

What is Right-Sizing?

Case Study for Envirotorch

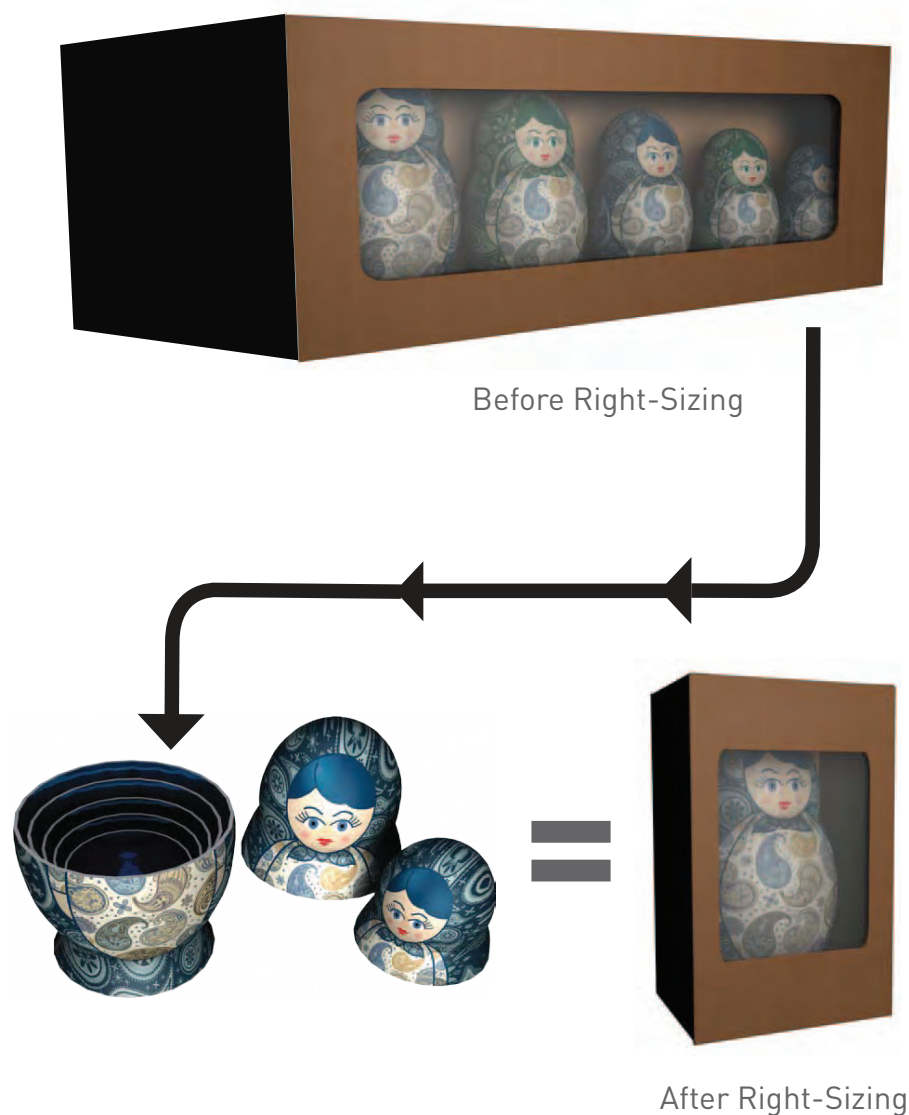
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Creative Solutions

The clue is in the name!

We minimise the size of pack and the amount of packaging used to save money and reduce the impact on the environment. We also introduce recycled and recyclable products wherever possible.

- Less material used
- Less environmental impact
- Less waste to handle
- Less vehicle movements



Envirotorch traditionally uses the 'three environmental Rs' (reduce, reuse and recycle) and applies this to all of their products and packaging. However the company believed their 'Wind up Torch' had the potential to be even more environmentally friendly.

In this document we look at how we reduced the environmental impact of the Envirotorch packaging using the right-sizing process.



Layers of packaging

Our Mission: As you can see, the primary material is PVC. We believe this is not the most environmentally friendly option. We hope to reduce or even eliminate the plastics from this product's packaging, resulting in minimal material usage.

