Accelerating Towards a Circular Economy

Core Philanthropic Partner:

Global Partners:

Circular Economy – A New Systemic Model

Getting your tongue around it

Circular Economy – A New Systemic Model

Elements of a definition

Regenerative and Restorative by intent and design

… aiming to decouple economic growth and development from the consumption of finite resources

…keeping products, components and materials at their highest utility and value, at all times and based on renewable resources

THE LINEAR ECONOMY

‘take, make and dispose’

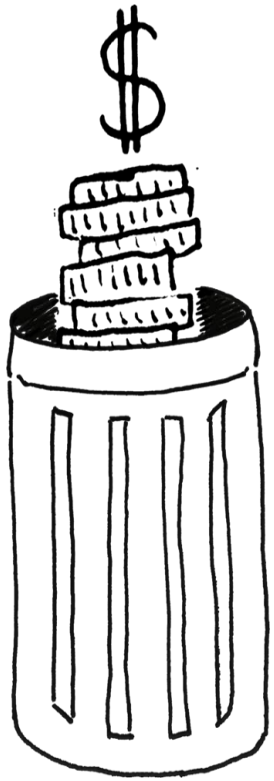
Linear products typically use mostly new virgin materials – they are resource and energy intensive

“End-of-pipe” recycling of linear products, never designed for re-use, is problematic

Waste levels are chronically high

Most of the value is lost as waste

$3·2 trillion value



$2·7 trillion lost as waste.

Other drivers for change

A number of other factors indicate the power of the linear model is reaching its limits

