

# PREVENT & SAVE

## Quick Guide to Pallets and Palletisation

### Introduction

Most companies use pallets whether it's to send out deliveries or to receive raw materials from suppliers. The pallets you use, how you handle those pallets within your operation and how you palletise your products can all have a significant impact on the cost to your business. This guide is designed to provide tips and options to help companies to reduce these costs and is divided into two sections.

- Section 1 Pallets and Waste Prevention
- Section 2 Reusable Pallet Loops

### Section 1 Pallets and Waste Prevention

1. Maximising pallet stacking efficiency – Improved stacking plans increase the profitability of each pallet and can reduce the number of truckloads you send out of your business. It can also reduce the amounts of tertiary packaging you use per pallet (e.g. stretchwrap and corner protection). At Repak, our packaging team would be more than happy to support you in determining options to optimise the stacking patterns of your pallets. If you have a specific query please do not hesitate to email us at [prevention@repak.ie](mailto:prevention@repak.ie).

2. Onwards pallet reuse - Pallets associated with incoming material deliveries are often reused for outgoing finished goods. This can therefore save on the purchase of a new pallet for your finished goods. It is often necessary to ask suppliers to standardise to the same pallet type that you use for your finished goods where feasible in order to allow for the effective operation of this type of system. This avoid numerous pallet types arising from incoming goods deliveries and becoming an issue for your business from a waste management perspective.

3. Returnable pallet loop system – This is where the pallet is only rented and there is no disposal/recycling charge associated with it. In general pallet reuse loop systems work out to be most economical for companies. Examples of the options available in Ireland can be found in section 2 below.



4. Single-use pallets – The use of single use pallets involves the cost of purchasing the pallet and then disposal/recycling costs. This is generally the least desirable option from a waste management point of view however in some cases it may be unavoidable. It is always useful to determine if your suppliers/ customers can reuse pallets or switch to a returnable pallet loop system.

Of course sometimes the critical factor does not permit any choice, for instance:

### **Size and Shape of the Load**

Oversized or irregular shaped loads may require bespoke pallets and often require more than a pallet to support their loads.

#### Pallets for reels

A good example of this is large reels which are often supplied with chocks to keep the load stable. Quite often these chocks are part of the pallet structure which means that they can't be used for other purposes on-site.

In these instances return to vendor is usually the best outcome so the pallets can be reused on future similar deliveries.



### Pallets for Large Slabs of Material

Another example of bespoke pallets in use is where large slabs of material are required to be transported on oversized pallets.



Again, these pallets will be of little use to anyone else so the best scenario is to introduce a re-use system. Of course sometimes the end user may have difficulty in returning the pallets but that might change if a rebate system was introduced whereby a small incentive is used to encourage reuse.