There are three levels of packaging:



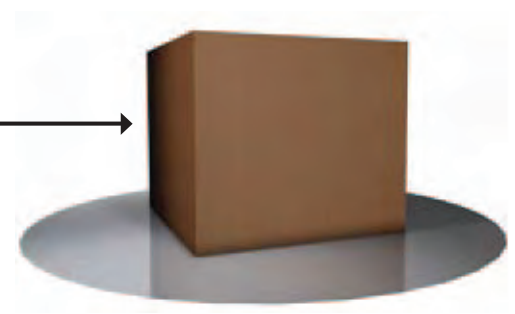
Primary Packaging

is seen at the point of sale. It needs to contain and protect the product, as well as display it and provide information.



Secondary Packaging

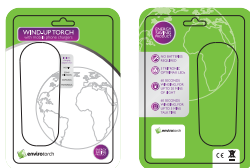
is the middle layer of packaging – for example a cardboard box with a number of identical products inside.



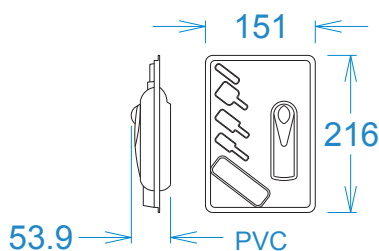
Transit Packaging

is the outer container that allows easier handling during transfer between factory, distribution centres and retailers.

PRIMARY PACKAGING



600MIC SOLID BOARD
(printed 4 colour both sides)



Primary
151 x 52 x 215 mm



Secondary
344 x 331 x 225 mm



Logistics

Problem

- Poor utilisation of container cube
- High cost for manual handling
- Excessive packaging

WASTE

Disposal

Problem

- Non-recyclable products
- Landfill issues




Excessive packaging

Problem

- Negative environmental impact
- Excessive cost for waste handling
- Specifications not set or followed

**24 LORRIES DELIVER
870,912 PRODUCTS**



	Primary (Consumer unit)	<table><tr><td>1688.18</td></tr><tr><td>10</td></tr><tr><td>23</td></tr><tr><td>0</td></tr></table>	1688.18	10	23	0	cm3 cube g paper g plastic mm tape	
1688.18								
10								
23								
0								
	Secondary Transit Outer (Store case/RRP unit)	<table><tr><td>12</td></tr><tr><td>25619.4</td></tr><tr><td>524</td></tr><tr><td>0</td></tr><tr><td>1460</td></tr></table>	12	25619.4	524	0	1460	Units per secondary cm3 cube g paper g plastic mm tape
12								
25619.4								
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	Container (Manual loose loaded)	<table><tr><td>3024</td></tr><tr><td>36288</td></tr><tr><td>92.1</td></tr></table>	3024	36288	92.1	Secondaries per container Primary packs Fill efficiency		
3024								
36288								
92.1								
	Packaging weight per primary shipped within the container	<table><tr><td>76.67</td></tr></table>	76.67	g				
76.67								

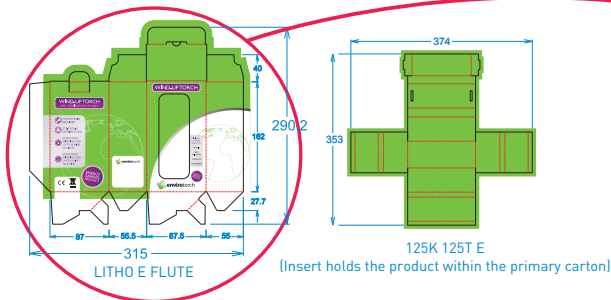
New Packaging – Right-Sizing

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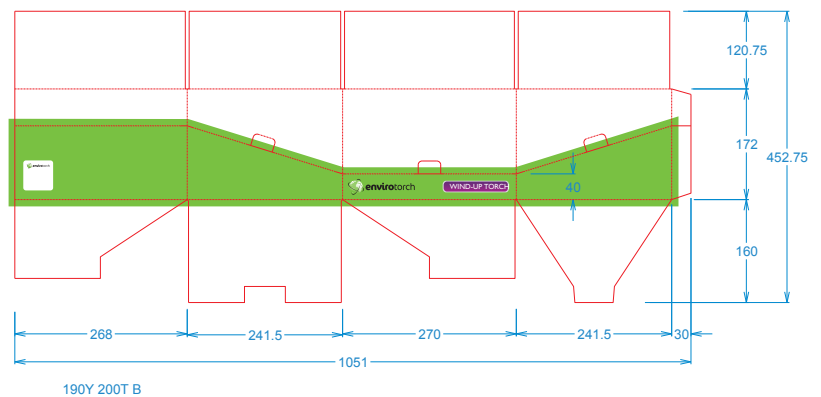
Creative Solutions

