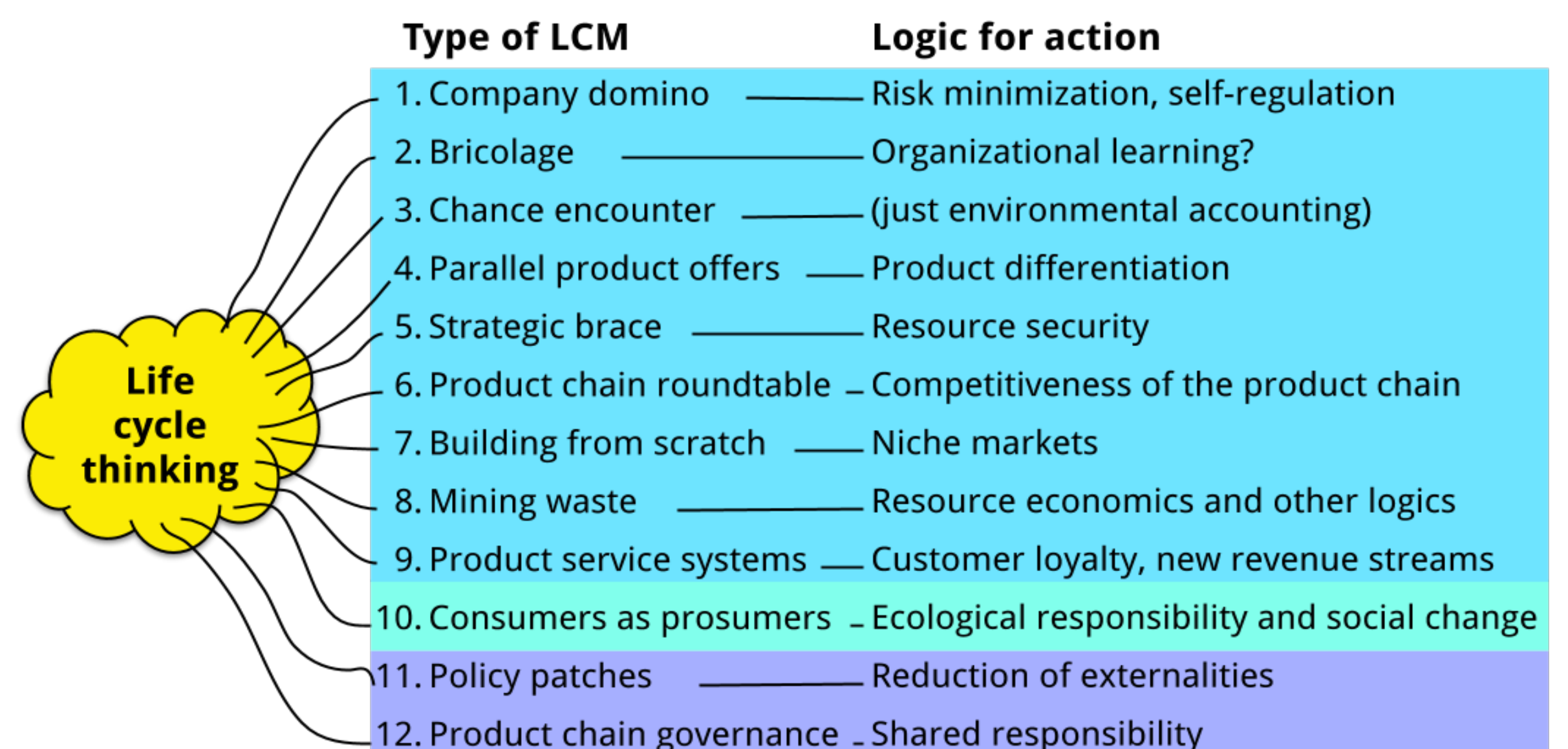# 12 x LCM — Variants of life cycle management

A case-based review shows that, in practice, LCM is shaped by a dominant action logic in the setting. A dominant action logic is, for example, the business strategy of a company or a government objective.

A first typology reveals 12 forms of LCM, in which each type is a result of life cycle thinking meeting a particular action logic. It also shows when and how LCM is seen to fit the purpose of different actors.

This typology provides an overview of the diversity of practiced LCM and a matching vocabulary with the aim of furthering discussion and understanding of LCM.

