THE WASTE HIERARCHY

There is no 'away'

The waste hierarchy is a framework for establishing the order of preference for different waste management options. It is based on the cradle-to-grave principle - where the product is followed from its production to its 'grave' or final disposal.

The order is usually set out as below:

Step 1 – Reduce

We should aim to reduce and/or prevent the amount of waste produced such as unnecessary packaging. We should design-out waste at the manufacturing stage. Plastic shopping bags can be used as a simple example of this principle. If we don't accept or use products that become waste, we reduce resource consumption and prevent those materials from entering the waste stream in the first place. Reduction or prevention is the best option.

Step 2 – Re-use

We should try to reuse materials for the purpose for which they were designed, or sometimes for other purposes (e.g. wooden pallets can be use in reuse building projects).

Step 3 – Recycle & Compost

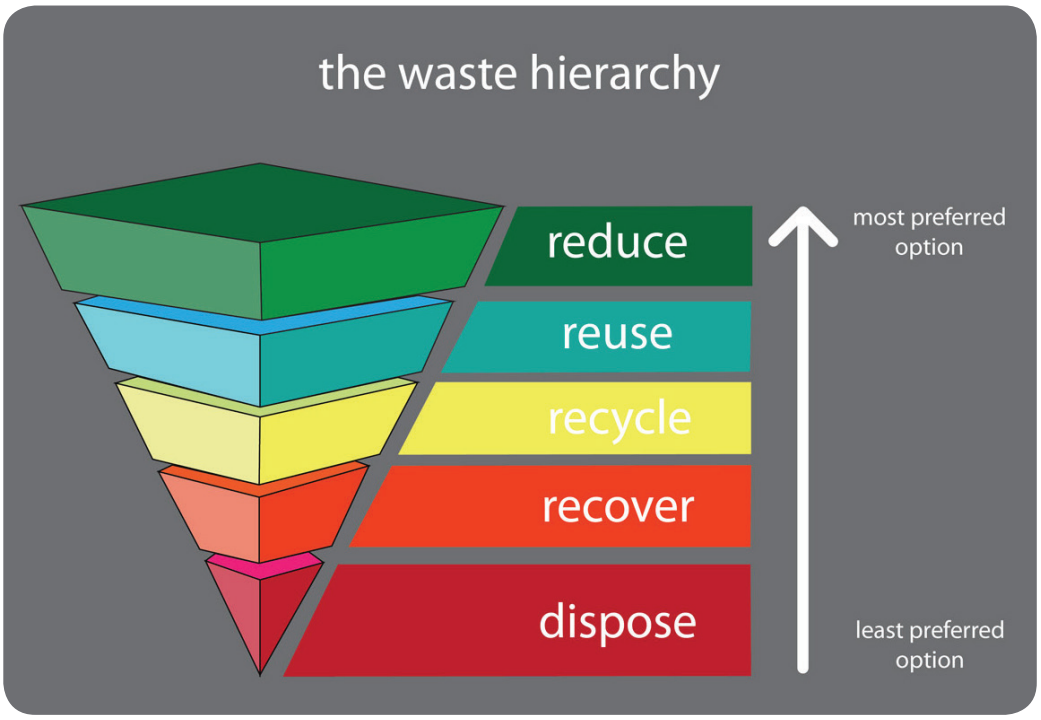
We need to recycle and compost as much as possible that is left after reduction and reuse. Landfill bans of organic waste and existing recyclable items could eliminate half of what currently goes to landfill.

Step 4 – Recover Energy

Recover the energy and raw resources embedded in the waste.

Step 5 – Residual Disposal

What waste remains after steps one to four, we would send to landfill. This is the LAST option.



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For more info on Zero Waste Network visit: www.zerowaste.co.nz

WHERE DOES THE CONCEPT COME FROM?

The origin of the concept is unknown, but has been around since the 1970's. During this period, with the increasing influence of the environmental movement, environmental protection became a second major driver (public health was the first) for change in waste management. The waste hierarchy was first introduced into policy in the European Union's Waste Framework Directive of 1975. It has since been formalised into a series of waste management options in countries around the world, including New Zealand, and has been imbedded in the New Zealand Waste Strategy in the form of the '5R's' since 1992.

The hierarchy draws on the precautionary principle (in that reducing waste is likely to cause far less harm to people and/or the environment than putting it into landfill will), and it prioritises the reduction of waste, then its reuse, recycling, and recovery and lastly the optimisation of its final disposal.

The waste hierarchy can be roughly divided into two parts: those activities that can be carried out by individuals/operational teams in a home/organisation and those that are carried out by specialists outside the organization. Reduction, re-use and recycling are able to be undertaken at the level of the household, providing more opportunity for engagement by individuals in these activities, than in the recovery and disposal of waste.

DO WE NEED A NEW MODEL?

Increasingly the cradle-to-grave model is seen as insufficient alone to create significant change towards a sustainable future. This model is generally product centered, but as concerns about sustainability become broader a whole systems model is emerging. This new 'cradle-to-cradle' approach requires things such as transport, occupational health and safety, working conditions and fair trade to be considered as well. While parts of the waste hierarchy (particularly the 3 R's of Reduce, Re-use and Recycle) are still seen as vital to achieving sustainability, these new considerations suggest that the design of products and services is equally as important.

Much of the practice and design of waste management has relied on centralised systems, which have been most cost effective during a period of relative cheap transport fuels. As congestion and fuel costs increase, decentralised solutions appear more attractive. Advanced economies, such as the Nordic countries, have identified source separation and householder responsibility as integral to a sustainable waste solution.

Some waste management experts have recently incorporated a 6th R: "Re-think", with the implied meaning that the present system may have fundamental flaws, and that a thoroughly effective system of waste management may need an entirely new way of looking at waste. Rethinking and redesigning the whole system is very much at the heart of the zero waste philosophy and practice.

Thanks to ZWN Member the Waiheke Resources Trust for their help with the writing of this resource. For more info check out: www.wrt.org.nz