

Maintenance induced failues

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Sometimes there are moments that asset management is very close to yourself. Last weekend I tasted the happiness of gardening. You know it, a little lawn mowing, weeding, hoeing, and occasionally even some pruning. This time it was the turn of the hedge. Now a hedge is a strange thing, especially if it is a beech hedge. A beech is, in my opinion at least, a large tree. But for a hedge you put a lot of those closely together, and then you expect the trees to adhere within the borders which are specified for the hedge. That means a pretty solid filling inside straight surfaces. Funnily enough the beaches do not remain within these borders, and the branches grow in all directions. Occasionally, there must be intervened dramatically through a rationalization operation. In other words: pruning.

Pruning a hedge indeed is a strange occupation. With a dangerous device full of electricity and with moving blades you have to try to get a flat and rectangular appearance to an object that consists of many small branches. That will never work if you stand too close, you will only see the individual branches, you can only remotely assess whether it is correct. So that means up the stairs, a little cut, down the stairs, look from a distance to see if you're not making modern art, up the stairs again, do some cutting again, down the stairs, moving the stairs, up the stairs again, and so on. At the same time you should avoid the hedge trimmer prunes a piece of yourself and avoid the power cord getting cut. Pruning yourself now is quite difficult because you have to hold the device with both hands so that the business end directs away from you, but cutting the cord is no problem. That repeatedly happened to me in my career as a hedge trimmer. After a while you know how to do it, and you do larger pieces before you descend the stairs again and check the work. Obviously there will be a time when you become overconfident and you're trying to do a too large portion of the hedge at once. Then you find out that the range of man with hedge trimmer is according to the mathematical principles of a sphere, while the hedge should become a flat or preferably even a rectangular appearance. You can cut a flat surface out of a sphere, but then you suffer somewhat to the maximum sizes. If you do not do this you will always get some spherical shape in the hedge.

Now you can respond to this type of error in two ways. The first is to note that the last attempt to increase efficiency led to a decline in quality. To correct that deficiency in quality more effort must be made than the objective of improving saved. That is clearly a negative business case, and it is best to go back to the final configuration where the desired quality was delivered. In other words, you correct the Dali which is cut in the hedge and in the sequel you cut a smaller piece in hedge at a time. This is the principle of continuous improvement which is of course a central part of asset management.

The second way to respond is to try from the position at once in which it is not possible anyway. So you are going to have to do better. That means you're extending a bit further to tackle the last bit. Only, it may mean that you end up with your own center of gravity outside the support surface of the stairs so you fall over with hedge trimmer and ladder. Of course, it is not purely theoretical that you damage the hedge or cut through the cord. Also, you can fall down unlucky. If you're really unlucky you could injure yourself with the hedge trimmer, although that is virtually impossible with modern protection as has already been said. As long as you're holding it with two hands, the knives stab away from you, and if you release one hand the thing almost immediately stops. Of course it's not nice to be attacked by a stationary hedge trimmer but I assume that everyone still prefers it above fall on a pair of scissors that is in operation.

Speaking about the safety of the device, someone who is looking for opportunities for improvement has long been seen that the protection limits the maximum range when pruning. If you hold the device with one hand your reach is larger than double handed usage. For example, just look at the tennis that is now played at Wimbledon. Spectacular rescues are always done with the racket in one hand. Now the design forces the use of the trimmer two-handed, but as the unsurpassed Mythbusters have demonstrated several times there is no problem in which duct tape is not an adequate solution. By

sticking the protection of the second handle you can operate the device with one hand. That means you add just about an arm's length to the range, which represents a doubling. It implies moving the ladder two times less. So a great idea. Or maybe not?

The presumption is that because there is a kind of law of conservation of hubris:

One every level of skill there comes a time when one tries to go beyond the level of proficiency allows

So if you remove the protection there comes a time when you try to cut something out of reach, so your center of gravity is outside the plane on the stairs and you'll fall over. However the protection is removed from the hedge trimmer, so the chances are not inconceivable that with your body involuntarily comes into contact with the hedge trimmer in full operation. Quite sure serious injury will be the result. A typical example of an efficiency improvement at the expense of a high risk therefore.

If you think about it, and the law of conservation of hubris indeed applies, then it is inevitable that it goes wrong at least once in any process in which one tries to improve. Improving the maintenance process so inevitably leads to maintenance induced failures. As asset management largely comes down to continuous improvement, this means that asset management leads to maintenance induced failures and that was not the intention.

Is there then no solution? Yes, fortunately. The first is simply to calculate what the maximum range is and therefore determine the optimal routine for trimming the hedge. Much more than some basic algebra and geometry is not required. The maintenance of the hedge is then executed strictly according to this routine, and only with a technology change (larger hedge trimmer, someone with longer arms) the optimal routine is reviewed. The second solution is more in line with the ideal of the asset manager we always sketch. Namely do not touch the assets as much as possible and instead lie on the beach. This second option currently is our clear preference. For the hedge we rent a gardener. We'll see you after the holidays again.

Ype Wijnia is partner at AssetResolutions BV, a company he co-founded with John de Croon. In turn, they give their vision on an aspect of asset management in a biweekly column. The columns are published on the website of AssetResolutions, <http://www.assetresolutions.nl/en/column>