

Replacing an Asset

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Every asset experiences this once in a lifetime: end of life. To the asset manager the beautiful task of replacing the asset. So you grab the phone to call the supplier and you order a new one....not. The asset that you operate is not manufactured anymore by the time it has worn out. Parts can be ordered, but replacing an asset by ordering all parts and then assemble the assets oneself can be very costly. This means a new asset has to be selected. That is the start of a process of establishing functional requirements, preselecting of potential suppliers, starting the tender, selecting the asset and finally the delivery of the new asset. If this is carried out according to the asset management principles, the selection will be based on the total cost of ownership of the asset. This requires information on purchase prices, maintenance costs and expected life, which are combined in a decision model to calculate the TCO. This is a very interesting topic, but we will address that another time. This column is about establishing the functional requirements, because that is not always as easy as it seems.

Let us begin with the simplest case: the supplier still exists and still produces similar products. Take a Volkswagen Golf for example: that model has been developing since its introduction in the 1970s, but in terms of functionality the current version is highly compatible with the original. The asset then can be specified with something like: an asset with the same capabilities as model 123456 and compatible in size. The functional specification is then explicit. The manufacturer knows the function of the old asset and should be able to propose a replacing asset. Though in case of the Golf, you would probably end up with a Polo, but what's in a name?

It becomes more difficult if the supplier does not produce a comparable product anymore. To stay with the example of cars, try to find a replacement for the good old 2CV. That car was designed for the French countryside, with as a functional requirement that it would bring a farmer with a basket full of eggs to the market on unpaved French countryside roads in any weather without breaking an egg. This is the explanation for the incredibly weak suspension, but it had its purpose, as was the case with the narrow and light build, a roof that could be folded and the opportunity to start the engine by hand (with a hand crank!). Not to mention the fact that the car could be repaired with a hammer and a screwdriver. That kind of car is not produced anymore. Suspension is generally rock solid (thanks to the Top Gear idiots like journalists who only care about going through corners very fast), and all electronics, luxury and safety precautions add so much weight that a bigger engine is needed, adding more weight by itself. This leaves any vehicle without any chance in the mud, unless it has four wheel drive of course, but that adds weight which requires a bigger engine and so on.

If the 2CV is to be replaced you really have to think about the functionality that is important. If it is about some basic transportation, you could think of a small car (C1, Alto or Up) or perhaps a budget line like Dacia. If the vehicle is to be used in the country side, you could opt for a 4Wd, though they all tend towards the luxury SUV. And if you really put some effort in, you may even find a combination: the Fiat Panda 4 by 4. But if that has the soft suspension of the 2CV?

Replacement can become dramatic if the functionality is not available on the market anymore. This can happen if the functional requirements are (or have been) defined too narrow. An infamous example was the air traffic control system in Curacao on 29 September 2005¹. In the control tower, when guiding planes the essential information on a plane is printed out and put on some planning board. On this unlucky day, the printer failed and this operation was not longer possible. But the interface between the computer and the printer was that specific that the computer could only talk to one mark and model of printer, which went out of production a long time ago. In the end, a replacement was found (on Ebay or something), but until it arrived all air traffic had been down. A typical example of over specification removing all flexibility in replacing the asset. However,, one could also state that even though the interface had been the state of the technology back then (about 25 years ago!), but that is was by no means the current state of technology. It should have been updated much earlier. But purely from the functionality viewpoint there was no need to replace the asset as it still functioned. Adding a risk

¹ Zie NRC Handelsblad 29-9-2005, sectie economie, pagina 15

perspective it might have been wiser to have some strategic spares available, as it would take quite a while to find them if the asset would fail, and replace the asset if there were no more spares available².

This brings me to the reason why this column is about replacing assets. As any modern office clerk I own a smartphone which allows the user not only to call, but supports email, calendar and internet access. Besides, it has a camera onboard and a GPS. Technology in the smartphone area is developing very fast. The cutting edge of 2 years ago is now hopelessly outdated, at least that is what marketing wants you to believe. Nevertheless, a smartphone is a tool that wears. Scratches on the screen, reduced battery power, internal connections. At a certain state it stops functioning properly. I myself noticed some aspects of end of life on my phone. The battery did not last very long anymore, the phone crashed more often, and some functions did not work at all anymore. Time to replace the asset. But then you find out that the functions that are important to me are not part of the smartphones on the market right now. Mail, calendar and telephone (do not forget this!) are within range of every smartphone. But local synchronization between computer and mobile is rare. Everything runs over the cloud nowadays. With a normal data subscription that is not a problem as long as you stay in your own country. But if you are often in foreign countries you would be fined heavily on cross border data use. Local synchronization is then the better (or at least the cost free) option, especially since hotels often only provide one free account for internet access, and then the laptop prevails. A second requirement is a battery that lasts long. In the good old days a phone could last for a week in standby mode, with a smartphone you should be happy to get home on a workday without recharging. And as car kits are not common anymore (hands free calling uses the blue tooth interface) you are constantly on the lookout for charging opportunities. There are phones that last longer, but you really have to put some effort in. And finally operation of the phone. I prefer physical buttons, as it allows the phone to be operated by touch. That is also very rare. But finding a combination of all three requirements is virtually impossible. Considering this, you tend to say goodbye to the whole idea of a smartphone and go back to a dumpphone, preferably with a rotating dial.



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² Determining the optimal level of spares is an interesting topic, which will be addressed later.