Type of LCM	Logic for action
1. Company domino	Risk minimization, self-regulation
2. Bricolage	Organizational learning?
3. Chance encounter	(just environmental accounting)
4. Parallel product offers	Product differentiation
5. Strategic brace	Resource security
6. Product chain roundtable	Competitiveness of the product chain
7. Building from scratch	Niche markets
8. Mining waste	Resource economics and other logics
9. Product service systems	Customer loyalty, new revenue streams
10. Consumers as prosumers	Ecological responsibility and social change
11. Policy patches	Reduction of externalities
12. Product chain governance	Shared responsibility

Life cycle thinking

TYPES OF LCM BY THEIR ACTION LOGIC. Legend: turquoise background indicates a company or a group of industry actors as instigator to LCM, minty green for consumer-citizen-led LCM, and lilac for government-led LCM.
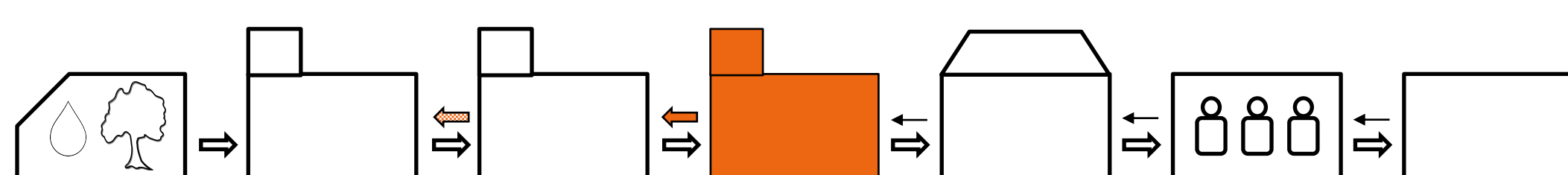

1. COMPANY DOMINO. Starting as traditional B2B management, a company impose demands on their first-tier suppliers, also hoping for a company domino effect of environmental management upstream the product chain (in orange). Aim: Corporate environmental self-regulation and risk minimization.
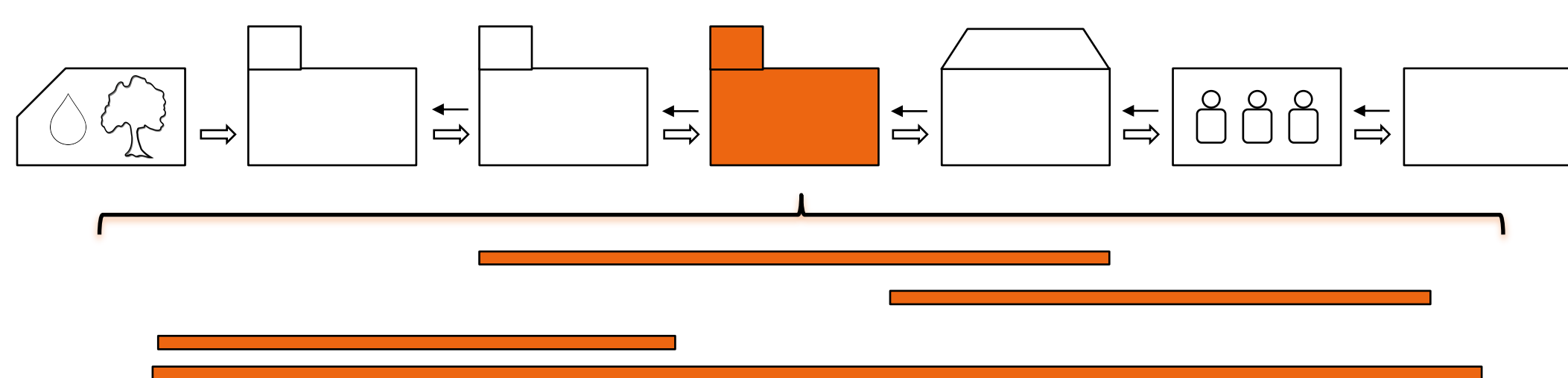
2. BRICOLAGE. A number of sustainability initiatives, aimed at different parts of the company and different parts of the product chain, are gradually being developed and implemented, together constituting LCM (in orange). Aim: Presumably organizational learning.
