

Towards a circular design approach for products made from locally collected waste

Expanding EcoWorld’s product portfolio with meaningful design, for local Kenyan people, from collected plastic waste

CHALLENGES

Company Challenge: Transforming Recycling into Upcycling
How might we design products that help EcoWorld to shift from traditional recycling practices to innovative upcycling methods, thereby maximizing the potential of waste materials?

End User Challenge: Addressing Inadequate Housing, and Closing the Knowledge Gap
How can we create solutions that simultaneously improve the inadequate housing conditions, and enhance public awareness about the impact of plastic on the environment and health?

THE APPROACH

A definition of Circular Design or upcycling in the local context was defined:

“Upcycling centers on creating products from plastic waste that offer enhanced social benefits to end users while managing the entire lifecycle of these products.”

A framework was made together with the company to visualize the circular product life cycle towards a circular design approach. It was found that the company did not focus on the Product in Use phase, as well as the Product End of Life. To address these phases the end users was involved in the design process through a four week field research.

FIELD RESEARCH

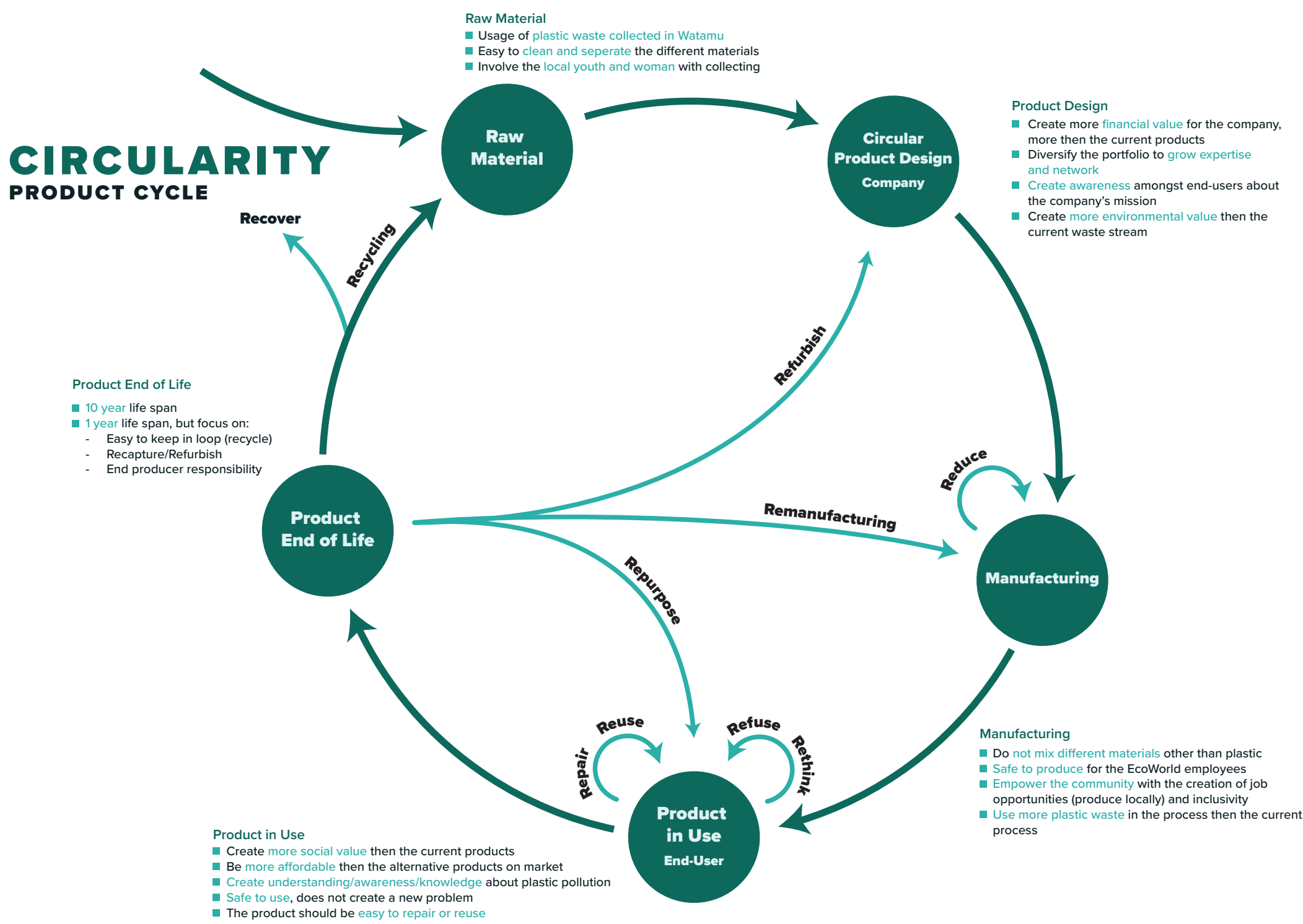
A 4 week field research was conducted in Watamu Kenya to involve the end user in the design process. Through co-creation, observation and interview methods insights were derived.

There is currently a lack of trust in using plastic waste material for products due to the novelty of the technology. However, local end users do see the benefit of this new emerging technology, and are together with the employees of EcoWorld eager to learn more about the possibilities. To start building trust and involvement among the end users with this emerging new economy a product is designed together with the local end users. The ideation sessions resulted in a Design Goal that fits in the local context and that is desired, while it addresses their current hygiene problem in house. Next to that it is designed to be viable and feasible in the local context. This design goal addresses the challenges addressed earlier, and functions as the first step towards building trust and involvement of the local end users.

“Design a recycled plastic-based, locally manufactured product to store personal possessions which improves and facilitates local Kenyan household cleanliness through its straightforward usage, affordability, and minimalistic design”

THE CONCEPT

The proposed concept improves the current living conditions in local kenyan households by facilitating storage possibilities for their possessions. The modular design uses no permanent connections for easy assembly and disassembly. Creating social value by addressing the overall cleanliness in house and involving the end user in the design process. This way the concept fits in the proposed framework as well as the design goal.



Leander Hombergen
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Committee
Prof. Dr. Ir. J.C. (Jan-Carel) Diehl
Dr. Ir. S.S. (Sonja) van Dam
Steve Trott
Company
EcoWorld