Environmental degradation

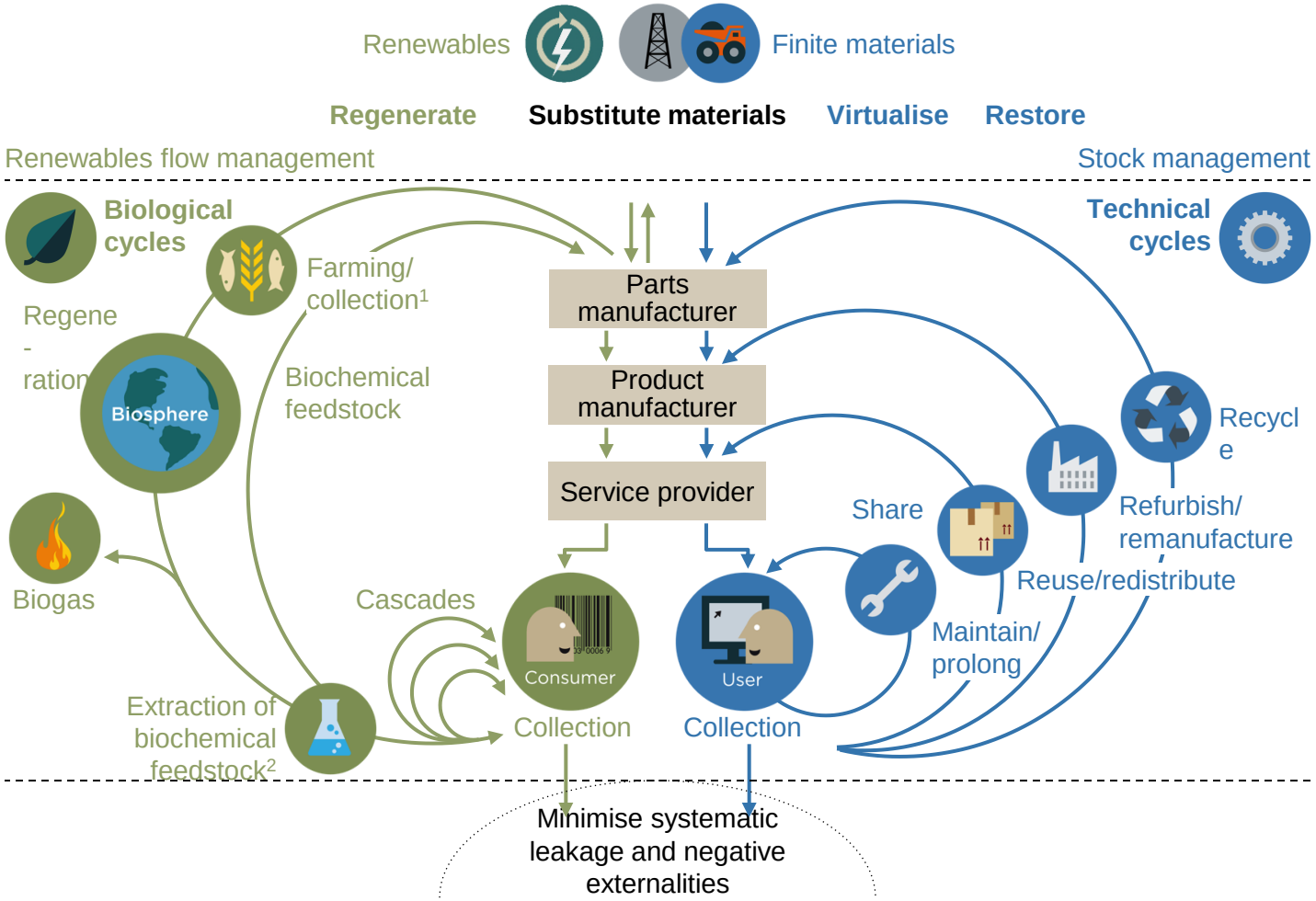
Regulatory and regional trends

Consumer trends

Enabling technologies

Outline of a Circular Economy

Circular economy – an industrial system that is restorative and regenerative by design



1 Hunting and fishing
2 Can take both post-harvest and post-consumer waste as an input
SOURCE: Ellen MacArthur Foundation – Adapted from the Cradle to Cradle Design Protocol by Braungart & McDonough

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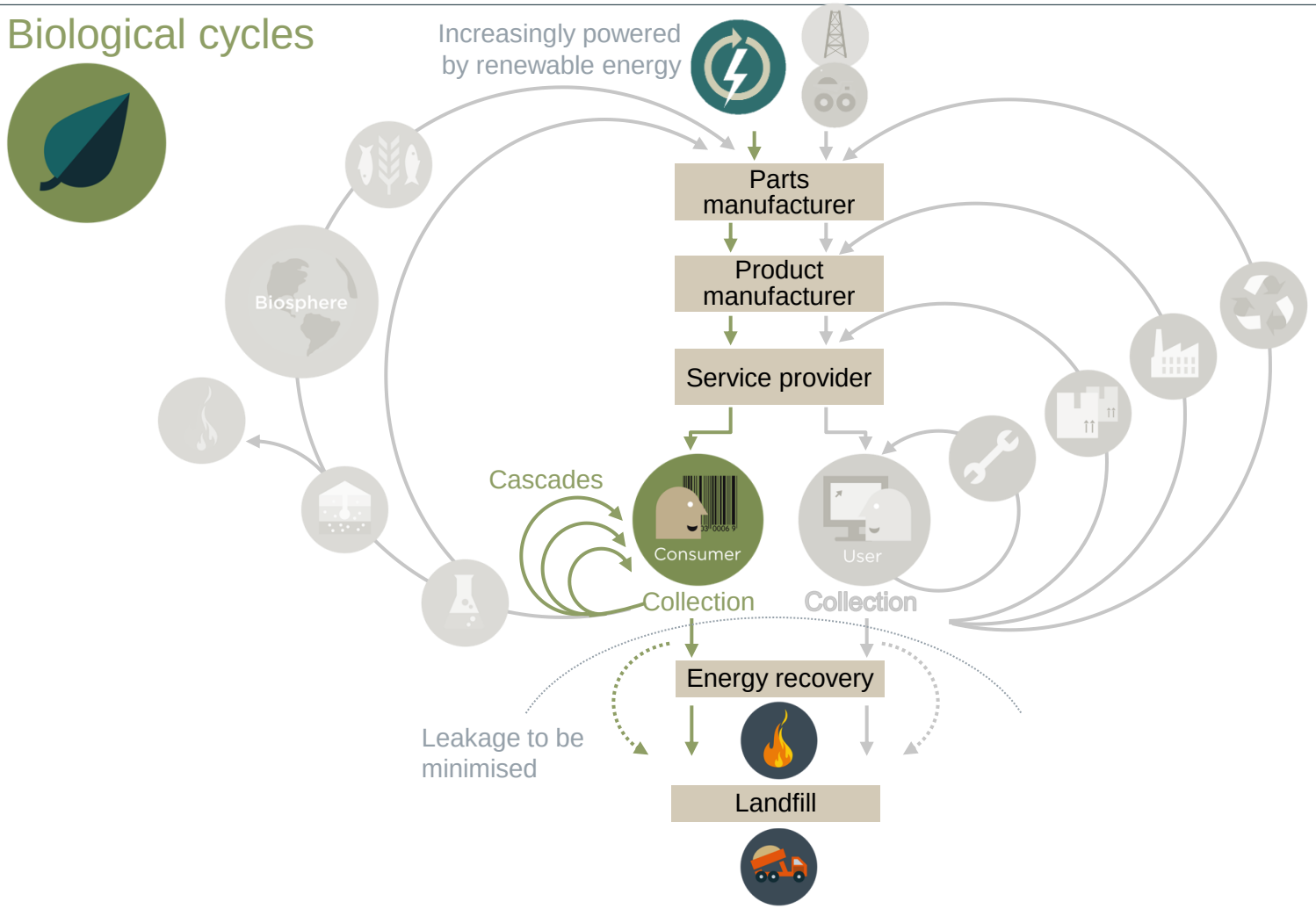
Biological Cycles: Cascading