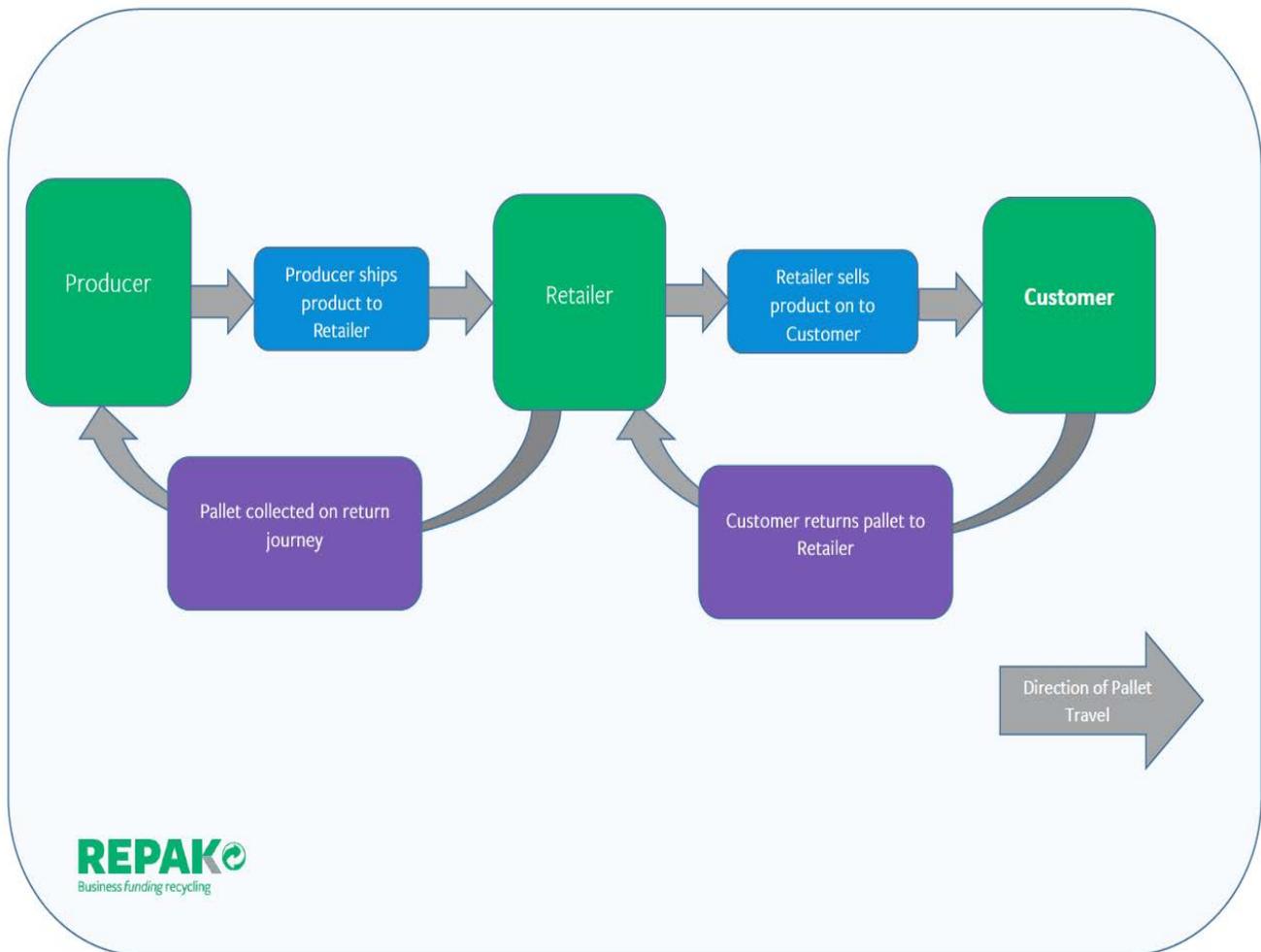
### **Delivery Process**

Whether or not the shipment goes via private delivery (empty return journey likely) or by way of 3rd party contractors (cost involved per each way journey).

### Private Delivery

Typically if goods are transported within Ireland there is a good chance it is by private transport. The producer usually ships the goods via their own vehicle fleet and therefore the return journey is already included in business costs. Thus any packaging, such as pallets, which are returned to the producer will effectively be transported free of charge.

We have seen many instances where this has worked very efficiently including retailers, food producers and beverage companies.



### Third Party Contractors

Unfortunately many shipments overseas make use of third party logistics companies and as a result the producer only needs to pay for the outward journey. In these instances it can be more difficult to initiate returnable packaging loops due to the costs required for the homeward journey.

In these circumstances pallet reuse loops work best. For more information relating to options in this area please click [here](#) (links to Reusable pallet options lower down the page).

### **Stacking Patterns**

The stacking pattern also plays a huge role in reducing packaging. Maximising the allowable height and pallet footprint means the optimal amount of product gets shipped.

Quite often companies neglect this aspect and are under utilising the potential of their packaging as a result. Each additional unit or SKU added to a pallet load leads to extra profit for the business.

There are several computer packages available to help assist in confirming the best stacking pattern including [CAPE Pack](#).

### Height

Quite often pallets are not stacked to their highest allowable point.

It is important to find the limiting factor for height and quite often this may be the dimensions of the container being used to ship the product, the weight of the pallet load and its effect on stability or simply the person loading the pallet might struggle to reach any higher.

The photo on the right shows pizzas being stacked to the maximum height allowable by the container (The space above the red line on the container wall is required for cold air circulation). When these are delivered to the UK the load is split in half by a special grab machine and the top half is placed on a new pallet before being shipped onwards to their eventual destination.



### Weight

Many producers limit the weight of a pallet to one metric tonne. Often this is too conservative for the pallet's strength. A detailed process flow should be carried out to highlight the potential critical points regarding maximum pallet load weight.

20ft containers have a maximum allowable nett weight of 24 tonnes, whereas a 40ft container can accommodate up to 30.5 tonnes. Therefore, depending on the mix of products being shipped it may well be possible to transport pallets that weigh more than one tonne.

## Health and Safety

Health and Safety is an important consideration when palletising, particularly when doing so by hand.