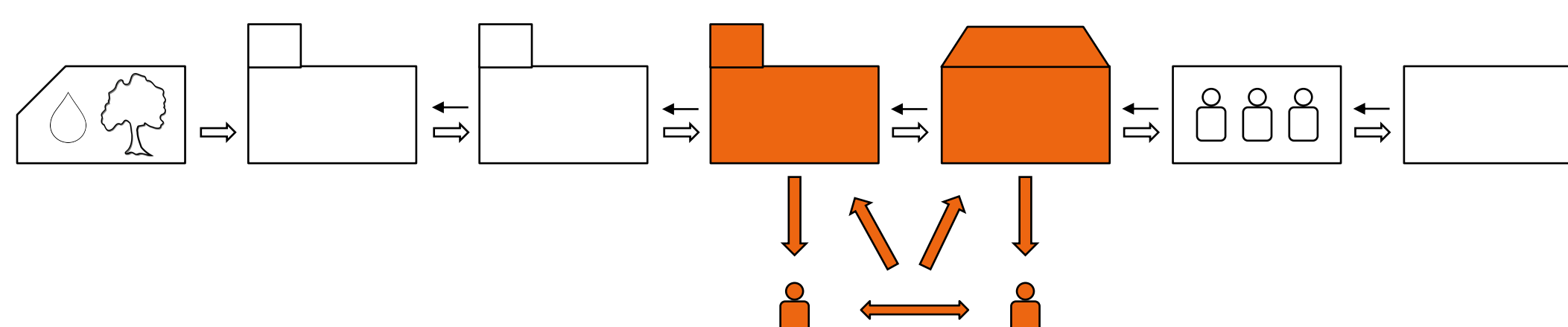
3. CHANCE ENCOUNTER. Employees of companies in the product chain, through chance encounters, meet and find possibilities of improving LCM in their product chains, which they also act upon (in orange). Aim: Presumably just environmental accounting.
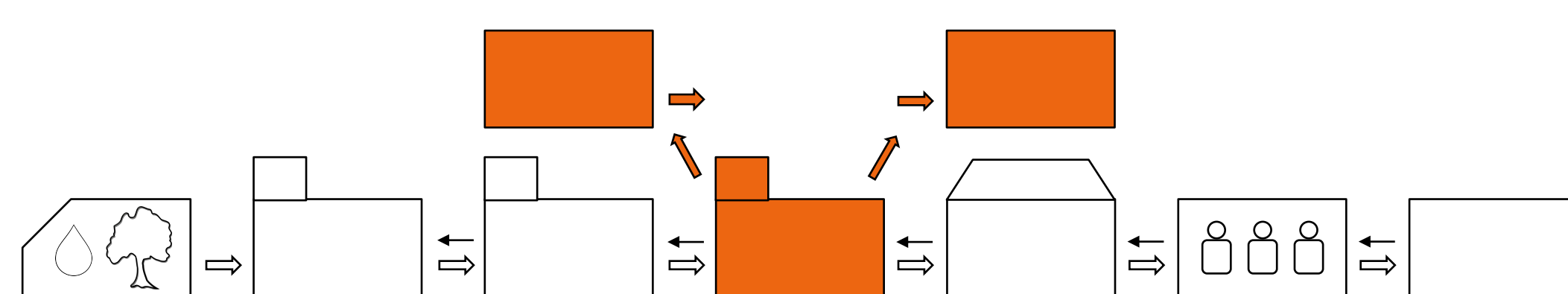
4. PARALELL PRODUCT OFFERS. Starting as company sales from only the traditional products portfolio, this is followed by the development of an alternative and parallel sustainability product portfolio (in orange). Aim: Product differentiation.
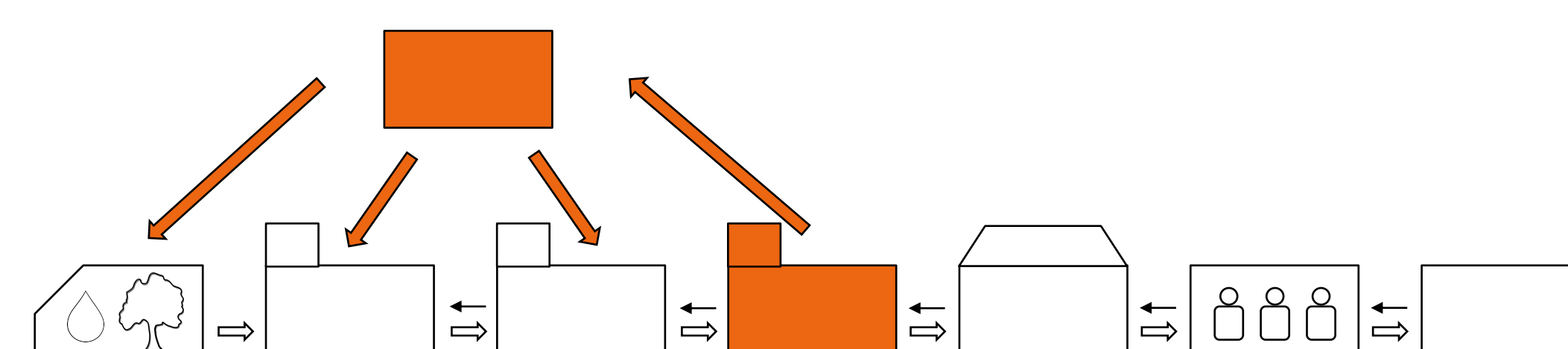
5. STRATEGIC BRACE. Starting as traditional B2B management, a company seeks to certify a product (or category), by collaborating with an external actor, who identify, assemble, and govern the reorganized product chain (in orange). Aim: Resource security.
