Table 1. Characteristics of the ReSOLVE (Regenerate, Share, Optimize, Loop, Virtualize, Exchange) model.

No.	Action	Description	Examples
1	Regenerate	Shifting to renewable energy and materials; reclaiming, retaining, and regenerating health of ecosystems; returning recovered biological resources to the biosphere	• Shift to renewable energy and materials • Reclaim, retain, and restore health of ecosystems • Return recovered biological resources to the biosphere
2	Share	Keeping the product loop speed low and maximization of the utilization of products by sharing them among users, reusing them throughout their technical lifetime, and prolonging their life through maintenance, repair, and design for durability	• Share assets (e.g., cars, rooms, appliances) • Reuse/secondhand • Prolong life through maintenance, design for durability, upgradability, etc.
3	Optimize	Increasing the performance/efficiency of a product and removal of the waste in production and the supply chain	• Increase performance/efficiency of product • Remove waste in production and supply chain • Leverage big data, automation, remote sensing, and steering
4	Loop	Keeping components and materials in closed loops, and prioritization of inner loops. In the case of finite materials, this means remanufacturing products or components, and, as a last resort, recycling materials	• Remanufacture products or components • Recycle materials • Digest anaerobically • Extract biochemicals from organic waste
5	Virtualize	Delivering and using the utility virtually	• Books, music, travel, online shopping, autonomous vehicles, etc.
6	Exchange	Replacing the old materials with advanced non-renewable materials and applying of the new technologies	• Replace old with advanced non-renewable materials • Apply new technologies (e.g., 3D printing) • Choose new products/services (e.g., multimodal transport)