2D and 3D design

PRIMARY PACKAGING



SECONDARY & TRANSIT PACK IS NOW ONE PIECE



Secondary and transit packaging protects the primary packaging. This form of Secondary packaging is known as Shelf Ready Packaging (SRP).

What we changed in the design

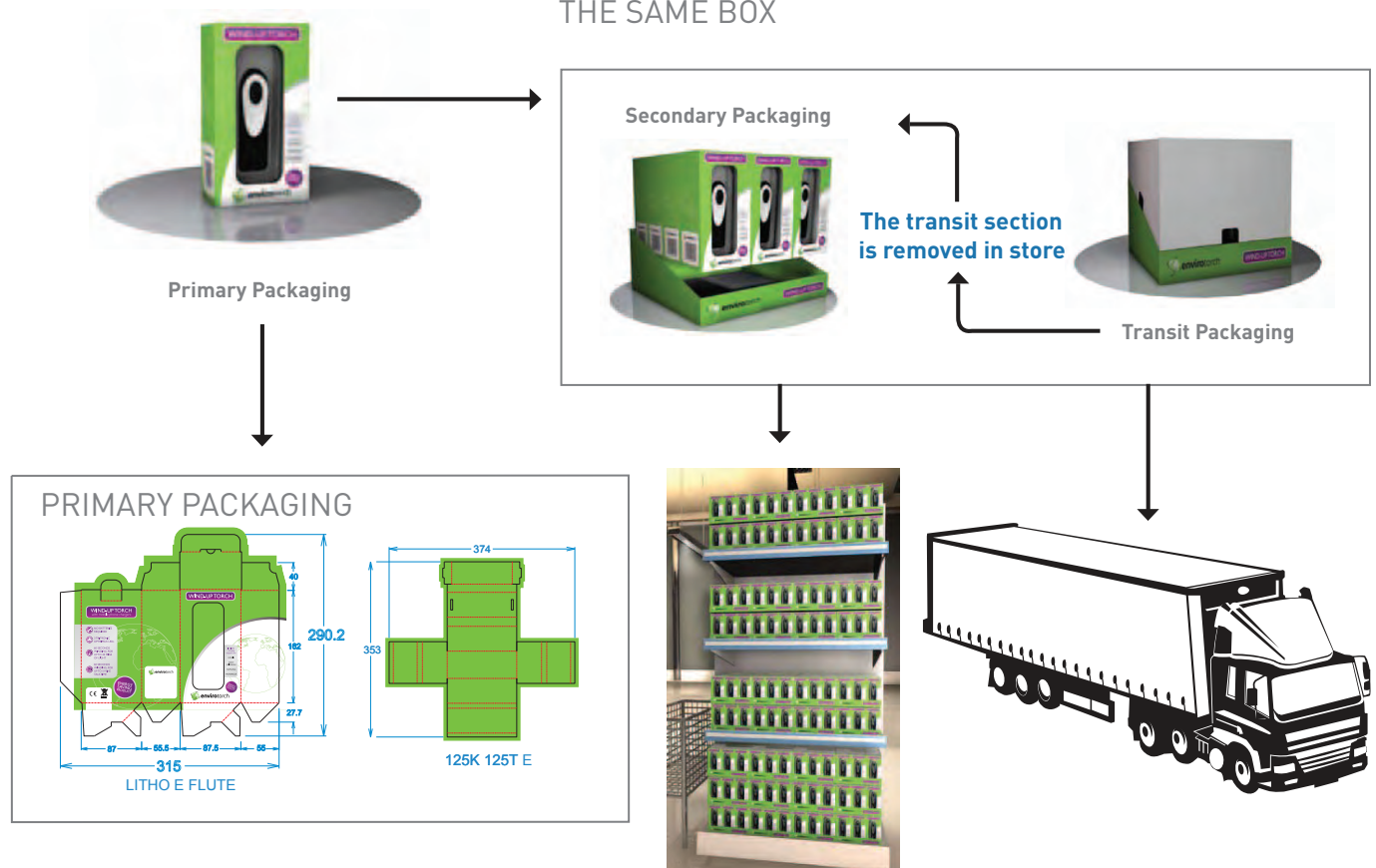
- We have taken the original plastic blister packaging and replaced it with a Crashlock base carton.
- The new corrugated carton has an internal fitting to protect the product and its fittings.
- The resulting size reduction is continued through the use of a one-piece secondary box over the original two-piece.

