# 5. PRODUCT SUSTAINABILITY

**The analysis of a product in terms of environmental, economic, and social criteria over its entire useful life is becoming ever more important—not just from customers' standpoint, but also at the political and legislative level. The effects on voestalpine's climate protection targets are particularly important in this connection.**

Solid and workable data are the basis for any assessment of sustainability. They make it possible to provide transparent and quantifiable information on the sustainability of products to business partners, investors, trade and other associations, non-governmental organizations (NGOs), the public at large, and government agencies. These stakeholders use a wide variety of assessment and certification systems for the individual parameters. This poses a major challenge for a global technology group that operates in different segments. Among other things, therefore, voestalpine's activities also focus on helping to shape the legal framework for product sustainability, e.g., through legislation, the development of standards, the standardization of methods, etc.

Environmental, social, and economic aspects must be considered and included in any comprehensive product assessment—specifically, in each case across the given products' entire useful life, from the extraction of the raw materials all the way to the products' reuse and recycling.

Product sustainability thus encompasses all three pillars of sustainability along the entire supply and value chain, even though the requirements currently tilt the focus in the direction of ecological issues.

## Environmental Aspects

>> Life cycle assessment (LCA) for determining the environmental effects (the "carbon footprint") of voestalpine's products, such as a given product's carbon or water footprint and the provision of verified environmental balance sheets in the form of Environmental Product Declarations (EPDs).

>> Material compliance: Information on the handling of relevant substances and substantiation of compliance with the applicable statutory requirements, e.g., "Registration, Evaluation, Authorization, and Restriction of Chemicals" (REACH); the "Restriction of Hazardous Substances Directive" (RoHS); the "Global Automotive Declarable Substance List" (GADSL); and the EU Directive on End-of-Life Vehicles.

>> Circular economy: Development and creation of closed-loop substance, materials, and value-added chains to boost resource and energy efficiency (e.g., utilization of waste and recycled materials stemming from the production of steel, creation of recycling chains for product and secondary raw materials in the supply chain).

### Social Aspects

>> Disclosure of and transparency regarding the use of so-called conflict minerals along the entire supply chain pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank Act"). voestalpine applies the internationally standardized and accepted "Conflict Minerals Reporting Template" (CMRT) of the Responsible Minerals Initiative (RMI) based on information from the upstream supply chain.

### Economic Aspects

>> Provision of solid and workable information for various assessment and certification systems that are included in supply chain decision-making processes and can be utilized all the way to the end consumer as conveyors of information.

# 5.1 ENVIRONMENTAL PRODUCT ASSESSMENT: LCA IN THE voestalpine GROUP

A life cycle assessment is a methodology for systematically determining the environmental impact of products. It always involves analyzing several impact categories such as the carbon footprint ($CO_2$), the acidification potential ($SO_2$, $NO_x$), primary energy needs as well as the utilization of land and resources.

While the "cradle-to-grave" concept (i.e., all life stages including distribution, use, and disposal) is typically used to define the system limits of products destined for end consumers, the "cradle-to-gate" approach generally applies to industrial products, because these products are turned into end products outside of a company's own facilities. This is also how voestalpine applies the procedure in most cases. The findings of such an analysis can be used by the given industrial customer to compute a complete life cycle assessment for a specific product.

An LCA of voestalpine products also shows the potential gained from recycling, because doing so avoids engaging in new primary production. Steel scrap (e.g., from end-of-life autobodies)—which is an important raw material in steelmaking and can be turned back into high value product qualities during the production process—is a typical example of this approach.

Environmental Product Declarations (EPDs) are important tools in this regard: They deliver transparent and neutral information on the environmental impact of a product based on its environmental balance sheet. voestalpine already has prepared and published EPDs for a variety of products such as colofer®, heavy plate as well as hot-dip galvanized strip steel. They are based on EN 15804 and ISO 14025, were verified by independent auditors, and have been published in the declarations program of the Austrian Institut Bauen und Umwelt (IBU), an association of building product manufacturers. For example, additional information and data on assessments of a product's sustainability, which voestalpine makes available to its customers on a regular basis, serve as pre-chain data for customers' products. They also serve as a basis for different sustainable building certification systems; supply chain reporting (e.g., the Carbon Disclosure Project, CDP); international product-related standards (e.g., the Framework Standard for Responsible Sourcing (BES 6001)); or national initiatives such as the Netherlands' History Database of the Global Environment.

