

# Food Waste Prevention – a guide to help you & your business increase ‘available’ product life for consumers



## Introduction

This guidance has been produced by WRAP to help businesses to reduce food waste by giving consumers more ‘available’ life on the products they buy, with a focus on improved performance in the supply chain and no change to the product or packaging. It is aimed at employees working in the food manufacturing and retail industry whose roles can have a direct influence on the supply of their products to consumers.

The guidance has been divided into two key sections; one for manufacturers and one for retailers, and is intended to help employees working in the types of roles shown in the table below. This is an area where many businesses are already taking action, so some topics may be more relevant than others. Case studies showing what food businesses have already achieved are available at the end of this guidance to help .

Supply Chain and Operations / Forecast & Demand Planning / Procurement & Buying/ Technical, Quality, Regulatory and Product Development			
What Can You Influence ?			
<ul style="list-style-type: none"><li>• Process efficiency</li><li>▪ Storage solutions</li><li>▪ Product handling</li><li>▪ Temperature control</li><li>▪ Logistics and distribution</li></ul>	<ul style="list-style-type: none"><li>▪ Rotation and stock control</li><li>▪ Delivery scheduling</li><li>▪ Forecast accuracy</li><li>▪ Demand and supply</li><li>▪ Unplanned changes</li></ul>	<ul style="list-style-type: none"><li>▪ Stock levels</li><li>▪ Product /Service</li><li>▪ Innovation</li><li>▪ Order accuracy</li><li>▪ Order quantities</li></ul>	<ul style="list-style-type: none"><li>▪ MLOR requirements</li><li>▪ Stock management</li><li>▪ Product safety &amp; quality</li><li>▪ Process control</li></ul>

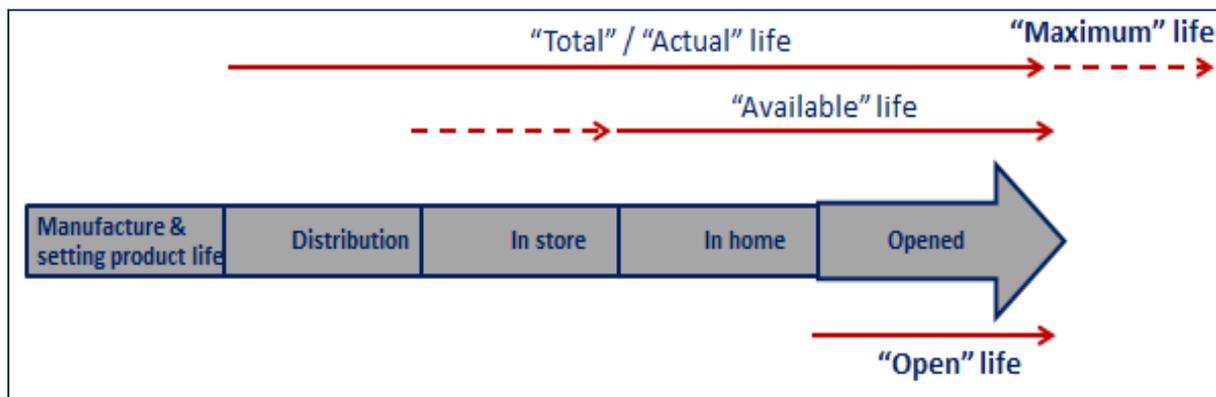
On the following slides we provide a series of key questions to help employees review the impact of current businesses operations on product life both internally and externally i.e. with key supply chain partners. It is recommended that this guidance is used in conjunction with the recent [WRAP research on product life](#).



