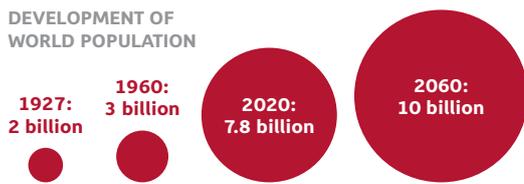




Our impetus for growth,
which is not at the expense of the environment, climate or quality of life
**THERE IS ONLY ONE PLANET EARTH,
BUT BY 2050 GLOBAL CONSUMPTION
WILL REACH SUCH A LEVEL YOU
WOULD THINK WE HAD THREE OF THEM¹.**

Every year „Earth Overshoot Day“ reminds us that humanity has already used up its resource budget for the year. While it was still 7 December in 1990, by 2019 more resources than the Earth can renew were already being consumed from 29 July onwards. In 2020 the deadline has been put back to 22 August, a postponement of more than three weeks, which means that that humanity’s ecological footprint has been reduced again somewhat. This proves that it is possible to reduce the consumption of resources within a short time. The target and zero mark for a secure future is 31 December.

DEVELOPMENT OF WORLD POPULATION



Cause: increasing consumer demand

There are around 7.8 billion people living on the planet today, and according to current UN figures there will be more than 10 billion in 2060. Global average per capita income is expected to reach the current OECD level, around 40,000 USD, by 2060. The growing world population with higher incomes is causing a sharp increase in global demand for goods and services³.

Global impact chain: 5 of 9 ecological pollution limits are already exceeded by mankind today

A group of scientists from the fields of earth system and environmental sciences published an initial overview of ecological stress limits in 2009. They identified nine planetary limits, each of which is essential for the survival of mankind. According to the latest data collected in 2015, five of the nine limits have already been found to be seriously exceeded⁴. The consequences are complex and irreversible environmental damage which has long been visible worldwide. The ecological load limit has only not yet been reached in the areas of ocean acidification and freshwater consumption⁵.

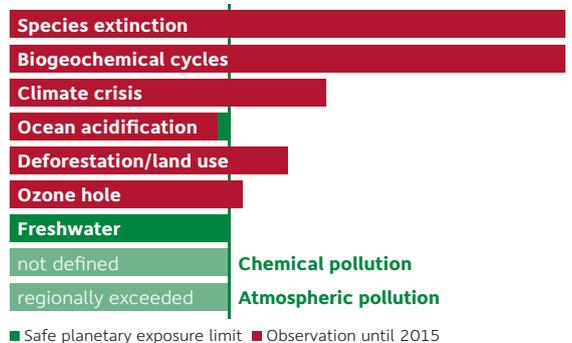
DEVELOPMENT OF GLOBAL MATERIAL CONSUMPTION



The result: Increasing consumption of resources

Global material consumption is expected to more than quadruple from 79Gt in 2011 to 350Gt in 2060 due to growing consumer demand. If we take into account that services and technological developments are expected to reduce material intensity, i.e. the required quantity of raw materials per unit of income generated, by 1.3 % per year worldwide by 2060, global material consumption would be 167 Gt in 2060, twice as much as in 2011.

ECOLOGICAL POLLUTION LIMITS 2015



Recycling management as an ecological and economic necessity⁶

Closing material cycles is seen as an essential issue for the future, the fifth industrial revolution after mechanisation, the steam engine, electrification and digitalisation.⁷



EU action plan for recycling management

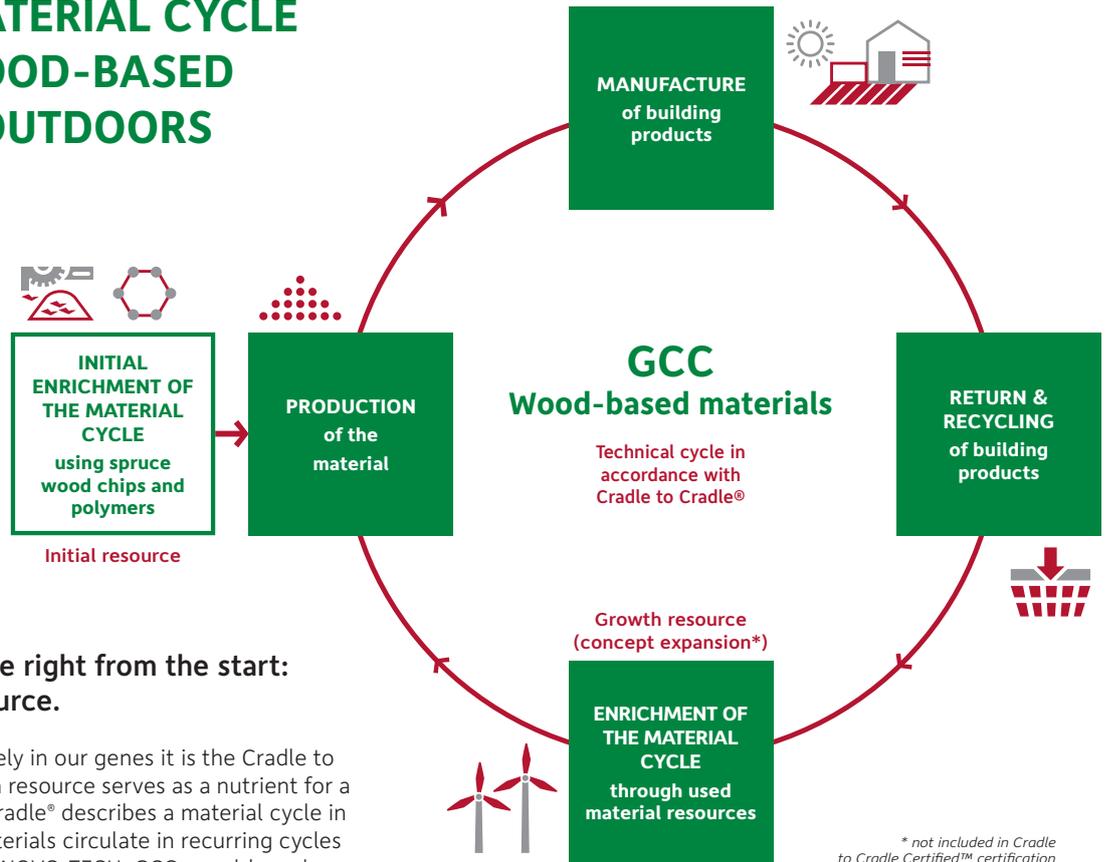
In its 2020 action plan for recycling management, the European Commission has emphasised that the transformation to a recycling economy will be central for the future competitiveness of European industry⁸. The European Commission’s Environmental Action Plan sets the goal of halving the volume of residual waste by 2030, while at the same time doubling the proportion of recycled materials in total consumption, the so-called „cyclical material use rate“, over this period.

