Point of View
By Nils J. van der Zijl

LET'S BRING OBSOLESCENCE OUT OF THE SHADOWS

AND TO THE FOREFRONT OF THE ENVIRONMENTAL DEBATE

A Point of View by Nils J. van der Zijl – Director IBM MRO Inventory Optimization Practice EMEA, designed to generate discussion around obsolescence and asset management as well as blockchain technology, and the significant role it can play in helping mankind avoid an environmental tipping point.

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Recently I visited two well-known car manufacturers whose vehicles are exported globally. Its highly likely that many of you reading this have owned one of their models. Their assembly lines and inventory methods are in line with industry standards, however the deeper implication of this mode of operation, ignited my awareness and urgency for corporate responsibility.

For me, the heart of the matter lies in the fact that every car model has a unique production life-cycle, with unique parts and spares for the equipment producing the cars. Once a new model is launched, the old model is no longer manufactured. Often this happens in three to five year cycles. Significantly, each of these cycles start with a design; build; operate; function process, before each model is socialised to the consumer. In this process, the production equipment is optimised for mass production, which results in the stockpile of roughly $10 to $15m in spare machinery parts. These are currently deemed necessary to ensure no down-time or inefficiencies, which could have a potential knock on effect in the quality of the car, or the integrity of the production line.

Your initial thoughts might be that there's not a lot wrong with this system, after all, it gets the job done. However, it's often the case that each of these 'model' production cycles leave 7,000 critical spares, bloating the inventory stores with spare parts. These parts are often worth an average of $9m and, as they are incompatible with the next models being produced, are totally obsolete. Their fate is to sit around for years – wasted and financially written off as depreciating assets. As well as this unwelcome impact on a company's balance sheet and profit margin, the potentially disastrous environmental toll is quantifiable too. The stockpiling of these unmaintained, critical parts, containing potent, toxic chemicals, eventually results in their slow deterioration and absorption into the earth's soil and waterways.

Furthermore, if we think about the figures affecting just a single car manufacturer, with 12 lines and over 50 different vehicle models and each model being assigned its own unique production line, we can imagine a base level. If we were to multiply this level to include the 10 largest car manufacturers in the world, we are now talking about 7,000 spares x 12 lines x 10 car manufacturers; making 840,000 spare parts, with an approximate value of just over $1 billion. This is before we have even begun to extrapolate this out to trucks, busses, trains, planes or even considered looking at other, asset rich sectors and organisations.

The term Obsolescence graphically describes a product in perfect working order but simply no longer useful or wanted, is present in every asset intensive company, regardless of whether it has developed a mature inventory management system, or not. Obsolescence cost is thought to cost $1.5 trillion per annum globally *. A company's balance sheet, where obsolescence can be hidden or written off, can look deceptively healthy; while in reality the company is either burdened with worthless, obsolete inventory, or underperforming due to regular inventory write offs.

The question is what do we need to do to balance the needs of industry and the ecosystems that exist alongside it? In addressing this imbalance, we will begin reversing the potentially catastrophic implications on our planet. More importantly through this collective awareness we will develop a deeper purpose, gain an understanding that this is, the very least we can do in terms of cultivating a symbiotic existence. The future for the Earth, and everything that depends on it for survival, looks bleak unless we find an answer to this catastrophic situation.

To make a difference, we have to start to think differently. As Einstein said, *"We cannot solve our problems with the same thinking we used when we created them".* Looking beyond obsolescence, one of the largest threats to humanity is water pollution; oil spills, plastic waste and toxic chemicals are entering our waterways at incomprehensible rates, damaging our most valuable asset on earth. But, through a slow process of education, enlightenment and proactive campaigns we are becoming more disciplined in our management of water resources. Some Governments, realising that the environmental cost of tourism is beginning to outstrip the financial benefits, have begun to take a proactive stance. New Zealand and the Republic of Palau now asks tourists to sign an eco-pledge, requesting their respect towards the local environment and involving them in being actively invested in a positive environmental outcome to their visit, and Hawaii, Mexico and Aruba have all now banned the use of non-biodegradable sunscreens. But much more needs to be done. The Seychelles has taken a holistic approach by committing to a 'blue-bond' which supports the financing of ocean and marine-based projects to bring about economic growth, whilst supporting its environment. In order to bring about a sustainable difference, we need to work together at every single level, not just as individuals or families but also within the corporate organisms we build and sustain.