The following definitions are used by WRAP when discussing Product Life:

<b>Product Life</b>	The length of time a product may be stored without becoming unsuitable for consumption, with regards to food safety and/or quality
<b>Maximum Life</b>	The technical, maximum product life that could be set, without compromising food safety
<b>Available Life</b>	The proportion of the total product life remaining to consumers when they buy the product
<b>Total/actual Life</b>	The total/actual life is the product life given to the product and the difference between the total life and the maximum life is a factor determined by the manufacturer and/or retailer to ensure that the product is at its maximum quality at the end of its given life
<b>Open Life</b>	A time period specified, within the date code, which stipulates the period that a product should be consumed within once open, e.g. 'once opened consume within x days'
<b>Minimum life on receipt (MLOR)</b>	The amount of life remaining on a product on receipt into a retailers depot is a key performance measure – this is often known as the 'minimum life on receipt' (MLOR)

Figure 1: Product Life Definitions



### Food redistribution

The redistribution of food still within its existing product life has not been included within this guidance document. However, it is recognised that the redistribution of food that is fit for human consumption to charities or other organisations can play a significant part in enabling beneficial use of food that might otherwise have been wasted. For further information visit this [WRAP webpage](#).

Definitions

[Introduction](#)

[Manufacturers](#)

[Retailers](#)

[Case Studies](#)

These questions are to help guide you in reviewing current business operations to see where changes can be made to increase the ‘available’ life to consumers on your products. The responses to these question should be used to support further conversations with key stakeholders and to help with the development of specific actions to improve product life.

Supply Chain and Operations	Forecast & Demand Planning	Procurement & Buying	Technical, Quality, Regulatory and Product Development
<ul style="list-style-type: none"> <li>■ Is there scope to optimise distribution operations to reduce the time products spend in transit? <i>e.g. load size/ delivery frequency/ on time deliveries/ route optimisation</i></li> <li>■ How long do products spend in storage prior to being despatched and can this be reduced?</li> <li>■ Could optimising storage conditions and procedures extend product life? <i>e.g. humidity control, stock control training</i></li> <li>■ Are there any supply chain dependencies and complexities disrupting production and effecting product life?</li> <li>■ Can an alternative vehicles and technology be used to transport the product? <i>e.g. deep chill logistics, chill chain logistics</i></li> <li>■ Can discussions with your customer buyers be enhanced to maximise throughput to minimise impact on product life?</li> </ul>	<ul style="list-style-type: none"> <li>■ What information do you currently share with/ receive from customers and can this be enhanced to improve forecasting accuracy?</li> <li>■ Can forecasting techniques be improved? e.g. is there a jointly agreed forecast that everyone can work to?</li> <li>■ Are there any technologies or product innovations that would create efficiencies?</li> <li>■ Are there better ways of working with your retailer clients to understand demand? <i>e.g. demand amplification (finished stock being held at despatch)</i></li> </ul>	<ul style="list-style-type: none"> <li>■ Can enhancements be made between forecasting and procurement to improve efficiencies?</li> </ul>	<ul style="list-style-type: none"> <li>■ Can alternative storage technologies or alternative techniques be used? <i>e.g. humidity control</i></li> <li>■ Have appropriate case sizes for particular store formats been considered? <i>E.g. smaller cases for convenience stores.</i></li> </ul>

Manufacturers

[Introduction](#)

[Definitions](#)

[Retailers](#)

[Case Studies](#)



These questions are to help guide you in reviewing current business operations to see where changes can be made to increase the life ‘available’ life to consumers on your products. The responses to these question should be used to support further conversations with key stakeholders and to help with the development of specific actions to improve product life.