Cascading allows additional value creation



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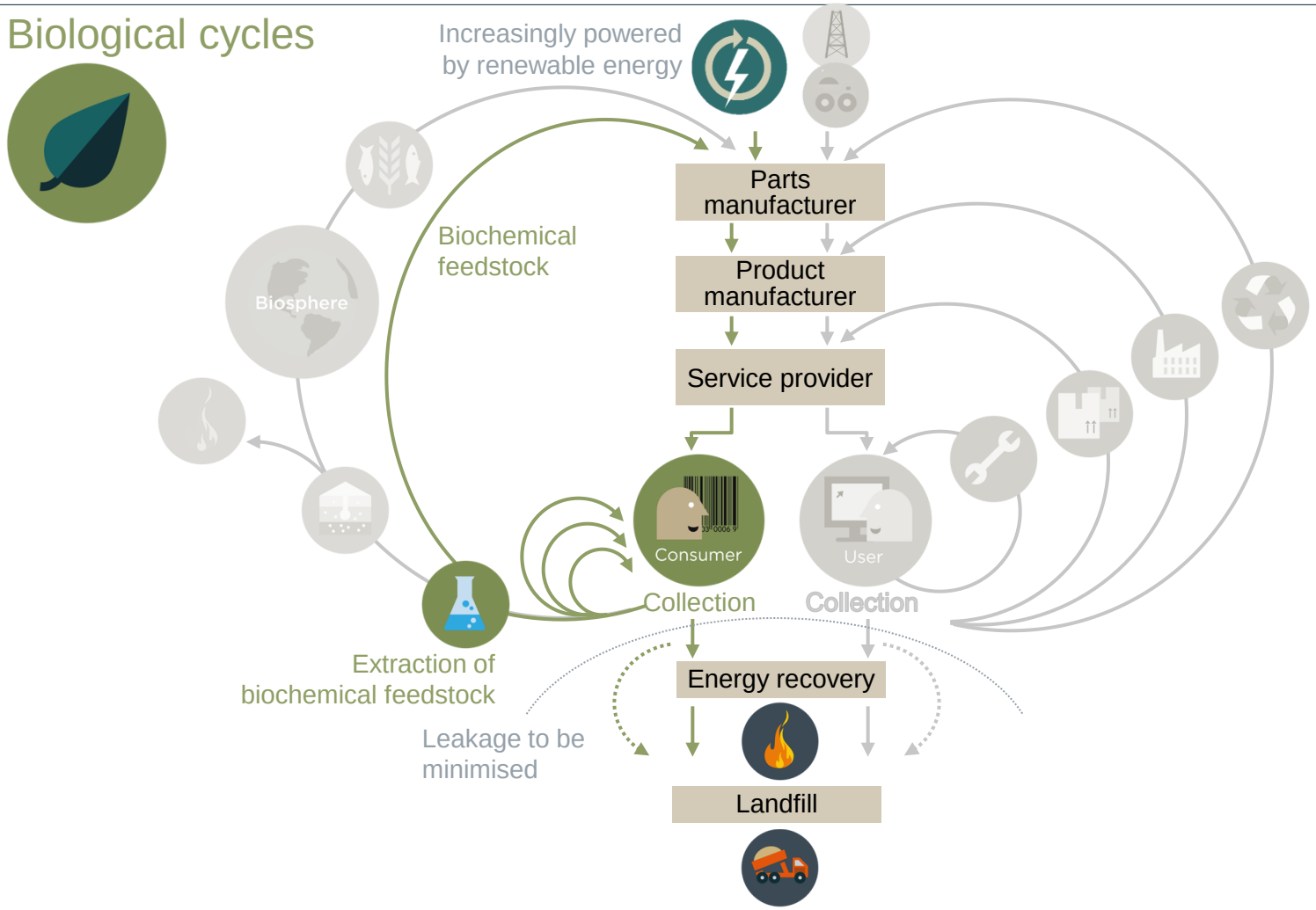
Biological Cycles: Extraction of Biochemical Feedstock

