Examples of Zero Waste Business

Waste is a sign of inefficiency of a system and/ or a process. Therefore it is no surprise that successful companies try to optimize processes and eliminate waste.

A company that is generating excessive waste whilst at the same time obtaining good results is because is loading the burden on the shoulder of some other actor in the society.

In the current situation of a globalised economy, companies with zero waste strategies are more likely to survive in the long term.

Basic principles for Zero Waste companies are:

- Raw materials should be obtained, whenever possible, from recycled materials and not from new extraction. Any new extraction should be only justifiable when it comes from a regenerating source.
- The linear system of production needs to be changed into a circular system in which the recycling potential can be maximised.
- Production processes should be redesigned in view of avoiding the generation of waste –in and outside the plant-.
- The consumption of energy and generation of waste of the product/machine should be included in the optimisation calculations.
- Apply eco-design and integrated product policy approach.
- Change the focus from labour productivity to resources productivity.

This is an indicative and non-exhaustive list of examples of zero-waste strategies for companies of different sizes, sectors and countries.

At big scale - INTERFACE

The American company Interface is the biggest carpet producing company in the world controlling 40% of this market. In the 90's, when CEO and owner Ray Anderson decided to start implementing sustainability measures, Interface was a company based entirely on oil. In 1995 the goals of "zero impact" started to be implemented. Since then emissions, energy consumption from fossil fuels and water and waste generation has declined dramatically while sales have risen two thirds and profits doubled.

Interface has prevented 74.000 tons of carpets from going to landfill (90% reduction of waste) and now 25% of original material used is renewable and recycled.

The 400$ million Interface saved in costs avoided through the pursuit of Zero Waste have paid for all the costs of transforming its practices and facilities. As Ray Anderson CEO says "(the Interface example) *dispels de myth of the false choice between the environment and*

the economy… if we, a petro-intensive company, can do it, anybody can. And if anybody can, it follows that everybody can".

The program to minimise materials use and optimise processes is called QUEST and since its start in 1995 it has reduced costs in waste by 50% per unit which represented 372 million dollars of savings.

Interface "zero impact" policy reaches out to their suppliers which creates a spill-over greening effect from which the whole economy can profit.

Beyond cost savings, Zero Waste has helped redesign the company's business paradigm, Interface has managed to go from being a company selling oil-intensive industrial carpets (which after use ended up landfilled) to becoming a company that offers the service of the carpets in leasing. This way it can make sure that the material is recovered after use and can be repaired, reused or recycled instead of going to landfill.

At small scale - EFFECORTA

The municipality of Capannori, pioneer in the Zero Waste strategy in Italy, was the location chosen by the cooperative enterprise Effecorta to establish the first of its stores. Two years after its creation Effecorta is already replicating the system in Italy and the idea is being exported successfully. Since 2009 sales have been increasing at an average of 20% annually.

Effecorta gives a strong emphasis to sustainability and therefore it focuses in minimizing the whole ecological footprint of their products. This means that 85% of its sales come from products produced 70km around the store (target is to reach 95%), which is great to minimize emissions. Moreover, 80% of the products are organic and Effecorta implements the zero waste philosophy on packaging.

Effecorta doesn't use plastic bags or any non-reusable plastic. All liquids -soap, milk, wine, oil, beer, wine, cream, honey, etc. ...- are sold in bulk which means that customers can bring their own containers or buy them in the shop. All containers sold in the shop can be reused and replaced when damaged.
The non-liquids (cereals, cheeses, spices, fruits, nuts, rice, pasta, etc...) are also sold in bulk to give each client the possibility to buy according to his/her needs which helps to avoid the disposal of eatible food.

Effecorta is active member of the Italian Zero Waste network.

Examples of other companies applying zero waste policy:

Xerox announced an internal rate of recycling 92% which has prevented 1 million tons of waste from going to landfills during the period 1991-2009.

Brewers of Ontario, Canada - Brewers of Ontario supplies to 12 million people and employs 6.000 employees, with sales of 1.400 billion. The system has a recovery rate of 97.6% and 80% of the containers are reusable. Thanks to this system the costs of waste treatment have been reduced in 89% (from 1.5 million to 170,000 dollars).

