
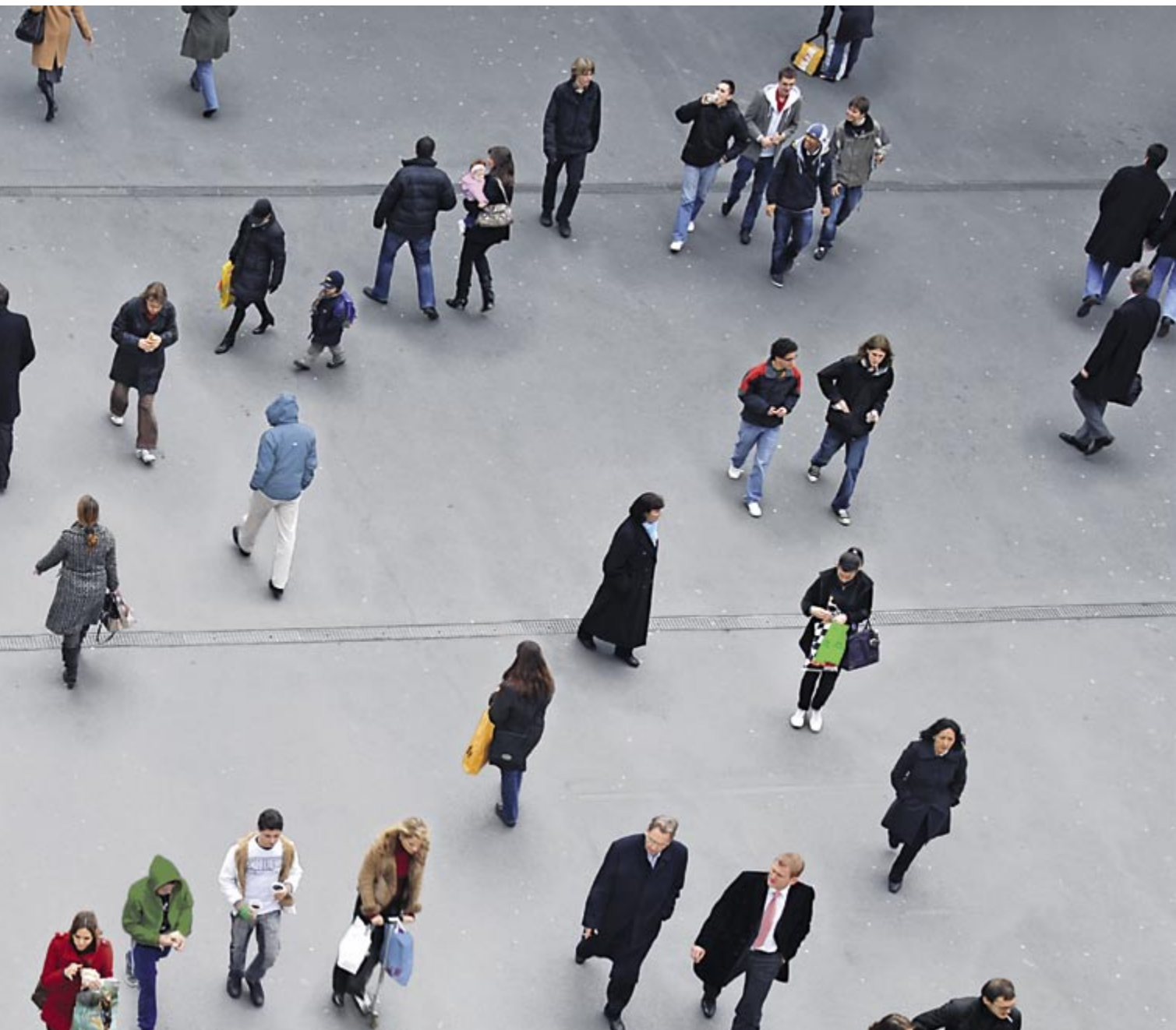