Biochemical Feedstock can be extracted for further usage



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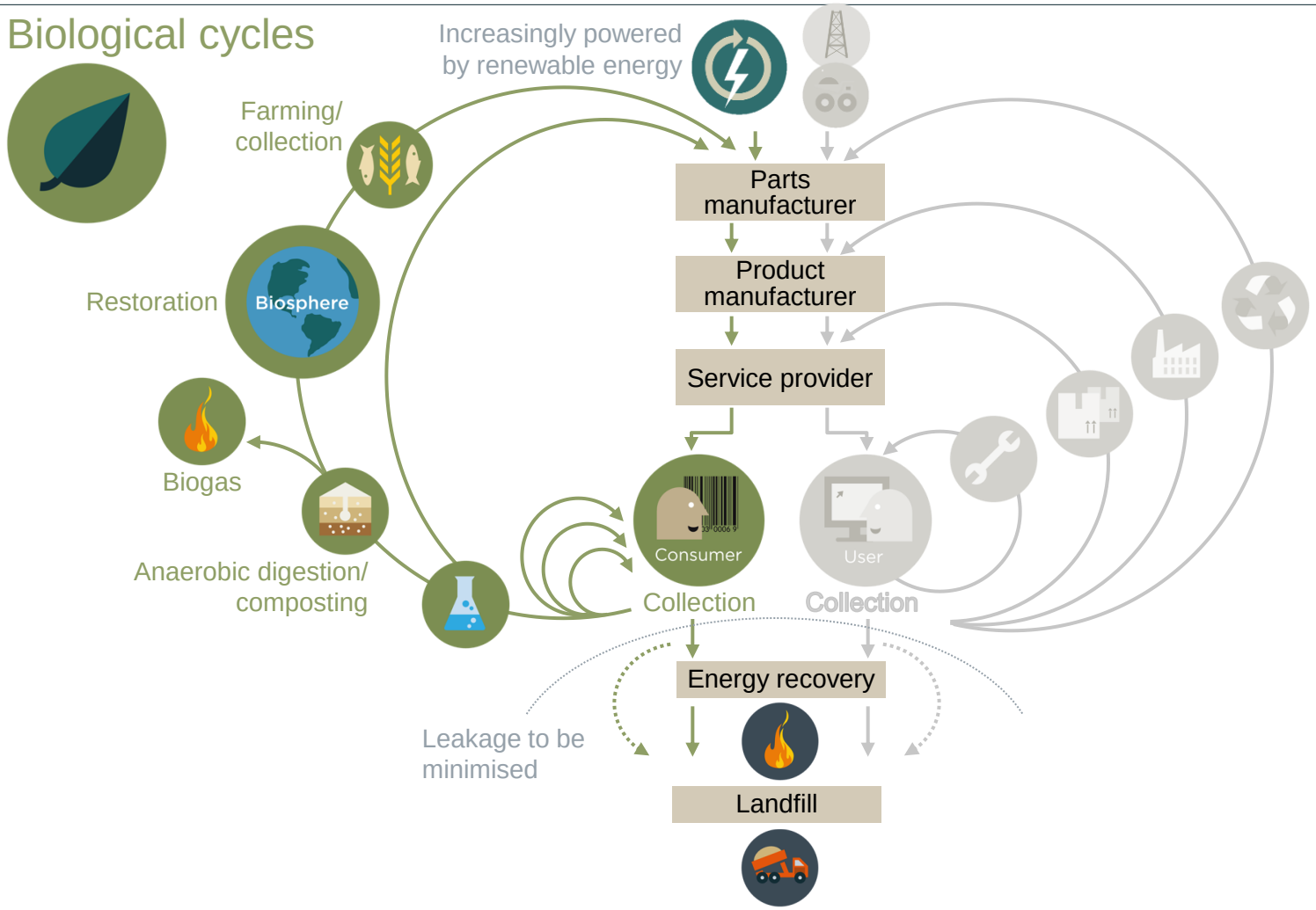
Biological Cycles: Restoration of Nutrients

