

# INVENTORY MANAGEMENT IN A CHANGING CLIMATE

**Our world is in trouble. Many dither, but our children tell us we must change for their world**

Take public transport; turn off the light; change your habits and behaviours...the environment is changing and there is an inexorable shift in the business climate too.

## Changing what is managed

There are major technology changes happening in part because of the drive to improve utility, safety and comfort. However, many changes are being driven by things like emission standards and the need to respond to climate change.

As reported by Reuters on 4 October, "Denmark, backed by 10 other European Union countries, called for a strategy to phase out diesel and petrol cars, including allowing the ban of sales at member state-level by 2030 to combat climate change."

These sorts of changes will inevitably influence the Car Parc here in Australia – we are not an island unto ourselves.

The changes will be accompanied by the rise of electric and autonomous vehicles and changes in vehicle ownership models and maintenance approaches. This will affect the range of parts being carried and the distribution supply chains, and could even affect the very nature of your business.

There will be a lot of inertia in the Car Parc's evolution, so suppliers of cooling and exhaust systems, engine parts, brakes and many other parts will be affected. Some changes will happen over a 10-20 year timeframe, so there is time to adapt to some changes, unless of course we hit some climate change tipping points.

However, there is an urgency to change and an opportunity to change much faster in certain areas, especially in how inventory is managed.

## Changing how it's managed

You may have heard of a concept called food miles which describes how far food travels between the point where it is grown and the time when it is consumed. In simple terms, the greater the food miles, the further the travel, and the more fuel is used in transport.

In a similar way, you can establish the carbon footprint of parts as they arrive from overseas and are transhipped to the ultimate end users. A part that arrives in bulk via sea freight and is then fitted on a vehicle in the same city as its point of importation will have a far smaller footprint, than one that is transhipped to another state and then popped in an air bag for ultimate delivery.

Clearly these sorts of differences will be reflected in transport costs, however as measures to manage climate change are implemented the costs for supply methods with higher carbon footprints will inevitably be higher.

The changes suggest a review of how you run

your supply chain. There are many variables that you can adjust to ensure you respond in the best possible way.

At the strategic level it is important to look at where your DCs are situated. How far does product travel from its point of importation to its ultimate destination? Should you shift your principal DC to another location? Should you import via more DCs?

With your major suppliers, perhaps it is time to even ask them these questions. They may have had a Melbourne or Adelaide centric strategy in the past, but is that appropriate for the future? How much might fuel costs change in time, especially for different modes and service levels and how might that affect your optimum network? Is it time for some sensitivity analysis to establish the time when you will really have to change?

More tactically however there are several things that should be examined. From a climate response perspective and from simply a common-sense point of view, many of them revolve around reducing the number of emergency stock transfers. Air and express freight costs more, in carbon terms and in dollars and cents. What can be done to reduce emergency stock transfers?

One simple way is to just increase the inventory that is regularly stocked in a branch. Unfortunately the effect on working capital of such a strategy means that crudely throwing inventory at the problem is by no means the smart way to do this.

Usually you will have to increase the range being carried in stock, but that can mean you need to reduce the stock levels for more popular parts in order to create the financial room to accommodate a greater range of slow movers. Inevitably that drives you to smarter inventory management solutions.

A minimum of four and a maximum of six for a popular part, relative to a minimum today of four a maximum of twelve could free up capital and space to hold another half dozen products at a branch. It would mean adopting a different risk posture and streamlining your replenishment processes, but it could substantially reduce your carbon footprint.

In essence, you want to shift emergency stock transfers to more regular standard replenishments. If doing this at each branch is too much of a challenge, then perhaps look at the sorts of strategies we described in the last article which described the use of Support Warehouses.

At the same time, maybe you need to look at the frequency for standard replenishment times for your branches. Weekly is very different to twice a week or daily. Weekly means consolidation but it also means bigger gaps between regular shipments,



which increases the need for emergency stock transfers. Should you opt for faster or slower transport modes? Where is the sweet spot? It is very easy to model different alternatives.

It is also imperative that we use information to keep inventory in the right place at the right time. Telematics and service booking systems for planned maintenance can help give advance warning of when parts might be needed so you can ensure you have what is needed when it is needed. Information used well is a lot cheaper than inventory. You cannot use these sorts of approaches for crash panels because clearly you won't get advance warning of accidents but maybe Vehicle on Road data can help you position stock where it is most needed.

But it is not just systems and processes that might need to change. Behaviours might need to change too. One example to illustrate this point is as follows: take a slow moving part that perhaps sells only a couple of times a year. How often do some of your branch managers, having sold the one part they have in stock, go and emergency order a replacement, rather than wait a few days for the next normal replenishment run?

The probability of needing the part before the next normal replenishment arrives could be one in a hundred. So why have certainty of a significant increase in the carbon footprint and in cost, against a one in hundred need? What is the compelling need for a 100 percent service level when 99 percent can be achieved at a much lower cost and carbon footprint?

Senior managers may also need to look at the remuneration and incentive schemes that drive such behaviours. People might plead customer service but is it at any cost? Is it perhaps time to look at some of the fundamentals and see what is really important? What would our children say?

For further information consult  
[www.horizoninventory.com.au](http://www.horizoninventory.com.au) or  
 email [info@horizoninventory.com.au](mailto:info@horizoninventory.com.au)