Supply Chain and Operations	Forecast & Demand Planning	Procurement & Buying	Technical, Quality, Regulatory and Product Development
<ul style="list-style-type: none"> <li>■ Can the turnaround times in depots or delivery performance be improved?</li> <li>■ Are there new innovations or procedures that can be brought in to advise customers on product life? <i>e.g. sensing technologies, GS1 barcodes</i></li> <li>■ Can technological innovations be used to better monitor and manage product life? <i>e.g. RFID</i></li> </ul> <p><b>Store operations</b></p> <ul style="list-style-type: none"> <li>■ Have the goods receipt / storage and handling back of store procedures been reviewed for efficiencies? <i>e.g. product identification at back of store (easy ID)</i></li> <li>■ Can efficiencies be made with the shelf replenishment processes? <i>e.g. better discipline in stock rotation and adherence to mark down protocols</i></li> </ul>	<ul style="list-style-type: none"> <li>■ Can communications or processes with suppliers be enhanced to improve demand and forecasting?</li> <li>■ Are products that are going out of date monitored and are these reflected in future orders?</li> <li>■ Can efficiencies be made around promotions on certain products? <i>e.g. timings of promotions, adequate notification for suppliers, bespoke in-house store procedures</i></li> </ul>	<ul style="list-style-type: none"> <li>■ Are there any technologies or product innovations that would create efficiencies?</li> <li>■ Can ordering and storage procedures be improved to reduce processing times?</li> <li>■ Can enhancements be made between demand and procurement to improve efficiencies and minimise waste?</li> <li>■ What is the MLOR? How are these set and how frequently are these reviewed? Are MLORs benchmarked? Can higher MLORs be set working collaboratively with suppliers? Are there regular performance reviews for those not meeting the required MLOR?</li> </ul>	<ul style="list-style-type: none"> <li>■ Can technological innovations be used to better monitor and manage product life? <i>e.g. RFID</i></li> </ul>

The following case studies show examples of how retailers and their suppliers have worked together to implement changes, which have extended 'available' life on products.

<b>The Co-operative Food</b>	Optimising product life will save The Co-operative Food £5m. <a href="#">Click here</a>
<b>Greenvale potato washing</b>	Technical improvements through an innovative washing system help extend potato product life and reduce water usage. <a href="#">Click here</a>
<b>Sainsbury's</b>	Working with Sainsbury's and Cranswick in a business experiment demonstrated that a small increase in product life prevents waste and improves availability. <a href="#">Click here</a>
<b>GS1 barcodes</b>	GS1 Batch Identification for fresh foods. <a href="#">Click here</a>
<b>Co-operative Food and farms</b>	Supply chain collaborations, packing efficiencies, timings of promotions and orders. <a href="#">Click here</a>
<b>Ocado</b>	Chill chain efficiencies to maximise food life remaining at the point of receipt into the customer's home. <a href="#">Click here</a>
<b>Tesco</b>	Buying in advance direct from its grape suppliers to improve forecast demand. <a href="#">Click here</a>
<b>Midland Co-operative</b>	Introduction of smaller 12kg banana boxes for use at convenience stores and improved in-store efficiencies. Page 10. <a href="#">Click here</a>
<b>Waitrose</b>	Trial of smaller packaging for salads Page 14. <a href="#">Click here</a>
<b>Asda</b>	Efficiencies to delivery and store systems for chilled products. <a href="#">Click here</a>
<b>Asda</b>	New packaging innovations to extend product life of potatoes. <a href="#">Click here</a>

We hope you have found this guidance useful. For further information please go the [WRAP driving out waste in food & drink manufacturing and retailing webpages](#) or email: [foodspecialist@wrap.org.uk](mailto:foodspecialist@wrap.org.uk)

Case Studies

[Introduction](#)

[Definitions](#)

[Manufacturers](#)

[Retailers](#)





WRAP's vision is a world where resources are used sustainably. It works in partnership with governments, businesses, trade bodies, local authorities, communities and individuals looking for practical advice to improve resource efficiency that delivers both economic and environmental benefits.

Our mission is to accelerate the move to a sustainable resource-efficient economy through:

- re-inventing how we design, produce and sell products,
- re-thinking how we use and consume products, and
- re-defining what is possible through recycling and re-use.

First established in 2000, WRAP is a registered charity. WRAP works with UK Governments and other funders to help deliver their policies on waste prevention and resource efficiency.

WRAP is a registered Charity No. 1159512 and registered as a Company limited by guarantee in England & Wales No. 4125764. Registered office at Second Floor, Blenheim Court, 19 George Street, Banbury, Oxon, OX16 5BH.

Find out more about our work [www.wrap.org.uk](http://www.wrap.org.uk)