Non-toxic materials are returned to the soil



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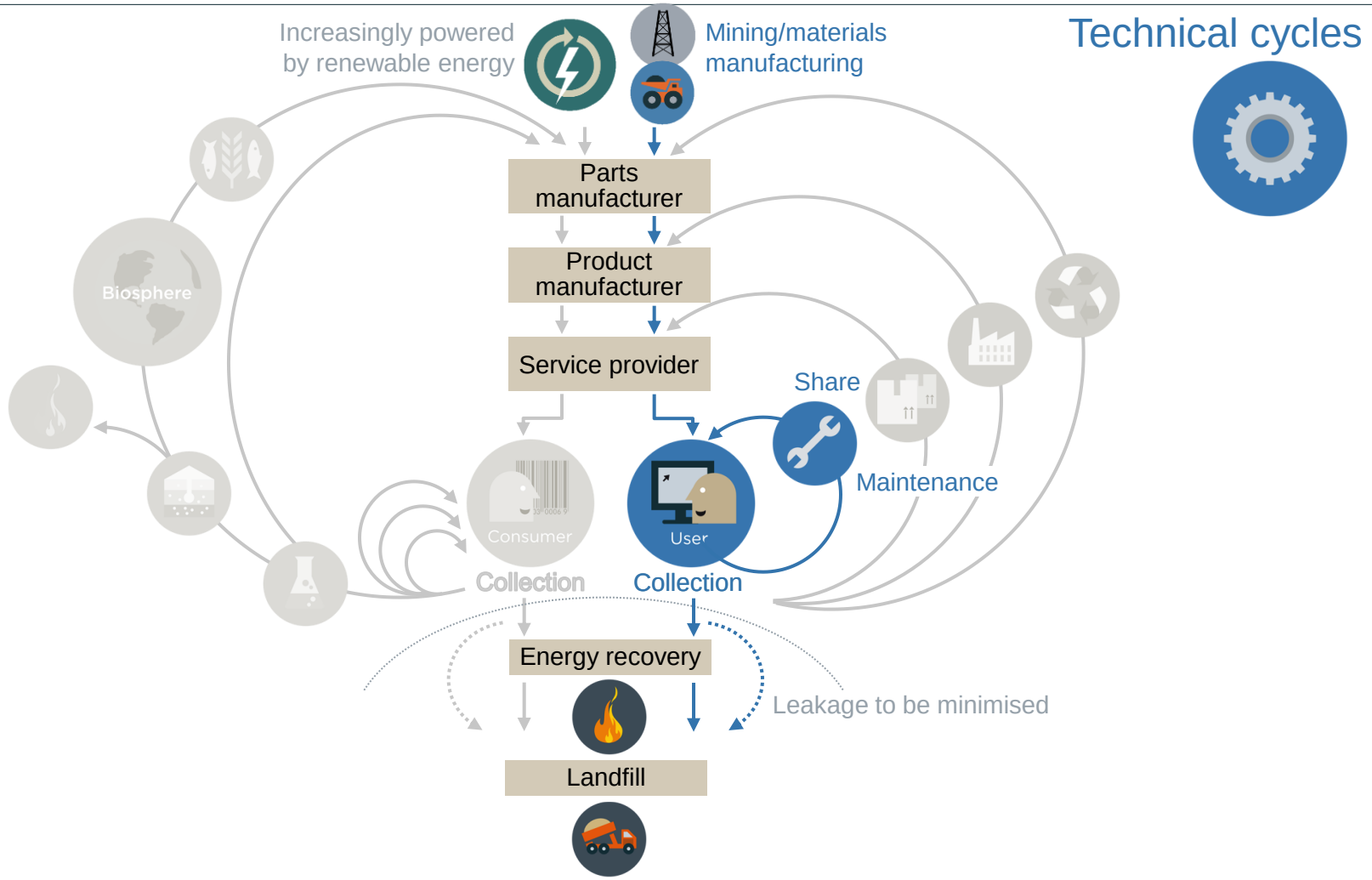
Technical Cycles: Maintain/Prolong