In closed loop recycling management, the products and the materials they contain are not disposed of after their useful life but are preserved in the best possible way through reuse, repair, reconditioning and recycling. Waste can be reduced to a minimum by extending the useful life and increasing the degree of utilisation, because waste is turned into valuable resources and the need for primary raw materials is reduced.

1 <https://www.un.org/sustainabledevelopment/sustainable-consumption-production/>
 2 <https://www.worldometers.info/world-population/>
 3 https://www.ec.europa.eu/environment/global-material-resources-outlook-to-2060-9789264-207452_en.htm
 4 Dr. Henning Wilts, Nicolas Sengen, Strategieforschungsprozess Kreislaufwirtschaft, Basisreport, Juni 2020
 5 Will Steffen et al.: Planetary boundaries: Guiding human development on a changing planet. In: Science. Band 347, Nr. 6223, 2015, doi:10.1126/science.1259855.
 6 Dr. Henning Wilts, Nicolas Sengen, Strategieforschungsprozess Kreislaufwirtschaft, Basisreport, Juni 2020
 7 www.wuppertalbewegung.de/zukunft/projekt-circular-valley/
 8 Europäische Kommission 2020. https://ec.europa.eu/environment/circular-economy/pdf/new_circular_economy_action_plan.pdf

Production without additional consumption of natural resources

NOVOTECH CLOSES AN ENDLESS MATERIAL CYCLE FOR GCC WOOD-BASED PRODUCTS OUTDOORS



Our original principle right from the start: Everything is a resource.

If there's one thing definitely in our genes it is the Cradle to Cradle® principle that each resource serves as a nutrient for a new life cycle. Cradle to Cradle® describes a material cycle in which products or raw materials circulate in recurring cycles „from cradle to cradle“. At NOVO-TECH, GCC wood-based products pass through a technical cycle so that new products are constantly being manufactured from them. We have installed a special take-back system which has been returning NOVO-TECH products made of GCC back into the material cycle since 2005. For this purpose we provide free-of-charge grid boxes for the dismantling of the components and then take them back via our dealers.

We have developed a concept based on the same basic principle to reprocess other used products and feed the materials into our own material cycle. In this way existing material resources are maintained in their quality and used further. This enables NOVO-TECH to grow without additional consumption of natural raw materials and to manufacture building products to the highest quality standards.

Building with GCC is building with vision!

Added value for the environment and climate protection:

- ✓ assured take-back and recyclability more
- ✓ preservation of raw materials - less CO2 emissions
- ✓ climate-neutral production

Added value for planners and architects:

- ✓ permanent availability
- ✓ high flexibility in component geometry
- ✓ high physical load capacity/statics
- ✓ Accuracy of fit even years later
- ✓ enables modular modernisation

Added value for clients, owners and investors:

- ✓ prevents future disposal costs
- ✓ new business models (leasing model) preserve liquidity
- ✓ increase of real property value
- ✓ meets criteria for sustainable construction and green building according to DGNB system, LEED® and BREEAM®

Added value for customers/users and region:

- ✓ Increase in quality through long-lasting user experience
- ✓ Healthy living through certified non-toxicity
- ✓ Increase in regional added value through remaining and recycling of material values



GCC meets the Gold Level of the Cradle to Cradle Certified™ standard.

With Cradle to Cradle Certified™ Gold Certification of the German Compact

Composite (GCC) wood-based material will not only confirm endless recyclability, but above all the health safety of all components on a global quality level. Ecological evaluation of the integrated water management and the climate-neutral energy concept in production, in addition to the high social standards at our production site in Germany, round off the comprehensive material and process evaluation in a holistic manner. Within the certification, GCC even achieves platinum level in the category of material health and thus meets the highest standard for eco-effectiveness.

WWW.NOVO-TECH.DE