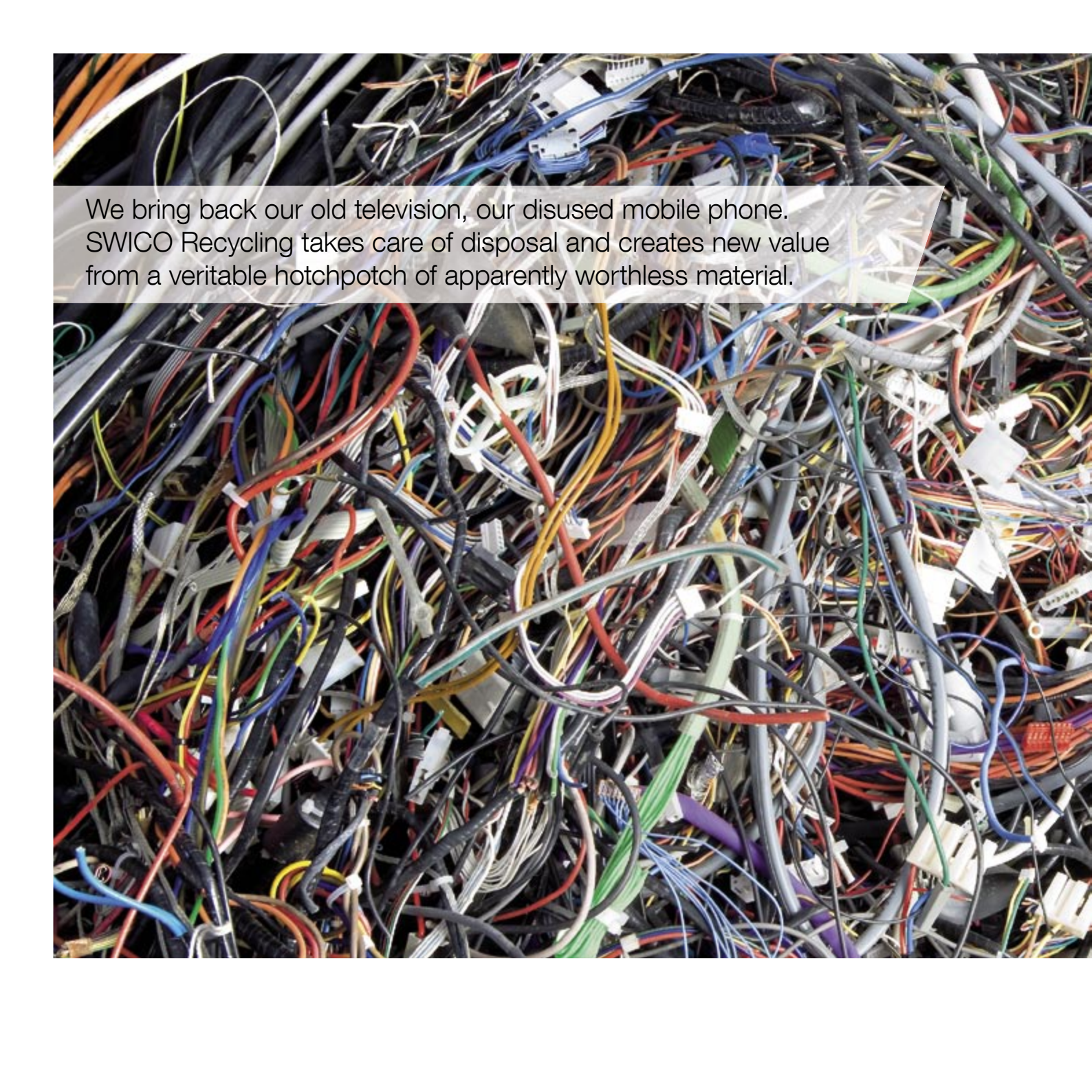


