
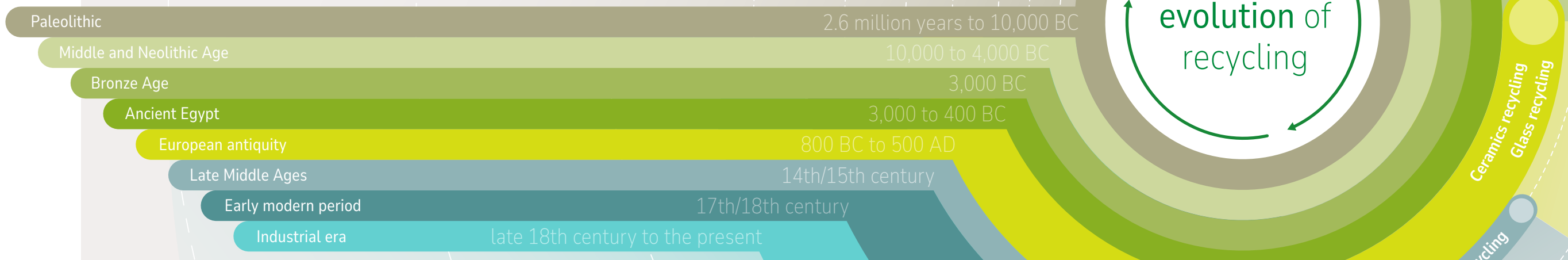


A return to the origins

The reuse of waste is not a modern invention. Archaeological and historical records show that recycling was already practiced in the Stone Age. In ancient Rome and Greece, systematically selected material flows were recycled, e.g. metals and glass were collected, melted down and reworked. The trade in used goods picked up speed in the early modern period. With the onset of industrialisation and growing consumption in the 20th century, waste becomes a global challenge. Awareness of environmental protection and material cycles is on the rise. With the increased desire for a society without waste, zero-waste strategies are coming into focus – a return to the origins.

 A return to **sustainable cycles**: From ancient Rome's use of **recycled materials** to the challenges of current global waste problems.



Paleolithic 2.6 million years to 10,000 BC
Middle and Neolithic Age 10,000 to 4,000 BC
Bronze Age 3,000 BC
Ancient Egypt 3,000 to 400 BC
European antiquity 800 BC to 500 AD
Late Middle Ages 14th/15th century
Early modern period 17th/18th century
Industrial era late 18th century to the present

Mineral recycling
 In the Qesem Cave in Israel, recycling can be traced as far back as 420,000–200,000 BC: stone objects that could no longer be used in their original form were transformed into small, very sharp tools – not as makeshift solutions, but as important components of the Stone Age toolbox.

First landfills
 The history of waste in human communities begins with the advent of settled living. Piles of organic waste found near dwellings can be considered early landfills. Archaeological investigations of Neolithic settlements have uncovered bones, arrowheads, faeces, food scraps, ash and broken tools.

Scrap metal recycling
 The first metals processed by humans were gold and silver. Due to their rarity, they were only used for jewelry and cult objects. With the discovery of copper, a new era begins: bronze, an alloy of copper and tin, proves to be an excellent material. The discovery of hoards of these materials proves that metal recycling was invented at the same time.

Papyrus recycling
 Once it had served its purpose, papyrus, the writing paper of the ancient Egyptians, was discarded on the city outskirts along with other garbage. Desert sand preserved the writings, thus conserving them for posterity. Old papyri were also reused in the production of mummy wrappings. The scripts could be restored by peeling them layer by layer.

Ceramics recycling
 Ceramics don't rot. That's why broken clay was piled up in Rome, for example: Monte Testaccio, one of the hills of Rome, was formed in this manner. However, there is also evidence of the reuse of clay, for example, old ceramic vessels were reassembled to form a kind of sewer system.

Glass recycling
 Roman glassworks imported raw glass from the Middle East and melted it down in small furnaces for further processing, adding a proportion of recycled glass. Even in ancient times, glass was separated by color, as colored glass contaminates the molten mass.

Waste collection
 In 1891, the first paid waste collection service was introduced on German soil. A blacksmith from Giesingen developed the Haritsch-Wagon. This coffin-like carriage was pulled by horses, the garbage was collected and dumped outside the city gates.

Waste treatment
 Thermal waste treatment is introduced to tackle the growing volume of waste in the industrialised world. The first modern large-scale waste incineration plant with a daily capacity of 1,200 tons goes into operation in Düsseldorf-Flingern in 1965.

Environmental law
 In the 1970s and 1980s, environmental protection legislation gathers pace. The protection of resources is expressed in the "Kreislaufwirtschaftsgesetz" (Circular Economy Act). Strategies to avoid waste, such as Design for Recycling and the right to repair, are shaping current socioeconomic development.

Recycling of gold thread
 At the Viennese imperial court and Versailles, for example, garments interwoven with gold thread were in demand. The robes were expensive, and parfilage, the pulling out and collecting of gold thread, became a favorite handicraft of noblewomen.

Second hand trade
 Social standing was expressed through the possession of the latest accessories. To finance their lifestyle, the old was sold to buy the new. As early as the 18th century, there were shops in Paris selling old furniture and art objects, while auction houses emerged in London and Paris.

Cloth rag recycling
 In 1390, the first paper mill began operating in Nuremberg. The raw materials for paper production were plant fibers, including used textiles in the form of cloth rags. With the invention of letterpress printing in 1445 and the increasing demand for raw materials, the export of cloth rags was partially banned and smuggling punished.

Paper recycling
 Justus Claproth, a lawyer from Göttingen, is regarded as the inventor of recycled paper. In 1774, he presented the first recycling process for used paper in his publication "An Invention for Turning Printed Paper into New Paper".

Sources: remex.de/quellen-resuemee