Pallet height may be restricted to 1.7 metres in some cases to avoid repetitive strain injuries to employees however there are options to overcome this hurdle.

a. Spring-loaded platform. Here the pallet sits on a spring loaded platform and as the product is added to the load the pallet sinks lower into the floor. Once the required amount of layers have been placed on the pallet the spring loaded platform can be fully extended and the pallet rises out of the floor, ready to be moved to the next process.



b. Lifting aids. For heavy loads where the max height might be limited to less than one metre a lifting aid can be used to grab the unit to assist the operator. This allows for many more layers to be added and increase load efficiency.



## Section 2 Reusable Pallet Options

A reusable loop system for pallets is one of the quickest & easiest means of reducing your packaging.

A typical pallet weighs approximately 25kg and this can make up a large portion of your packaging cost, as well as a larger portion of your packaging weight. By simply changing to a fully-documented reuse loop system your Company can drastically reduce both costs and weights associated.

Some of the advantages of reusable loop systems are as follows: -

- No capital outlay for one way pallets means reduced operational costs.
- No pallet procurement or disposal programs to manage.
- Meets supply needs during times of seasonal or unexpected spikes as equipment is available on demand.
- Reduced environmental impact with reusable packaging.
- Saves on storage costs by holding less pallet inventory.

The options available to Irish companies are as follows: -

### **Chep**

CHEP is the global leader in pallet and container pooling services serving many of the world's largest companies. CHEP issues, collects, conditions and reissues more than 300 million pallets and containers from a global network of service centers, helping manufacturers and growers transport their products to distributors and retailers. Combining superior technology, decades of experience and an unmatched asset base, CHEP handles pallet and container supply chain logistics for customers in the consumer goods, produce, meat, home improvement, beverage, raw materials, petro-chemical and automotive industries.



### Environmental Sustainability:

CHEP uses timber from tree farms, which are a responsible and sustainable source of timber. The pooling model encourages the repair and reuse of pallets and they recycle broken or damaged components rather than sending them to the landfill. CHEP make every effort to operate their business in an environmentally sustainable manner.

Pooling - the combining and sharing of assets in a common effort - is by definition an environmentally sustainable concept, since asset utilization is maximized. CHEP has pooled pallets and containers since 1958. That's 52 years – and counting – of environmental stewardship.

Based in Finglas, Dublin, Chep pallets are the most commonly used pallet pooling system in Ireland. Please [click here](#) for more information on product options.

## La Palette Rouge (LPR)

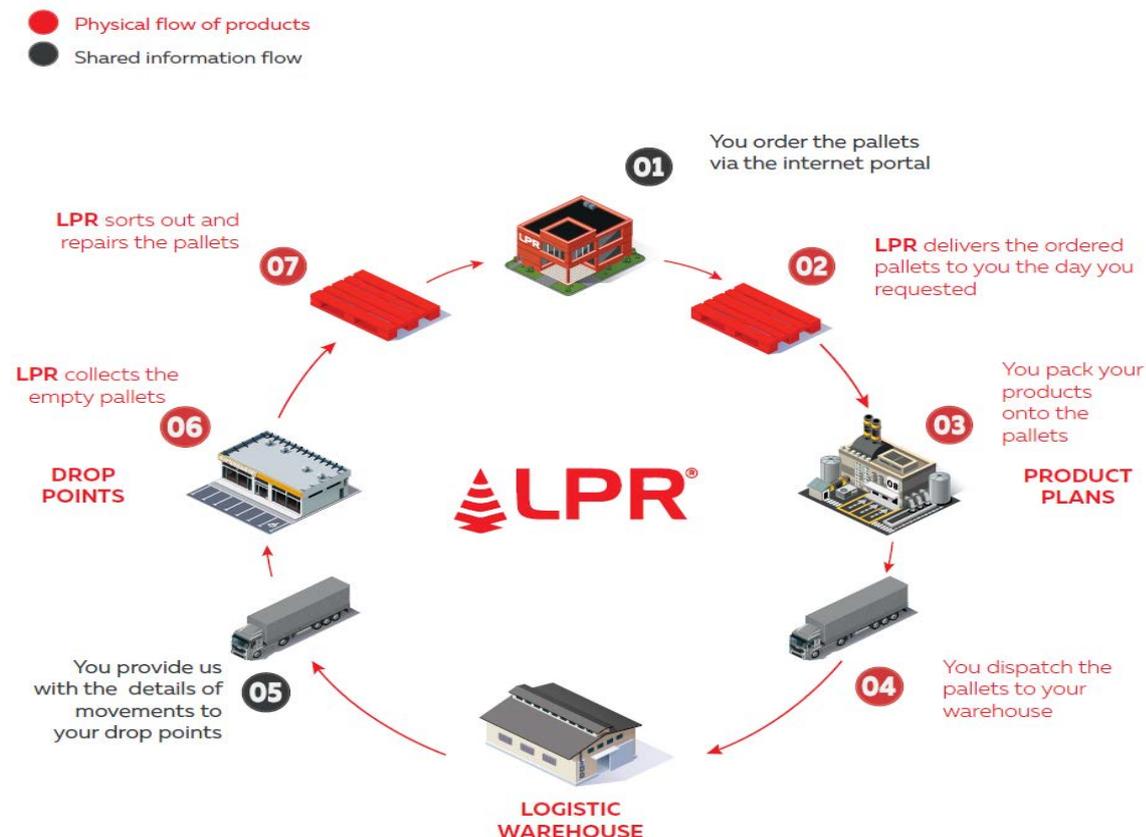
LPR offers a fully outsourced service which ensures that its customers always receive pallets in perfect condition from each of its 104 depots throughout Europe. LPR works with the main stakeholders of the FMCG sector and manages 20,000 drop-off points in 13 countries of Central and Western Europe.

