

# WHITE PAPER DISCUSSION DOCUMENT

## Neutral reefer asset management: a logical solution to a chronic industry challenge?

Exploring the value and viability  
of independent refrigerated  
container pools

Based on the proceedings of the first Grey Reefer Asset  
Management Round Table | Held in Antwerp, Belgium,  
23 January 2013





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# BACKGROUND

On 23 January 2013, a round table meeting was convened by foodcareplus™ and SeaCube Container Leasing Ltd to gauge initial industry reaction to the concept of establishing a neutral 3rd party asset management platform for the supply of refrigerated containers – also referred to as the “reefer pool” or “grey reefer” concept.

Headquartered in Belgium, foodcareplus is a provider of specialist freight forwarding services for the international movement of perishable foodstuffs.  
[www.foodcareplus.com](http://www.foodcareplus.com)

SeaCube Container Leasing is one of the world's largest container leasing companies, and currently the largest lessor of refrigerated containers. SeaCube is headquartered in the USA and, since January 2013, has been owned by the Ontario Teachers' Pension Plan.  
[www.seacubecontainers.com](http://www.seacubecontainers.com)

Held in Antwerp, Belgium, the Grey Reefer Asset Management Round Table was attended by 24 national representatives of the various interested industry parties across the containerised perishables supply chain, including:

- Reefer container ocean carriers
- Perishable shippers (cargo owners)

- Perishable freight forwarders/logistics providers
- Refrigerated container leasing companies
- Port operators
- Reefer depots
- Cold store operators
- Cargo and marine insurance, including P&I
- Industry consultants
- Media

Based on the preliminary feedback from the meeting, plus additional research and opinion, the intent of this document is to open up the independent reefer pool debate to a wider audience of interested parties on a worldwide basis.

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This document does not constitute professional advice, nor is it an exhaustive summary of the information available on the subject matter to which it refers.

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# 1 | EXECUTIVE OVERVIEW

The need to reposition empty boxes around the world as a result of trade imbalances is widely acknowledged as one of the most complex and chronic problems facing global freight distribution. According to research published in 2012, empty containers accounted for around 10% of existing container assets and 20.5% of global port handling<sup>1</sup>.

More recently, it has been reported that the world's top 30 container shipping lines are estimated to be spending a combined \$16-20 billion per year on repositioning empty containers<sup>2</sup>. Maersk Line – the world's largest container carrier and biggest refrigerated container service provider – reported in early 2012 that it was spending \$1 billion annually to reposition some 4 million empty reefer and dry freight boxes<sup>3</sup>.

## 1.1 REEFER BOX REPOSITIONING & UTILISATION CHALLENGES

For the refrigerated container sector, repositioning challenges are magnified due to the more heavily imbalanced nature of global reefer trade compared with dry cargo flows and seasonal export peak seasons that tie up a great deal of equipment on a relatively narrow range of trade routes during certain months of the year.

Seasonal peaks, preferring high yielding cargo, regional differences and tight capacity make reefer equipment repositioning a huge challenge (Seabury Maritime Cargo Advisory, 2011<sup>4</sup>). Each country and trade lane has its own reefer equipment needs, and these can vary tremendously. For example, Brazil has year-round perishable volumes, while Chile predominantly needs equipment at the end of the fruit season.

The equipment demand gap between peak and slack periods varies enormously across the world, according to Seabury's statistics<sup>4</sup>. Exporting nations with a strong reliance on a few seasonal commodities with identical seasons – such as Chile, Israel, New Zealand and South Africa – can see up

to 80% difference in cargo volumes between peak and slack months. For those with many different export commodities, including Peru, Spain, Vietnam and Germany, the "seasonality gap" is reduced to 50% or less. Those with strong reliance on a few non-seasonal commodities, including Belgium, Philippines, Costa Rica, Ecuador and Brazil, are the most consistent at 30% or less difference between peak and slack months.

