days, there is still enough to do. We should revisit our own processes, and see whether we can be better prepared for the future. And the future will bring – no doubt from my side – more volume. The million-dollar question is of course when? Well, let’s tackle what we can tackle and be prepared, the growth will come by itself.

Squeezing the lemon? Yes, but please analyse, quantify and then decide!

#### ABOUT THE AUTHOR AND COMPANY



**Yvo A. Saanen** (MSc in Systems Engineering, PhD on the design and simulation of robotised container terminals, both Delft University of Technology) is Managing Director and Founder (1996) of TBA, a leading simulation consultancy company in The Netherlands. He heads the department that supports ports and terminal operators all over the world in their design process of container terminals by means of simulation. During the last 12 years, he has carried out over 50 large terminal design projects, ranging from master planning, process improvement, terminal extensions and transitions, redesign of handling systems, to design of green-field terminals. Examples are APMT’s semi-automated terminal in Portsmouth, and the new Euromax terminal in Rotterdam. Aside from this, Yvo Saanen is a lecturer at Delft University of Technology, Lloyd’s Maritime Academy and the institute of Maritime Economics and Logistics (Erasmus University Rotterdam), teaching simulation and logistics. In various bodies, he lectures about terminal design by means of simulation.

#### ENQUIRIES

TBA b.v.  
Karrepad 2a  
2623AP Delft  
The Netherlands

Tel: +31 (0) 15 380 5775  
Email: yvo.saanen@tba.nl  
Web: www.tba.nl