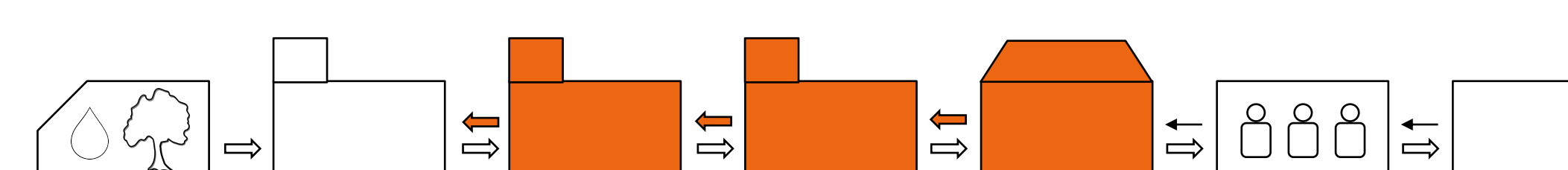
6. PRODUCT CHAIN ROUNDTABLE. Starting as traditional B2B management, it is followed by a multi-company coalition – a product chain round table – coordinating in-between multiple product chain actors (in orange). Aim: Competitiveness of the product chain.
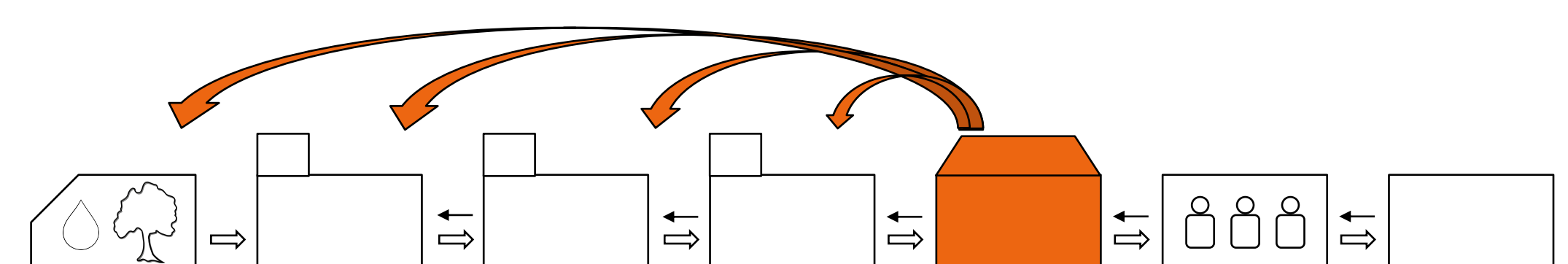
7. BUILDING FROM SCRATCH. In lack of an existing sustainable product and/or product chain, an entrepreneur creates one from scratch, which results in a transparent and sustainable product chain built on mutual reciprocity (in orange). Aim: Niche markets.