Hewlett-Packard, the U.S. branch (9.000 employees) recovers 95% of their waste and saves almost a million dollars per year.

Konica Minolta, implements its own zero waste methodology. In 2010 it has set a target of 50% waste reduction and 80% of CO2 emission from 2005 levels.

COLABORATION BETWEEN UNIVERSITIES AND BUSINESSES

LAST MINUTE MARKET

Last Minute Market (LMM) links shops and producers (processing industries, food shops, retail stores and the like) who have unsold food which would otherwise be discarded with people and charities who need food. Prof. Andrea Segrè started with this project in 1998. The University of Bologna developed SMM as a spin-off and it is now active in more than 40 Italian towns and has new projects starting in other places in the world.

LMM operates in the areas of unsold but edible food, unharvested vegetables, non-conform seeds, un-used catering products, unsold books and now also unused pharmaceuticals.

LMM eliminates waste by helping companies manage surplus (food and other items) and taking them out of the disposal route. Public institutions and communities also benefit from the reduction in the flow of waste to landfill and incineration which saves them money in taxes, health and environmental damage and less dependency on further foreign food imports. Finally it also improves food availability for the sectors of society that need it, and third sector (charity) receivers who reduce operating costs and release resources for other projects.

LMM brings about environmental, economic and social benefits. According to founder Prof. Segrè if LMM Food were to be adopted nationwide in Italy by supermarkets, small shops and cash and carry shops, €928,157,600 would be recuperated in products. Furthermore, these products could provide 3 meals a day to 636,000 people – in total 580,402,025 meals a year. Also by not sending these products to the landfill, 291,393 tonnes of CO2 emissions could be spared.

In April 2010 LMM launched "ancora utili", a program to recuperate unexpired prescription drugs donated by single users, doctors or hospitals. The pilot project in Ferrara has involved 11 pharmacies is projected to collect drugs for a market value of 15,000 euros per year.

In October 2010 LMM was presented in the European Parliament and the Agriculture Committee approved this resolution to reduce 50% of the amount of food waste throughout the food chain.

LMM is a win-win project and another piece of a Zero Waste strategy. The prevention of waste helps optimise resource use with benefits for the different stakeholders as well as for the environment.

The KLM up-cycling initiative

The dutch airline KLM is going beyond recycling and manages to upcycle the discarded lady uniforms of the airline. This gives a second life to the materials that otherwise would be discarded.

Sadly, in the Netherlands uniforms tend to be incinerated to minimize security risks. KLM admits that incineration is not a sustainable solution. On the other hand, recycling uniforms also has certain drawbacks. The most important being that existing collection and processing techniques usually cause the quality of raw materials to decline. In practice, this actually implies that recycling is little more than a detour on the way to the rubbish dump. In addition, the cost of recycling must be offset in the price customers pay for the newly manufactured product in shops. If the product is of a poor quality and relatively expensive, very few people will want to buy it.

Consequently KLM has chosen to 'upcycle' the discarded uniforms into blue slippers, luggage straps and bags. In a cooperative effort it has teamed up with a group of partners to run a project proving that it is possible to transform old uniform textile into new raw materials that can be used to manufacture new, high-quality products.

The result is very inspiring; by upcycling 90,000 kilos of textile, at least 500 million litres of water, 4,600 tons of CO2 and 1 million m3 of natural gas (all of which would have been used or emitted in producing new textile) are saved. Furthermore, the volume of pesticides, fertiliser and oil required is much lower. Farmland can also be used more effectively, to produce foodstuffs instead of cotton. An added bonus is that job opportunities are created for less privileged people in the community.

The success of this project is due to the cooperation of the company KLM with the textile processor Frankenhuis, the design firm D'Andrea & Evers, the Reshare sheltered workshops and it is coordinated by the recently established innovation centre Texperium, specialised in manufacturing new products from textile waste. All this is possible thanks to the favourable conditions to innovation and experimentation created by the Dutch government.