Concluding that perishable trades will continue to fluctuate heavily due to underlying seasonal fundamentals, volume uncertainty due to crop failure etc. and different regional priorities, Seabury observed back in 2011 that "consequently there is a strong risk of inefficient usage of refrigerated container equipment, resulting in an unattractive value proposition for both shipper and carrier."

The "unattractive value proposition" that reefer cargo has become for the container carriers was starkly illustrated last September when Maersk Line announced its plans to impose a universal 30% GRI for reefer cargoes, swiftly followed by similar announcements by the other major reefer container carriers. Maersk Line also confirmed that it would not invest in any new refrigerated container equipment during 2013. Given that the carrier controls an estimated 25% of the 2 million TEU+ global refrigerated container fleet, this was a significant statement.

All of this came at a time when the conventional reefer fleet is at its lowest level ever, representing just 9% of total maritime reefer transport capacity, yet with global reefer trades forecast to increase 4.5% per annum over the next few years (Drewry Shipping Consultants, February 2013<sup>5</sup>).

Thus, the equipment shortages that have become a serious bone of contention between the different parties involved ever since the global crisis of 2008-9 look set to roll on through 2013 and beyond. One possible result of this could be that more produce is diverted to domestic markets, thereby depriving

reefer carriers (container and conventional) of a key cargo base. Finding new solutions to improve the utilisation of the existing refrigerated container fleet - now the overwhelmingly dominant transport mode for world trade in perishables cargo - would therefore seem to be imperative for all involved.

## 1.2 ADDRESSING THE PROBLEMS

The challenge of solving the empty container logistics conundrum has exercised the minds of industry and academia alike over the years, with various studies, proposals and initiatives put forward. More recently in the reefer sector, this includes the non-operating reefer (NOR) concept, where refrigerated containers are used to move non-refrigerated cargo, thereby repositioning the reefer with a paying load (at a reduced rate). This is reported to have yielded some success.

So-called ‘street turns’, ‘virtual container yard’ and ‘match-back’ initiatives have also been introduced directly by carriers and/or freight forwarders, principally in the USA, to match import and export loads without an empty container first having to be delivered back empty to a port or depot.

Another proposed piece of the solution, and the subject of this discussion paper, is the development of neutral ‘non-branded’ equipment pools – the so-called “reefer pool”, or “grey reefer” concept. Given the equipment availability and repositioning issues

that have plagued carriers, shippers and logistics providers for a number of years now, is there an opportunity to introduce a fourth partner – the independent reefer box pool coordinator – into the mix?

It is not anticipated that such a pool coordinator (or coordinators) would replace entirely today’s set-up, where the carrier community acts directly or indirectly (through leasing deals) as the industry’s reefer equipment owner. Rather, it would function as a complementary solution, likely on a trade lane and/or regional basis, to help remediate positioning problems and benefit all parties through better equipment availability and utilisation, reduced empty repositioning moves (and associated costs) and more efficient inland trucking and intermodal operations.

There is no doubt that a neutral reefer pool operation, even more so than other types of equipment pool, will require considerable skill and care in set-up and execution, and that past “grey box” attempts have not generally succeeded. But past failure is not in itself a reliable indicator that the underlying concept itself is flawed, nor that it should not be re-evaluated in light of current circumstances.

Given the extreme and ongoing equipment pressures facing all those involved in international reefer container trade, now may indeed be the time to make the independent reefer pool system work.

1 | Rodrigue, J-P et al. (2012) The Geography of Transport Systems, Hofstra University, Department of Global Studies & Geography, <http://people.hofstra.edu/geotrans>

2 | Van Marle, Gavin (15.11.2012). Carriers could cut significant costs by pooling, says grey box pioneer. The Loadstar <http://theloadstar.co.uk/carriers-could-cut-significant-costs-by-pooling-says-grey-box-pioneer/>

3 | gCaptain editorial (15.03.2012) Filling Shipping’s \$1 Billion Hole – The Logistical Challenge of Empty Shipping Containers. gCaptain <http://gcaptain.com/filling-shippings-billion-hole/>