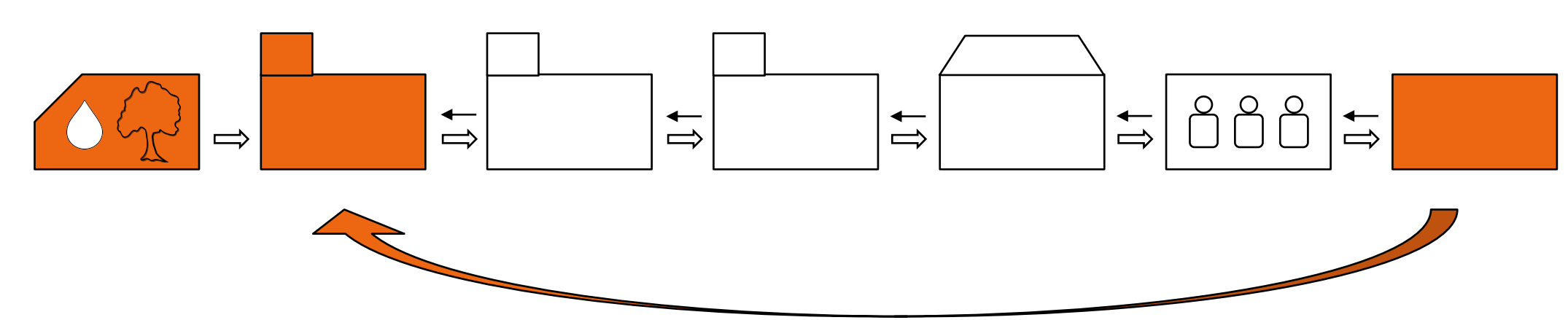
8. MINING WASTE. Identified waste resources are reused in the product life cycle (in orange). Aim: Resource economics, among else.
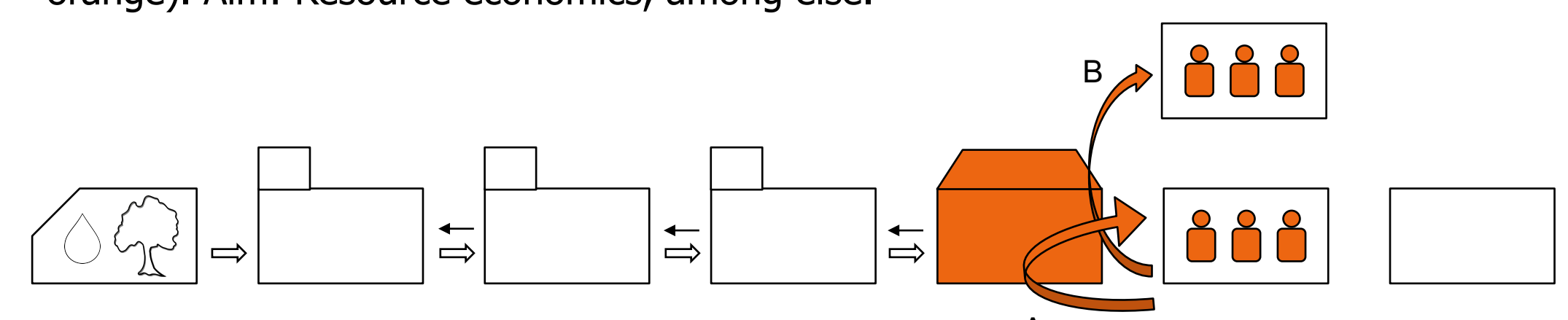
9. PRODUCT SERVICE SYSTEM. It is characterized by a) sales of services instead of (or parallel to) products, e.g. via b) servitization via the delivery of a service component with added value, when providing products (in orange). Aim: Customer loyalty and new revenue streams.
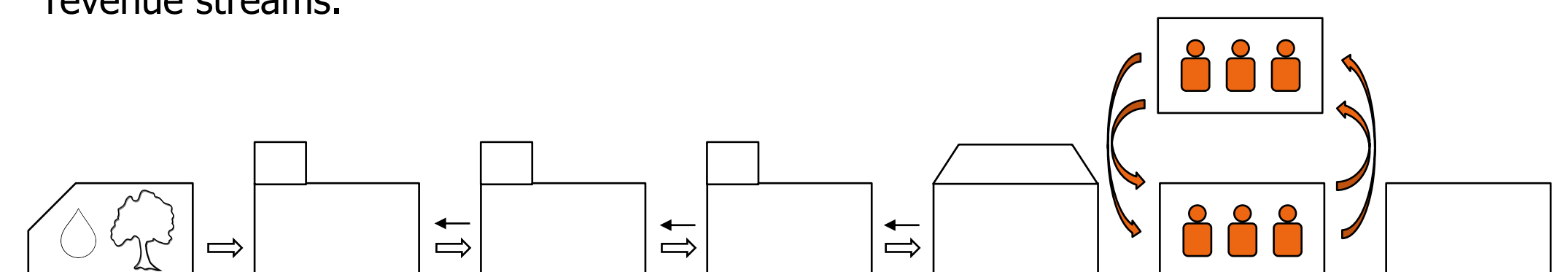
10. CONSUMERS AS PROSUMERS. An LCM type in which consumers are instead 'prosumers' via consumer-generated collective initiatives to repair and/or exchange products (in orange). Aim: Ecological responsibility and social change.