In the case of obsolescence, thinking differently means looking at the existing way we do business and coming up with a better alternative. Today's software is more sophisticated than ever and already carries out functions such as segmenting inventory systems, using calculations to hone in on criticality and profitability, then calculating safety stocks down to the SKU. So, what's the future? Demand forecasting, for example, requires a symbiosis of people and systems that have worked in traditionally separate departments - demand planning and inventory management. Open collaboration, both human and technological, is the way forward, pooling expertise and fusing overlapping departmental functions to develop a greater knowledgebase and reduce

waste.   But this methodology doesn't just apply in-house; it needs to spread across industries, bringing a transparency to data sharing and transfer.

In my experience, very few organisations have done enough to reduce obsolescence, mostly because doing so is transformative whilst being disruptive. It's easier to continue with existing systems, whilst maintaining shareholder confidence - why break this cycle? Since such behaviour is becoming socially unacceptable and waste is becoming a modern-day liability. The millennial generation has turned its back on the traditional values of previous generations and embraced a technologically enriched future. Its lack of allegiance to brands and its apathy towards advertising can have disastrous effects on a company's profit margin; added to which it seems undaunted at taking companies to task on what it considers unacceptable corporate behaviour. It is a generation that takes notice when NGOs make waves against targeted corporations. It is a generation that believes in taking care of itself and the environment. this generation, immersed as it is in technology, will be happy to rip up the corporate rule book, if a new, seamlessly integrated system works better for it.

A good look at one of the more significant changes to how both industry and consumers procure modern technology, now preferring SaaS (software as a service) based systems over On-premises ones, provides valuable lessons on how things will evolve in the future. This significant change has led to a revolution, as decisions are taken on needs based, real time, pay-as-you-go situations, rather than pre-buying systems and subsequently wasting part of the investment along the line due to obsolescence, new business models or priority changes. This change towards Cloud based technology is already having a dramatic effect on many areas of the corporate landscape but how can we climb higher and begin to tackle pressing issues such as obsolescence?

Perhaps the first thing industry needs to realise is that the future isn't going to be here tomorrow, it's here already, today! Obsolescence is a worldwide phenomenon, creating substantial pressure on the environment; our growing population's patience with current corporate philosophy towards environmental issues is growing thin, and companies, besieged by dwindling profit margins in a post-recession climate are constantly being challenged to juggle Corporate and Social Responsibility against their balance sheets. Plus, today, there are positive ways companies can respond to these challenges by implementing transparent supply chain technology, using a new breed of data. One of the most significant of these is blockchain, a distributed ledger system which provides a secure and transparent 'communication' that remains consistent across all users. Blockchain is already being adapted for multiple uses across various industries and is set to become the de facto technology to deliver a transformation in the exchange of data worldwide.

However, at individual company level, it will take a tenacious and brave mind set to implement the transformation needed. Even though through digitisation, industry is already cutting lose from making incremental changes and applying broader sweeps to move forward and maintain that precious competitive edge. So, why can't there be uniformity and regulation, forcing supply

chains to conform to standards; providing the asset with the data in the first place and providing an open industry catalogue that allows industrywide interchangeability? What I am proposing is Industrial Symbiotic Mutualism with mutual coexistence and collaboration, fundamentally (and permanently) changing the business landscape to eliminate waste. In my view, we are beyond using Enterprise Resource Planning, Asset Management and Inventory Optimisation systems...what we really need to consider is how we can use blockchain to be the one tool that's going to be able to speak every-one's language, with secure trust and interoperability across clients and industry.

The development of integrative supply chain technology could be just the first step towards wiping out obsolescence. The remarkable strides being made by Additive Manufacturing (3D printing) across many sectors, including construction and engineering has seen some products drastically reduce the number of parts needed to produce them. This has simplified the supply chain and led to a more effective level of maintenance. Case studies outlining the financial, technical and environmental benefits of 3D printing are growing all the time as companies begin to embrace this contemporary technology.

I don't see this point of view as a vehicle for me to simply state my case. The aim is to generate an ongoing discussion around obsolescence and what cohesive strategies can be used to tackle it. As I said in my introduction, my interest was piqued when I began to calculate the cost of obsolescence, not just to business but to the world as a whole. An image of the environmental damage created by obsolescence globally simply staggered me and is the motivation behind this project. Let's come together and invite others to join this growing discussion, to facilitate and support organisations to bring about some real change where it matters, while we still can!

Estimated figures based on known obsolescence in predominantly asset intensive industries.

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