4 | Slangen, Mathijs (2011). Seabury Maritime Cargo Advisory. Solid yearly growth with monthly extremes – global reefer trade analysis. Cool Logistics Global 2011 conference. <http://www.coollogisticsconference.com>

5 | Damas, Philip (2013). Drewry Shipping Consultants. Reefer Market Overview. TPM2013 conference <http://www.joc.com/event/tpm2013>

## 2 | THE REEFER POOL DEBATE

*The following is based on the dialogue and views expressed by attendees from all sides of the reefer container industry during the January 2013 Grey Reefer Asset Management Round Table.*

Has the window of opportunity for the independent reefer pool now opened? What do the different players along the reefer container supply chain think of the concept? And what are the principal objections and concerns?

These were the key questions posed at the opening of the 1st Grey Reefer Asset Management Round Table in January 2013.

### 2.1 THE CONCEPT AND PRECEDENTS

SeaCube Container Leasing outlined the precedent of marine and domestic chassis pooling in the USA, citing the model developed by TRAC Intermodal. The company currently operates 230,000 chassis across the USA, Mexico and Canada, including carrier-owned equipment placed in cooperative pools. Under the pooling system, TRAC will:

- Supply chassis needs furnished under User Agreements directly with customers
- Manage chassis maintenance through existing vendors
- Manage inventory levels based on hub volume needs and market forecasts
- Store excess chassis off site based on Rules
- Fill chassis shortages based on Rules

Replacing “chassis pool manager” with “reefer pool manager” gives a basic idea of the concept proposed. While the TRAC example is of course confined to a single landmass, it serves to demonstrate that a large cooperative pool of equipment owned by different parties can be successfully managed across multiple port and inland locations. TRAC currently serves 25 coastal and inland ramps.

Lessons may also be learnt from the airfreight sector, where equipment pools are said to be operating without any significant problems. However, there are some significant differences – including the far higher cost of reefer boxes and the fact that air cargo

containers are much more ‘captive’ in the system. However, it may be worth taking a more in-depth look at how the model operates in air cargo.

### 2.2 PROTAGONISTS, PROPONENTS AND PROS

Given the parlous state of the container shipping sector at present and concerns over the near-term outlook – particularly as more tonnage than ever is likely to flood the market this year and likely next, with foreseeable results for rates in general – the protagonists argued that reefer pool concept combines two key strategic advantages:

- A. Separation of dry freight container business from the reefer business
- B. Bridging the gap that exists between reefer cargo and reefer containers

The reefer business, though intrinsically volatile, remains nevertheless far more stable overall and has continued to grow steadily right from the start of the global crisis of 2008 through to today, with further growth forecast in the coming years. The reefer pool solution could enable improved equipment supply and utilisation, thereby supporting ocean carriers to continue growing their reefer business more ‘independently’ alongside dry freight operations.

Today, decisions made within a carrier organisation when it comes to vessel operations are only partly influenced by the reefer department, observed foodcareplus. On most trades, such decisions are principally steered by the dry container business department.

This should not come as a surprise, given that reefer traffic only makes up 5-6% of total global container trade. But it does often leave reefer sales departments battling internally to secure the equipment and slots needed to move cargo, and shippers frustrated. Thus

the question arises: “Why not increase the utilisation of reefer boxes by using ‘other services’?” (i.e. independent pool manager).

Foodcareplus also posed the key question: “Is there any relationship between the ownership of the box and the capability of offering a trustful reefer service?” While there are certainly some aspects that matter, the company queried whether these are so critical that they would justify an average turnround of less than five annual trips. “If we would share that performance with decision-makers of other industries, investing in similar expensive assets, they would think we were nuts.”

The need at the very least to explore this proposed new solution was also argued to be especially important given that the reefer GRI has not been uniformly successful.

While further rate restoration efforts certainly cannot be ruled out, currently the ocean carriers are still facing a situation where on some trades, reefer rates have not moved upwards for several years, despite significant cost increases during that time. Given the poor returns, any initiative to cut container management and hinterland operations costs would therefore seem worthy of serious review.