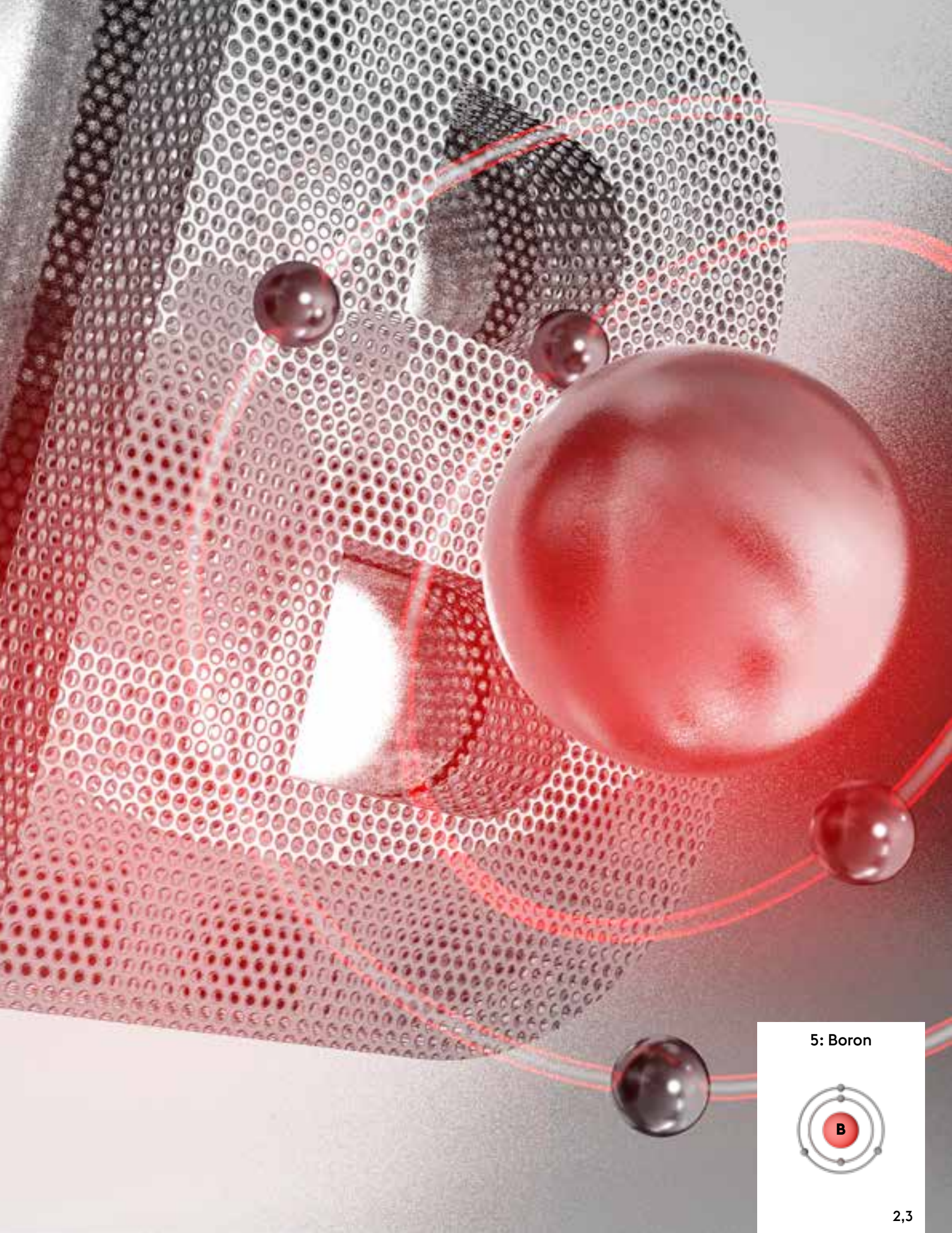
## 5.2 THE DECARBONIZATION CHALLENGE

The long-term decarbonization of the economic and social system plays a role in environmental product assessments also, especially in the context of the so-called "circular economy," which refers to sustainable recycling, taking value chains into account. EU legislation is addressing this topic too, e.g., through tightened limits on emissions up to 2030 and beyond.

In the automotive industry, for example, emissions assessments over a vehicle's entire life cycle (so-called "life cycle emissions") are being discussed in this connection. voestalpine cooperates intensively with its customers on these issues in order to describe the contribution of steel as a material and devise long-term concepts for $CO_2$-minimized steelmaking as well as to compile data on the joint potentials of the value chain.

## 5.3 AN ISSUE OF GROUP-WIDE SIGNIFICANCE

voestalpine believes that both corporate responsibility and product sustainability are key aspects of the sustainability of a company and its products, and aims to bring about a coordinated and intensive collaboration of its divisions in this respect. The first-ever product sustainability workshop in April 2019 signaled the start of specific steps: Representatives of all divisions and numerous operating companies as well as managers of the Strategy, Research, Sales, Corporate Responsibility, Environmental Management, and Communications departments participated in the workshop that was designed to facilitate an exchange of information.



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