# SWICO Recycling at a Glance

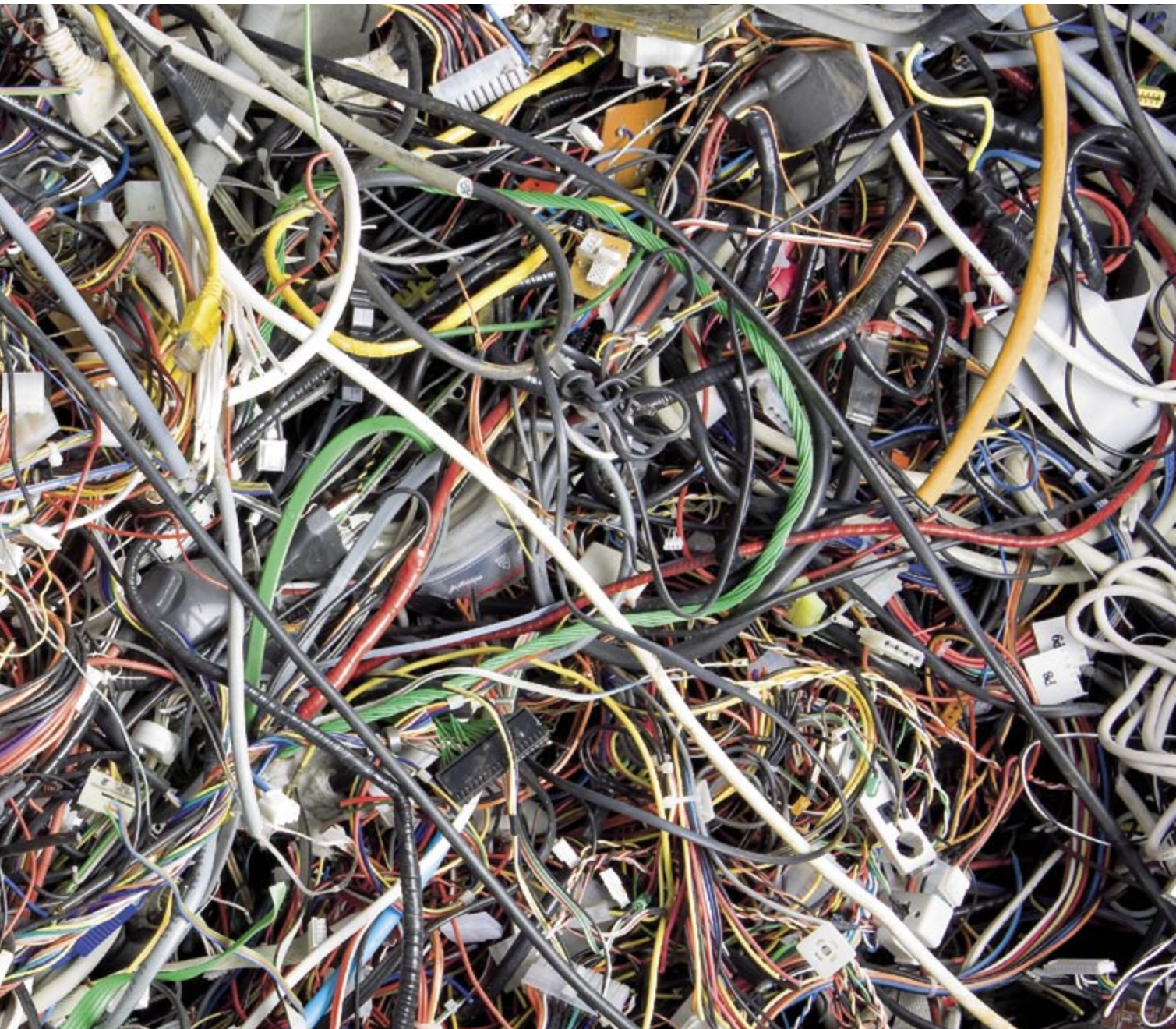



We are networked with the whole world – always and everywhere. A multitude of intelligent, fast-changing devices characterizes our modern lifestyle. This produces scrap material.