One of the main ideas behind the reefer pool concept is to “get the container closer to the cargo.” Shippers attending the meeting were uniformly in favour of the concept as a way to address some serious challenges. “This would be a good solution because right now, the containers I need are not available in the right place, or at the right time,” observed one reefer cargo owner.

### 2.3 INTERMODAL OPPORTUNITIES

The potential of reefer pools to improve hinterland intermodal operations by actively matching inbound and outbound cargo loads, versus the preponderance of one-way loads today, was the topic of considerable debate.

With carriers generally experiencing difficulties obtaining backloads for reefers, the question was raised: why not let the professional freight forwarding sector deal more with backloads and thus reduce dead-heading, which could also help the industry improve its intermodal and green credentials overall, not to mention reduced costs?

“The problem today is that reefer equipment is expected back at the port where it was released,” observed foodcareplus. Noting that a recent study on reefer availability showed that equipment is in fact already moving to an increasing number of inland or idle locations, an industry analyst observed: “Grey reefer would be a good concept because it would create more volume in cargo, due to being more flexible, and a pool would facilitate the commercial objectives of the intermodality aspect.”

In response to a query about the challenges of ‘turning’ reefer boxes inland, specialist reefer depot operator Smith-Holland confirmed that this is already happening today. Providing insurance, inspection and documentation is all in order, it is entirely feasible to undertake cleaning and PTI (pre-trip inspection) at an inland depot so that the unit is ready to accept an outbound load.

Smith-Holland voiced its support for reefer pools as a means of driving more volume, which is “very important to keep the inland depot working.” Although, as the industry analyst noted: “Carriers tend to think mainly about the inland depots in terms of the fees they need to pay.”

### 2.4 SPOT MARKET POTENTIAL

The intrinsic volatility of spot market trade is another challenge that an independently operated pool may be able to respond to, stated foodcareplus.

The company noted that traders who buy product directly from the supplier and immediately sell it to another party need ‘last minute’ spot lanes and that forecasting the volume of containers needed at any

given time is extremely difficult. “A pool would facilitate the process of finding a container, due to its flexibility.”

## 2.5 CONCERNS, CHALLENGES AND CONS

Loss of operational and asset control, and being distanced from the customer, were among the principal objections raised by the ocean carriers attending, who were generally either cautious of, or flatly opposed to, the reefer pool concept.

Reefer box availability drives the business today, noted the industry analyst attending, and is used to determine a competitive edge. Traditionally, there has always been more reefer cargo chasing reefer boxes than the other way round. Equipment shortages are therefore “almost part of the business model” adopted by the container carriers.

As long as the container business was performing well (until the crisis hit in 2008), reefer box profitability was generally not really considered to be crucial – although recent statements and actions by Maersk and others indicate that this is no longer the case. Still, the perceived loss of operational and asset control is clearly a difficult proposition for carriers to entertain. Anything that could be seen as lowering their competitive advantage vis-à-vis other carriers will necessarily be treated with great reserve.

Carriers attending remained to be convinced that if a third party (i.e., leasing company) took control of a cooperative reefer container pool, operating costs would in fact become more manageable and transparent - although both sides agreed that this would depend on the charges levied to users.

Concern was also mooted that any reefer pool could effectively become a ‘competitor’ to the equipment offered by the lines themselves and that the pool provider could end up controlling box supply on particular trade lanes. It was additionally noted that the difference between traditional leasing concepts and the pool system could get rather blurred.

In response to carrier questions about how per fees and bookings would work in practice, SeaCube Container Leasing said that this aspect is still a work in progress, but of course pricing must be competitive. And certainly, the system will be heavily IT-driven. “We could set up a member system, where you would log in when you need to make a booking or deliver a container.”

In further answer to one carrier’s observation that this sounds just like a current master lease agreement, foodcareplus noted that the pool would indeed likely be based on the trip hire system already offered by lessors, but with more transparency among the pool users, who would also represent a greater cross-section of the reefer supply chain (i.e. cargo owners, freight forwarders).

