A Decision-Making Support Tool for Resuable Packaging

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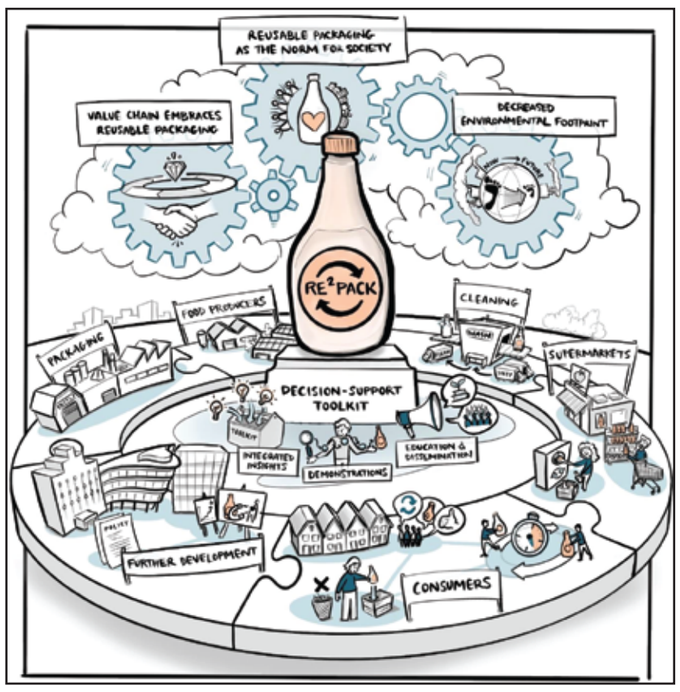
Re2Pack Project

The Re2Pack project is a collaborative initiative aimed at **advancing knowledge of reusable packaging systems (RPS)** to enhance environmental, economic, and social performance. The project focuses on challenging products (soft fruits and condiments).

Re2Pack brings together research groups specializing in Value Chains (WP1), Consumer Behavior (WP2), and Design (WP3). The goal is to create a decision-support tool for value chain stakeholders, integrating input from consortium partners and introducing innovative designs that promote behavioral shifts toward reuse.



WP1. Value Chains

The aim is to analyze the **key environmental, economic, and organizational factors** in RPS to support the decision-making process. By understanding the value chain and its critical factors, WP1 seeks to provide a tool for optimizing the RPS model (ecosystem organization) based on Life Cycle Assessment (environmental performance) and Life Cycle Costing (economic performance).

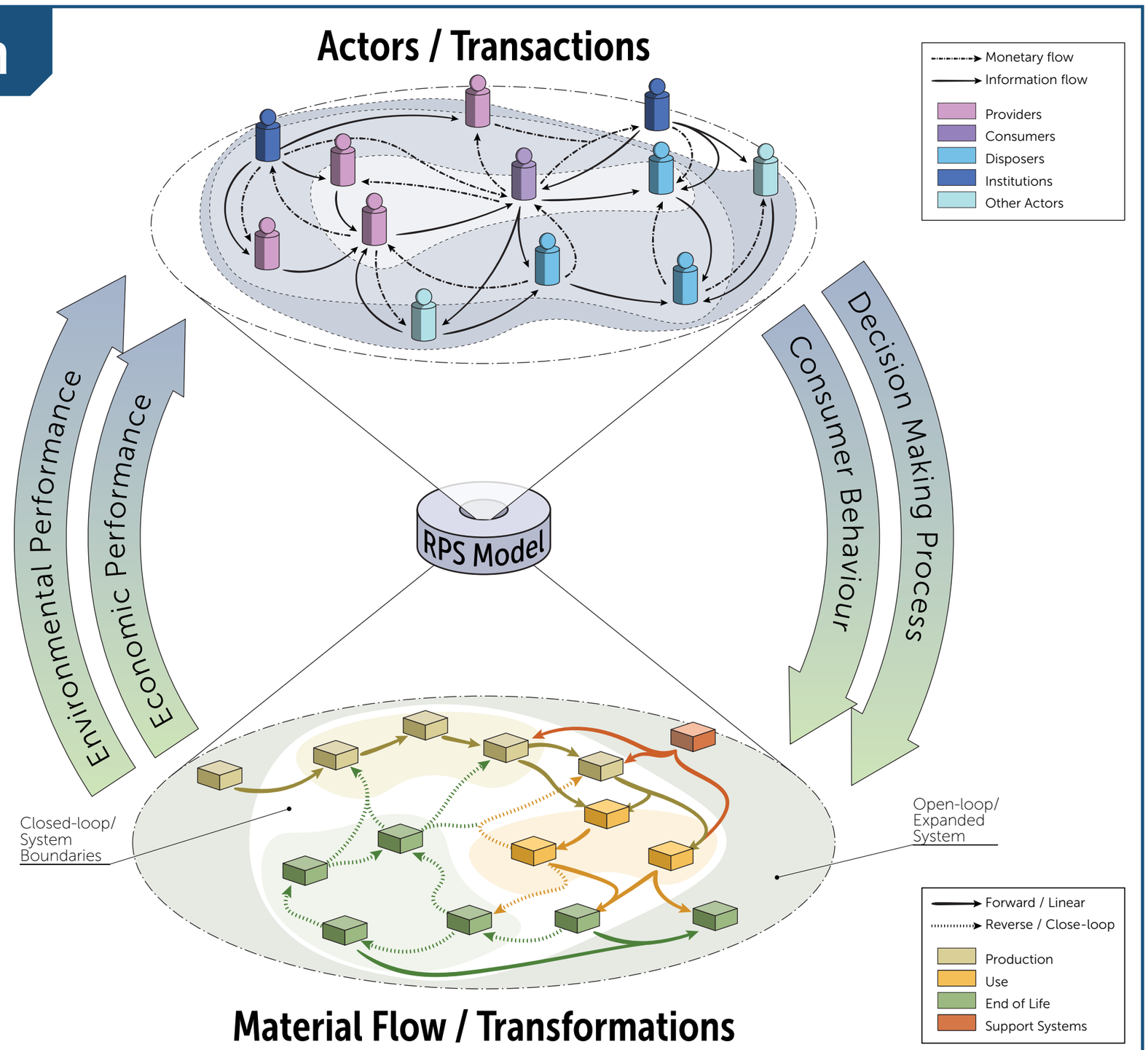
This would help assess new designs and determine which behavioral changes are more or less conducive to achieving common sustainability goals.

Theoretical Approach

The actors' network represents the **business ecosystem**, with the reuse service at its core and supporting actors on the periphery. The system behavior is produced by the actors' transactions and information exchanges, driving **consumer behavior** and **decision-making**.

Both systems revolve around the **lense of the RPS** and continuously influence each other's behaviour/performance. This interaction creates **conditions for success or failure**, primarily determined by **critical key factors** (environmental, economic, social and technical).

The **material flow system** encompasses the processes involved in the life cycle of reusable packaging, covering both closed-loop and open-loop supply chain activities. It determines the **economic and environmental performance** of the RPS model.



Methodology (2024 - 2025)

RPS Archetypes
- Elements
- Factors
- Value

Interviews
- Stakeholders
- Learn from existing examples

Data Analysis
- Influence in decision-making
- Value mapping and potential hot-spots

Framework for Tool Development
- Data needs for Life Cycle Assessment & Costing
- Results interpretation for decision-making process

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