We bring back our old television, our disused mobile phone.  
SWICO Recycling takes care of disposal and creates new value  
from a veritable hotchpotch of apparently worthless material.





Our environment is a habitat for plants and animals and a place of regeneration for human beings. SWICO Recycling protects this for the future by safely disposing of harmful substances.



## SWICO Recycling – Key Data

6 employees  
7 recycling partners  
500 collection points  
600 Convention signatories  
2600 online collection orders per year

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## Organisation

# A customer-friendly take-back system

Televisions dumped in the countryside, disused computers at the roadside: these images belong to the Switzerland of the past. Since 1994, it has been possible to hand in disused electrical and electronic equipment free of charge at any designated sales point as well as at SWICO Recycling collection points. There is no charge anymore for handing in disused equipment – charges of up to 40 Swiss francs per device were previously payable. In place of this, an advance recycling fee is now charged on all new equipment. This benefits the environment in many ways. The equipment is transported to specialist recycling compa-

nies and dismantled by experts. Recyclable materials find their way back into the production cycle while hazardous materials are expertly disposed of.

### **Experts in recycling**

It all began in 1992: the Swiss Association for Information, Communication and Organisational Technology, SWICO, was looking for a workable solution to the problem of collecting and recycling electrical and electronic equipment. To this end, the six biggest suppliers of copiers and IT equipment joined forces with the Swiss Foundation for



Consumer Protection and the Federal Office for the Environment (FOEN).

The system was subsequently handed over to SWICO for implementation. Thus SWICO Recycling was born – one of the world’s first collective take-back systems for electrical waste. SWICO’s mandate is neutral and non-profit-based. Today, the SWICO Recycling system comprises around 600 manufacturers and importers, 500 public collection points and qualified recycling partners throughout the whole of Switzerland and the Principality of Liechten-

stein. SWICO works closely with Empa, the research and services institution for materials science and technological development at the Swiss Federal Institute of Technology (ETH). In addition, SWICO Recycling is a member of the “European Association of Electrical and Electronic Waste Take Back Systems”, also known as the WEEE Forum. The goal of this European-wide platform is to set quality standards for recycling.

## Waste volumes

20–50 mil. tonnes	of electrical and electronic waste worldwide
150,000 tonnes	of electrical and electronic waste in Switzerland
3.2 mil. tonnes	of municipal solid waste in Switzerland
1 mil. tonnes	of hazardous waste in Switzerland

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## Recycling

# Disposing of waste without harming the environment

SWICO Recycling stands for environmentally friendly recycling. This is extremely important in today's world. Inappropriate handling of electrical and electronic equipment can cause harmful substances to get into the air, earth and water, thus endangering people, animals and plants.

### Heavy metals in old equipment

Plastic PC casings often contain flameproof material. Harmful dioxins get into the air if these are burned. Heavy metals can also be found in electrical and electronic equipment. For example, printed circuit boards in PCs contain lead, among other materials. This metal is extremely

dangerous to human health, especially in conditions of extended contact.

Improper recycling is a big problem in developing and newly industrializing countries. Raw materials from electronic waste are a popular source of income for people in poor countries. Especially since prices shot up on the world market. Disused equipment arrives in the less developed countries; the inhabitants break it down in order to sell the materials and thus ensure their survival. They are unaware of the extent to which some materials are harmful to health. They burn computer casings and cable

insulation, and breathe in carcinogenic vapours. They improperly break the equipment down into components containing hazardous materials and melt heavy metals – due to poverty sometimes even in pans in which they prepare their food. The broken-down equipment is dumped, and seawater and rain carry harmful substances into earth and water.