## 2.6 M&R MANAGEMENT

Not surprisingly, the practicalities of M&R management and cost allocation were also key areas of discussion. One complicating factor noted by a carrier representative is the current practice for each carrier to supply a different spare parts kit on board vessels for the various reefer equipment types that it operates. He questioned whose spare parts kit would get used and who would get billed in case of a repair at sea.

In reply, the protagonists noted that liability insurance, maintenance responsibility and equipment control are of course key issues that will need to be agreed as the concept takes more detailed shape, this being just a preliminary discussion. Exit strategies for sub-standard reefers from the pool also need to be the subject of further thinking and research. Broadly speaking, however, M&R costs would fall to the owner of that particular pool container. A cargo insurer attending confirmed that from their perspective, ownership of the container is not an issue: “We insure the cargo and that’s it.”

## 2.7 CARRIER-SHIPPER RELATIONS

Another carrier attending stated that “grey reefers” could jeopardise the relationship with the customer, as the carrier could not guarantee a certain reefer type available in the pool. In reply, one of the shippers at

the meeting observed that in practice today, they often do not get the type of equipment they were expecting. “The bookings that we promise are there, but the container type we need is not always there. So why not give the grey reefer concept a go and see if the equipment can be managed any better?” Foodcareplus stressed that the concept is for carriers to keep their regular trades going, while placing under-utilised reefer boxes, or equipment in idle places, into the pool.

## 2.8 TRADE LANE RISKS

The proposed trade lane-based approach to implementing reefer pools is also not devoid of risk, observed an industry analyst. The consultant noted that creating a steady flow is definitely necessary for the success of the initiative. However, “those steady trade lanes are already dealt perfectly with by the carriers themselves. We need to address the more unstable lanes and that is not that simple to start with.”

Foodcareplus noted that a next step will be to set up a feasibility study to identify lanes where return transit times are longer than outbound transit time and see if it is possible to combine outbound and inbound services more efficiently. “A grey reefer could work on a single trip basis and look for the ideal outbound/inbound combination.”

## 2.9 IN SUMMARY

The window of opportunity for the grey reefer concept may indeed have opened. Based on the feedback from the first meeting, shippers, freight forwarders, leasing companies, depots, cold store operators, freight forwarders and leasing sector may all buy into the pool concept. However, it is clear that the need for a truly independent platform will be critical for this to become acceptable to the ocean carriers.

A major port attending neatly summarised the situation: “The volatility of the sector is something that will never go away. We need to ask ourselves if the grey reefer concept is viable, desirable and if we have enough power behind the concept to get it started. If we want to put this thing on the road, we need to identify the requirements that all parties need and make this into a win-win situation.”

“Shipping lines will want to keep their sustainability and a good return on investment. Shippers look at the price, the quality, the service, the sustainability - and we all need to meet each other’s needs. It’s clear that the goal should be a long term basis and we heard solid arguments from both parties at this first meeting today.”

## 3 | NEXT STEPS & FEEDBACK

SeaCube Container Leasing and foodcareplus have now begun working together with Smith-Holland and other interested parties to move the Reefer Pool concept to the next stage of pre-validation. This includes developing the business model proposal and IT platform to support an initial trial on a dedicated trade lane.

Further details will be released during and after the upcoming Cool Logistics Africa conference in Cape Town on 16-18 April. [www.coollogisticsafrica.com](http://www.coollogisticsafrica.com)

Subject to initial feedback, additional validation studies,

market research and fund-raising will follow, with a view to rolling out Reefer Pools across a series of key reefer trade lanes worldwide.

Feedback is warmly welcomed. To submit comments and/or expressions of interest, and to be kept informed of future developments, please contact:

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## 4 | GREY REEFER ROUND TABLE PARTICIPANTS

Organisation participating in the first Grey Reefer Asset Management Round Table:

- Antwerp Port Authority
- C. Meijer
- C. Steinweg
- Cool Logistics Resources
- De Lloyd
- Equinox C&M
- foodcareplus
- Hapag-Lloyd
- LDH Trans
- Navigators Group
- Maersk Line
- MOL
- MSC
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