Circularity at Schneider Electric

The foundation of circularity at Schneider

The goal of circularity is to design out waste and pollution, keep products and materials in use, and regenerate natural systems. It proposes a framework in which outputs from every lifecycle stage become inputs to another, offsetting the need for new materials and energy-intensive manufacturing activities. A circular economy is also a non-negotiable for a net zero, nature-positive future. Our approach is highlighted below:

**Vision:** to decouple business growth from extraction of nature resources while meeting our net-zero and nature-positive targets

**Mission:** to keep products, parts, and materials in circulation at their highest functional value for as long as possible

**Strategic layers:**

- Use better optimizes material and energy use. For example, designing with less and use of sustainable materials.
- Use longer keeps products in use for as long as possible. Regular maintenance and repair services, and asset modernizations are examples.
- Use again recirculates products, parts, and materials in the economy. For example, refurbishing retired assets and reselling them before recycling its raw materials.

![Figure 1: Foundation of circularity at Schneider](image)

There is a hierarchy to this approach. Value retention is the highest at the center, and cost to recover value increases as you move away from the center. For example, it is far more efficient to optimize the use of copper in design (‘use better’) than it is to recover copper from products at the end of their use (‘use again’).

**Schneider’s strengths**

Schneider is today seen as an industry leader in circularity through its thought leadership, efficient manufacturing sites, awards, and product labels. For example Barbara Frei, EVP of Industrial Automation is an executive sponsor of the World Economic Forum, and several of our manufacturing
sites have gained lighthouse status. Moreover, Schneider’s unique offer and brand have set the company up for a significant first-mover advantage that is critical to success. Sustainability and circularity are not only at the core of its product offering but also its branding position as an impact company. Additionally, its integrated ecosystem offer consisting of connected products, open digital solutions, and on-site expertise breakdown typical circularity barriers like traceability, life extension and take back.

**How it links to environmental commitments**

When products and materials are circulated in the economy at their highest value, the need for virgin materials is reduced. This leads to a reduction in with metal and mineral extraction, fewer resource needs for manufacturing. This in turn leads to lesser environmental emissions and more space for nature regeneration and wilderness preservation.

The reduction in environmental emissions links directly to Schneider achieving its Schneider Sustainability Impact (SSI) targets 1 to 5 by 2025 and its Net Zero target by 2030. Circularity is a non-negotiable for Net Zero because most efforts to tackle the crisis have focused on a transition to renewable energy, complemented by energy efficiency, but these measures can only address 55% of emissions. The remaining 45% of emissions come from the production and consumption of products1. Beyond this corporate level, circularity principles also guide product sustainability, for example Eco-Design and Green Premium; efficient manufacturing, for example, waste to resource sites; and component and material securitization, for example, copper circularity.

Schneider has committed to net-zero biodiversity loss from its operations by 20302. Analyzing Schneider’s end to end biodiversity footprint, a significant share (85%) comes from downstream activities (mainly electrical consumption); the second most significant source of impact is upstream activities (15%) represented by sourcing of metals, timber and minerals. By incorporating the concepts of circularity ie., use better, use longer, and use again, Schneider can drastically reduce its upstream and downstream biodiversity footprint. Schneider has the ambition of having 100% of sites with biodiversity conservation and restoration programs.

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1 [Completing the Picture - How the circular economy tackles climate change.pdf](thirdlight.com)
2 [Schneider Electric details pledge to fight global biodiversity loss | Schneider Electric Global (se.com)]

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Figure 2. Circularity is the largest gear for a net-zero, nature-positive future