### **No transportation to the third world**

SWICO Recycling guarantees that no electronic waste delivered to the system from collection points in Switzerland and the Principality of Liechtenstein will be found

abroad. SWICO Recycling's partners break the equipment down into its individual components in an environmentally compatible manner. Parts containing harmful substances, such as printed circuit boards and capacitors, are transported to qualified disposal experts under conditions of strict safeguards. These disposal experts use specialized procedures to isolate recyclable, but harmful, raw materials such as mercury and lead. Non-recyclable materials are incinerated. High performance filters in our incineration plant guarantee that no noxious vapours find their way into the environment.

## Components of a desktop workstation

12.2 kg iron  
10.6 kg glass  
5.9 kg plastic  
1.6 kg aluminium  
0.9 kg copper

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## Valuable materials

# Anything other than waste

Supposedly worthless electrical and electronic waste contains valuable raw materials such as glass, plastics and metals. Even precious metals such as gold, silver and, above all, copper are built into a computer. Reclamation is absolutely essential given the present shortage of raw materials, especially in the case of copper: an average PC contains 900 grams. Copper is an important base material which is in heavy demand on world markets due to its excellent properties of conductivity of both heat and electricity. Without copper, modern technologies such as the Internet, mobile phones and computer networks

would be unthinkable. Copper makes new technologies possible. Demand is correspondingly high: at present 15 million tonnes of copper are processed each year, of which one third goes to the electrical industry.

Chile is the most important producer of copper. However, this metal is also mined in Indonesia, Australia and Russia. Half of the world's copper stocks have already been used. Mining is expensive, pollutes the environment and consumes a great deal of energy; around 200 tonnes of copper ore have to be extracted for every

ton of copper. The copper shortage has caused the price to skyrocket.

### **More environmentally friendly than mining: recycling**

A total of 40,000 tonnes of copper is disposed of in Switzerland. This is contained in many electrical and electronic devices. The reclamation of electronic waste is much more environmentally friendly than mining. 15 times less energy is required for reclamation than to produce copper from copper ore. For the purpose of reclamation

the equipment components containing copper are removed. The plastic sheathing is removed from electrical cables in specialized cable recycling works, and the copper wires and other copper components are sent via the scrap metal trade to processing works at home and abroad. Currently 12 to 13 per cent of copper worldwide is reclaimed from copper scrap; this figure rises as high as 50 per cent in the industrialized countries. The recycling of copper and other valuable materials therefore makes a great deal of sense.

### Origin of disused equipment

- 40 % from private collection points and communities
- 20 % from trade dealers
- 25 % from businesses
- 15 % from producers

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## Services

# SWICO Recycling – a strong partner for you

Signatories of the SWICO Recycling Convention pledge to protect the environment and to conserve resources. It costs nothing to join the Convention. SWICO Recycling guarantees free-of-charge transportation of the decommissioned equipment and recycling in accordance with Swiss law. Signatories to the Convention are also regularly supplied with updates from the recycling industry, science and technology, as well as European legislation and cur-

rent quality standards. They know how to represent their interests competently. For their part, participants in the SWICO Recycling system make a commitment to take back disused equipment and channel it into the system, to levy the advance recycling fee on equipment and components, and to settle the accounts with SWICO Recycling.

### **Who can join SWICO Recycling?**

Importers and manufacturers from the fields of IT/office equipment, telephony, dental equipment, consumer electronics, the graphics industry, medical equipment, measuring instruments, photography and safety engineering qualify to be members of the SWICO Recycling system. A further condition is that members must generate at least 500 Swiss francs of advance recycling fees (ARF) per year.

Joining the SWICO Recycling Convention is very easy: the membership application form can be found on the SWICO Recycling website. Download it, sign it and send it to SWICO Recycling. You will have then already taken the most important step. Membership of the SWICO Recycling system represents not only a clear commitment to the environment. It is also a commitment to responsibility.



**Join SWICO Recycling**  
[www.swicorecycling.ch](http://www.swicorecycling.ch)