8 – Examples

8-1 Reduction of residual waste by introducing new waste logistics

At the beginning of a CP project, many companies generate a large amount of waste. There is no functioning waste logistics system due to the lack of appropriate containers but also because staff have not been properly informed and are not motivated.

A well functioning waste logistics system can be seen as the calling card of a company and is a first and important step in a CP project. The following example illustrates how a company could dramatically cut down on its residual waste and thus save considerable costs.

The situation at the beginning: The company develops photos from celluloid films as well as digital photos and deals in photo equipment. It has 150 employees. Only three different types of waste (residual waste, wastepaper and packaging waste) are collected and the few available containers are not labelled or marked according to a colour system. In addition, most of the containers are placed at a distance from the workplaces of the employees.

A first check of the waste logistics leads to the following results:

- Introduction of eight instead of three types of waste (newly introduced: metal, workshop waste, waste oil, organic waste, glass);
- Purchase of new containers;
- Uniform labelling/marking of the containers;
- Design of a company-specific waste segregation guide;
- Training of employees on appropriate waste segregation.

Due to these measures 25% of the residual waste could be avoided. In absolute figures this corresponds to 27.5 tons of residual waste and to a cost reduction of EUR 3,500 per year.

Furthermore, an analysis showed that a large part of the residual waste consists of film containers – small boxes made of metal. These containers were examined in more detail and the analysis provided the following results: A metal box weighs 8 g, the metal shutter 1 g and the inlet made of plastics 2.5 g. If we assume that 15,000 pieces are thrown away every day, the metallic part of the residual waste amounts to 33 tons per year resulting in disposal costs of EUR 4,000.

In order to reduce its residual waste the company started negotiations with the neighbouring company, a scrap-dealer and solved the waste problem as follows: Instead of throwing the film containers into the residual waste they were separately collected and transported twice a week to the scrap dealer who paid for this waste. Thus the resulting savings amounted to EUR 4,000 per year due to the reduced residual waste, supplemented by a revenue of EUR 4,000 for the metal sold.

8-2 Significant reduction of hazardous waste

This example illustrates the development of a hazardous waste management system in a car repair shop and shows the potential of appropriate waste management combined with changes in technology and the training of employees. Further below a short overview of the measures implemented since 1995 is provided, when the company joined a regional CP project.

- Change from paper tissues used for cleaning to a rental system providing cleaning rags made of cloth. The oil-contaminated paper tissues, which previously were thrown into the hazardous waste category, were substituted by cleaning rags that are collected and washed by a textile rental company.

- Special training for employees working with paints and solvents. If the remaining paint is completely dried, it no longer has to be disposed of as hazardous waste but can be collected in the containers as metallic waste.
- Change of technology: a new ultra-filtration unit for the washing process of oily motor parts was installed. A ceramic membrane filters the solution and removes the oil. In this way the washing solution can be used for up to four months, thus reducing the hazardous oily waste by about 75% to 80%.

The combination and step-by-step introduction of these measures led to a dramatic reduction of hazardous waste from 4.68 kg to 1.78 kg per paint job which equals a reduction of 62 %.

8-3 Training in the reduction of residual waste

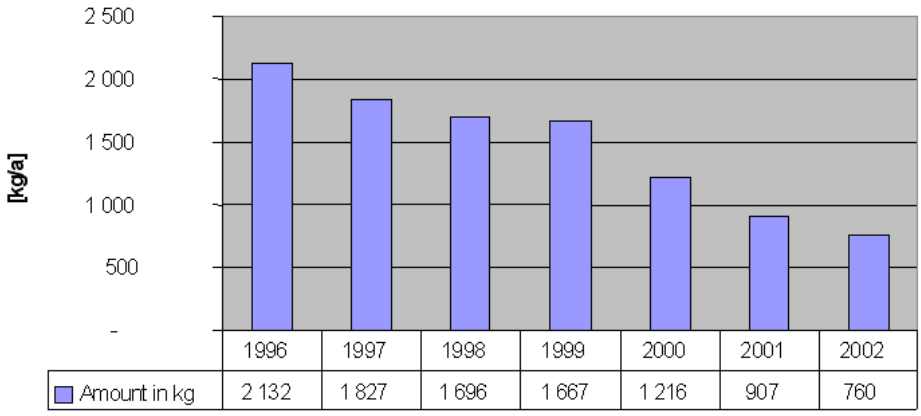
A hospital that had been implementing a cleaner production programme for seven years started an initiative called "Our environment, our hospital" in the seventh year. The staff received new informational material on the correct segregation of waste and training courses on environmental topics were organized.

Five one-day training courses were held for altogether 460 employees. The courses dealt with the correct segregation of waste with special emphasis on the often problematic waste generated in hospitals.

The success of this initiative was quite impressive:

- Within one year altogether 32 tons of residual waste was saved.
- As an additional benefit of the training sessions and awareness-raising seminars, hazardous hospital waste could also be significantly reduced over the years.

