

Feasibility & Desirability: How Bosch built a drill from post-consumer recycled plastics

Key Learnings



Prioritize Professional Aggregators For Volume

Reclaiming durable goods directly from users is logistically inefficient because products remain scattered across thousands of municipal sites. Interfacing with waste collectors who focus on specific electrical streams enables the recovery of high-quality components before they are downcycled. **Targeting industrial waste aggregators** provides the **volume and efficiency needed for economically viable reverse logistics**.

Inform Design Through Technical Data

The dismantling phase of a circular pilot acts as a research loop to understand how products age over seventeen-year lifecycles. Capturing metrics on disassembly time and material degradation reveals structural barriers that are typically invisible in linear models. **Translating dismantling data into technical insights** allows designers to **optimize future products for repair and high-value recycling** based on real-world performance.

Remove Friction Through Virgin Parity

Circular products achieve market acceptance when they match the industrial stress tests and price points of virgin versions. Maintaining identical standards for impact resistance and color ensures no performance trade-off, while avoiding a green premium removes the economic barrier for the user. **Matching virgin technical and price specifications** ensures that **circularity is a seamless transition for the customer** without compromising brand quality.

Initiate Small-Scale Pilots To Manage Complexity

Developing a closed-loop system involves high technical risk and long timelines that are easier to navigate through a narrow, focused product launch. Starting with a limited edition allows a team to test specific recycling trials and legal communication boundaries without the pressure of a full portfolio overhaul. **Daring to start with a single product** creates a **manageable environment to fail and learn** while building internal momentum for circularity.

Listen to the full episode here:

<https://circularity.fm/podcast-episodes/feasibility-desirability-how-bosch-built-a-drill-from-post-consumer-recycled-plastics/>