As soon as an order is received, LPR organises delivery of the pallets to the customer. Since they have been inspected beforehand at LPR depots, they can be used immediately in all automated production and picking systems.

Using the dispatching information sent in by its customers, LPR tracks pallet flows and organizes the collection of empty pallets from the drop-off points: logistics hubs, major retailers and wholesalers.

After collection, the pallets are taken back to LPR depots for sorting and, if necessary, repaired according to strict quality requirements. They are then injected back into the circuit for a new rotation. LPR can thus guarantee customers a constant supply of very high quality pallets.

LPR services are quoted on a 'trip-fee' basis meaning that the customer is billed a single fee for each pallet delivered. The price covers all services, including delivery to the customer's premises and collection from the final user, sorting, repairing and reconditioning pallets in an LPR depot, rental costs for the entire rotation cycle and general management and administrative costs.



The LPR service is based on the flexibility and responsiveness of its teams, which are indispensable qualities for promptly meeting all of a customer's needs.

LPR was the first company in the pallet-pooling sector to have obtained PEFC certification (Programme for the Endorsement of Forest Certification), which guarantees that pallets are made of wood from sustainably-managed forests. With certified pallets, LPR's customers can benefit from PEFC credit transfers and optimise their own carbon footprint (**Source [lpr.eu](http://lpr.eu)**).

The main contact in Ireland for the LPR pallet system are Goggins Transport. Please [click here](#) for more information or call +353 (0)1 836 5873.

### **IPP Logipal**

Pooling Partners is Europe's #1 integrated full-service pooler and producer of pallets and boxes.

With a history dating back to 1891, this Dutch family business operates three pooling networks in demanding supply chains including IPP Logipal Pool in retail and recycling supply chains and PRS Return System in the polymer sector.

The IPP Logipal pool is a leading rental provider of pallets and boxes in fast moving consumer goods and industrial supply chains across Europe. Via an extensive service centre network customers rent IPP pool pallets to store and deliver their brands. By deploying its pooling expertise in recovery and refurbishment, IPP Logipal provides its customers with pool pallets when and wherever they need them.

PRS Return System is an efficient and reliable pooling system for users of CP-type pallets in the demanding polymer and chemical sectors across Europe and Turkey. For nearly 20 years it has contributed to sustainability by strongly growing pallet re-use and reducing packaging waste.

Pooling Partners is a long-standing and leading exponent of circular economy models, promoting recovery and continual re-use of durable standard pallets and boxes in efficient and sustainable pooling systems. Its production facilities source from sustainably managed forests and produce and repair over 20 million pallets and boxes per annum from wood that is PEFC™ or FSC® certified.

The company has an annual turnover of ca. € 300 million and employs around 800 staff.

## One-Way Trip

### You produce. We pool.

For customers in fast moving consumer goods sectors we offer a simple One-Way trip system compatible with leading retail supply-chains and one which fulfils today's needs for simplicity and quality. Brand owners, manufacturers and growers faced with a list of daily challenges don't need to add pallets to that list.

How it works: Let us know the number of pallets you need. We will deliver what you ordered: on time, in full. Inform us when and where you have sent them. We'll do the rest.

We manage the collection of pallets at the end of your supply chain using an efficient collection and delivery network supporting our extensive service centre locations.



For further information on the services provided by Pooling Partners please [click here](#). You may also contact the Irish office on +353 1 6020620.

For further information on pallets and palletisation please contact our Packaging Technologists Brian Walsh or Colm Munnely.

Email: - [prevention@repak.ie](mailto:prevention@repak.ie).

Phone: - +353 1 467 0190

Repak Limited  
Red Cow Interchange Estate  
1 Ballymount Road  
Clondalkin Dublin 22  
D22 HW67

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