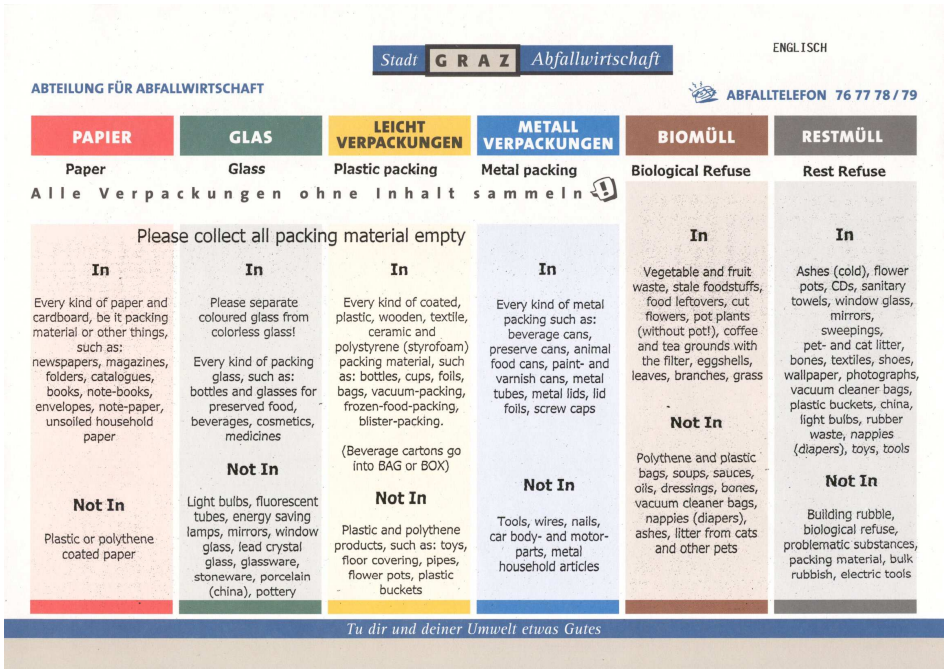
Savings without investments using the example of hazardous medical waste



8-4 Waste segregation guide

Below you will find an example for a "neutral", i.e non company-specific waste segregation guide from Austria, issued by a municipal waste disposal company.

Please note that colours are used to indicate the different types of waste: red for wastepaper, green for coloured glass, yellow for packaging waste, blue for metal waste, brown for organic waste and black for residual waste. This colour code is valid for all households in Austria and it is therefore recommended to maintain this colour code for in-company logistics.



Stadt GRAZ Abfallwirtschaft

ENGLISCH

ABTEILUNG FÜR ABFALLWIRTSCHAFT

ABFALLTELEFON 76 77 78 / 79

PAPIER	GLAS	LEICHT VERPACKUNGEN	METALL VERPACKUNGEN	BIOMÜLL	RESTMÜLL
Paper	Glass	Plastic packing	Metal packing	Biological Refuse	Rest Refuse
Alle Verpackungen ohne Inhalt sammeln					
Please collect all packing material empty					
In Every kind of paper and cardboard, be it packing material or other things, such as: newspapers, magazines, folders, catalogues, books, note-books, envelopes, note-paper, unsoiled household paper **Not In** Plastic or polythene coated paper	**In** Please separate coloured glass from colorless glass! Every kind of packing glass, such as: bottles and glasses for preserved food, beverages, cosmetics, medicines **Not In** Light bulbs, fluorescent tubes, energy saving lamps, mirrors, window glass, lead crystal glass, glassware, stoneware, porcelain (china), pottery	**In** Every kind of coated, plastic, wooden, textile, ceramic and polystyrene (styrofoam) packing material, such as: bottles, cups, foils, bags, vacuum-packing, frozen-food-packing, blister-packing. (Beverage cartons go into BAG or BOX) **Not In** Plastic and polythene products, such as: toys, floor covering, pipes, flower pots, plastic buckets	**In** Every kind of metal packing such as: beverage cans, preserve cans, animal food cans, paint- and varnish cans, metal tubes, metal lids, lid foils, screw caps **Not In** Tools, wires, nails, car body- and motor-parts, metal household articles	**In** Vegetable and fruit waste, stale foodstuffs, food leftovers, cut flowers, pot plants (without pot!), coffee and tea grounds with the filter, eggshells, leaves, branches, grass **Not In** Polythene and plastic bags, soups, sauces, oils, dressings, bones, vacuum cleaner bags, nappies (diapers), ashes, litter from cats and other pets	**In** Ashes (cold), flower pots, CDs, sanitary towels, window glass, mirrors, sweepings, pet- and cat litter, bones, textiles, shoes, wallpaper, photographs, vacuum cleaner bags, plastic buckets, china, light bulbs, rubber waste, nappies (diapers), toys, tools **Not In** Building rubble, biological refuse, problematic substances, packing material, bulk rubbish, electric tools

Tu dir und deiner Umwelt etwas Gutes

Examples of typical container systems available on the European market