The results are a saving of 34.1% on materials, a 100% reduction on plastics and we have increased the number of products in a container by 66.4%.

Layers of packaging

There are still three levels of packaging:

THE SECONDARY AND TRANSIT PACKAGING ARE NOW THE SAME BOX



New Packaging – Right-Sizing

Primary
89 x 60 x 167 mm



Secondary
270 x 238 x 175 mm



Logistics Solution

Reduces the impact of packaging on your logistics process and helps to make it quicker, cleaner and cheaper through understanding your flow requirements and designing fit for purpose packaging.

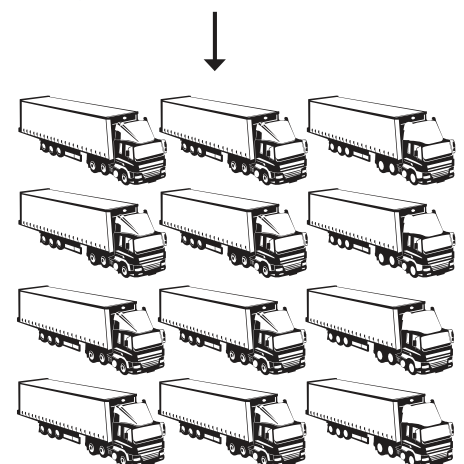
Structural design and manufacture Solution

Makes sure that the look and feel demanded from your packaging is maintained by creating fit for purpose design and global end-to-end project management.




Excessive packaging Solution

Designs out unnecessary and excessive packaging to save money and help reduce environmental impact.




**12 LORRIES DELIVER
933,120 PRODUCTS**





**12 FEWER LORRIES DELIVER
62,208 MORE PRODUCTS**

	Primary			
	(Consumer unit)	891.78	cm3	cube
		53	g	paper
		0	g	plastic
	Secondary			
	(Store case/ RRP unit)	12	Units per secondary	
		11245.5	cm3	cube
		182	g	paper
	Container			
	(Manual loose loaded)	0	g	plastic
		290	mm	tape
		6480	Secondaries per container	
	Packaging weight per primary shipped within the container	77760	Primary packs	
		96.8	Fill efficiency	
		68.17	g	

The results are in!

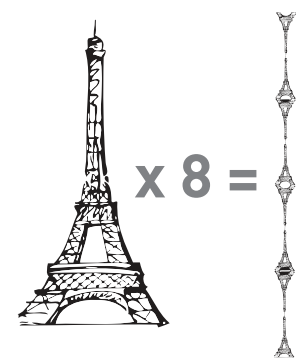
	Primary	Before	After	cm3 cube g paper g plastic mm tape
	(Consumer unit)	1688.18	891.78	
	Secondary	Before	After	Units per secondary cm3 cube g paper g plastic mm tape
	(Store case/RRP unit)	12	12	
	Container	Before	After	Secondaries per container Primary packs Fill efficiency
	(Manual loose loaded)	3024	6480	
Packaging weight per primary shipped within the container		70.67	68.17	g

Primary – before and after right-sizing

Secondary – before and after right-sizing

Tape Saved – (per 40 ft container) 1.6 miles – equivalent to 8 Eiffel Towers high



Plastics saved – (per 40 ft container) 835kg – equivalent to the weight of 3 African lions



Plastics and cardboard saved – (per 40 ft container) 308kg – equivalent to the weight of 2 Sumo wrestlers