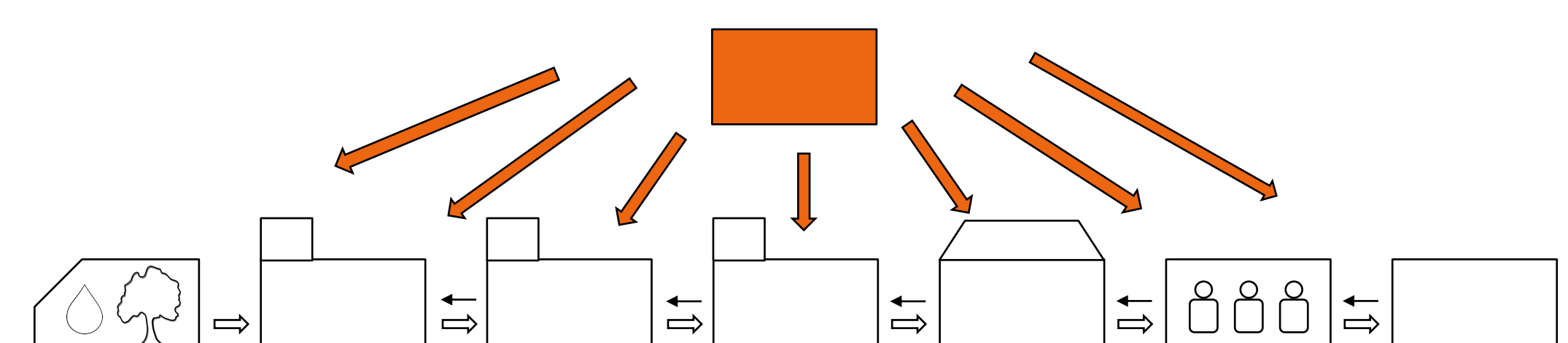
11. POLICY PATCHES. An LCM type characterized by a government actor imposing environmentally and product-oriented policy instruments targeted at different stages of the product life cycle (in orange). Aim: Reduction of externalities.
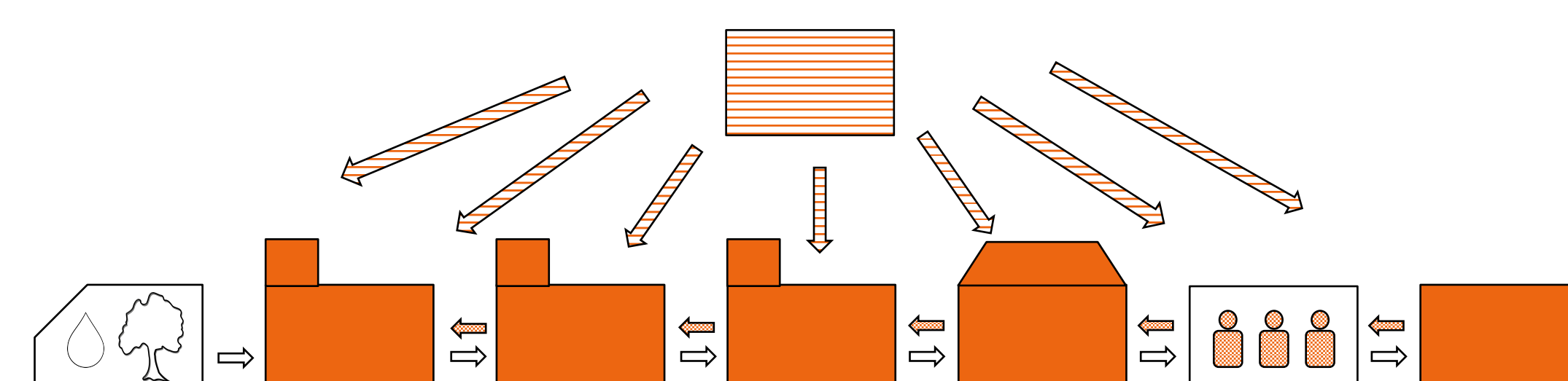
12. PRODUCT CHAIN GOVERNANCE. An LCM type characterized by shared responsibility (in orange), and with government often in the role of facilitator (striped orange). Aim: Shared responsibility.

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