Longer use preserves all value



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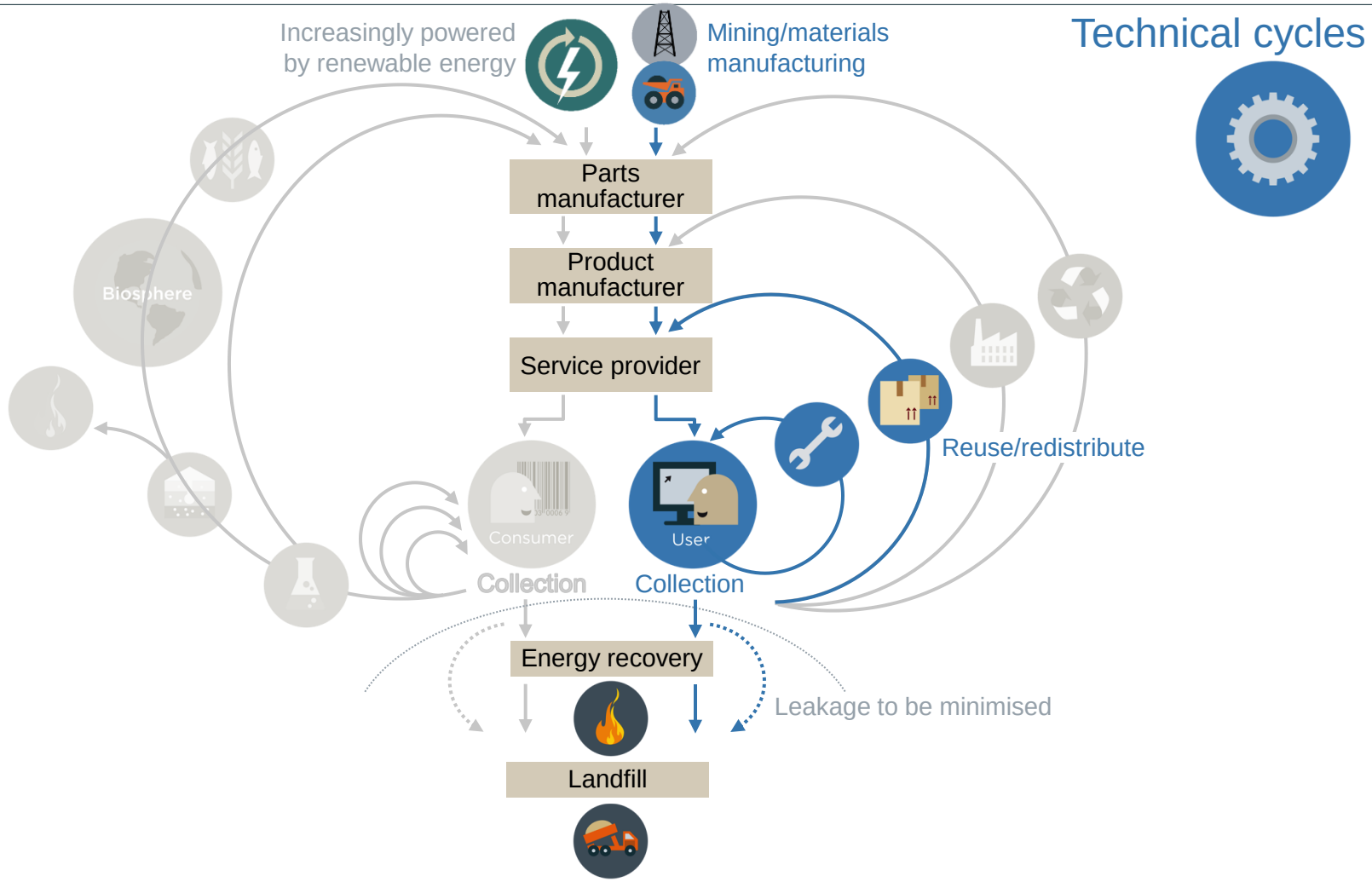
Technical Cycles: Reuse/Redistribute

Products can be reused by additional users



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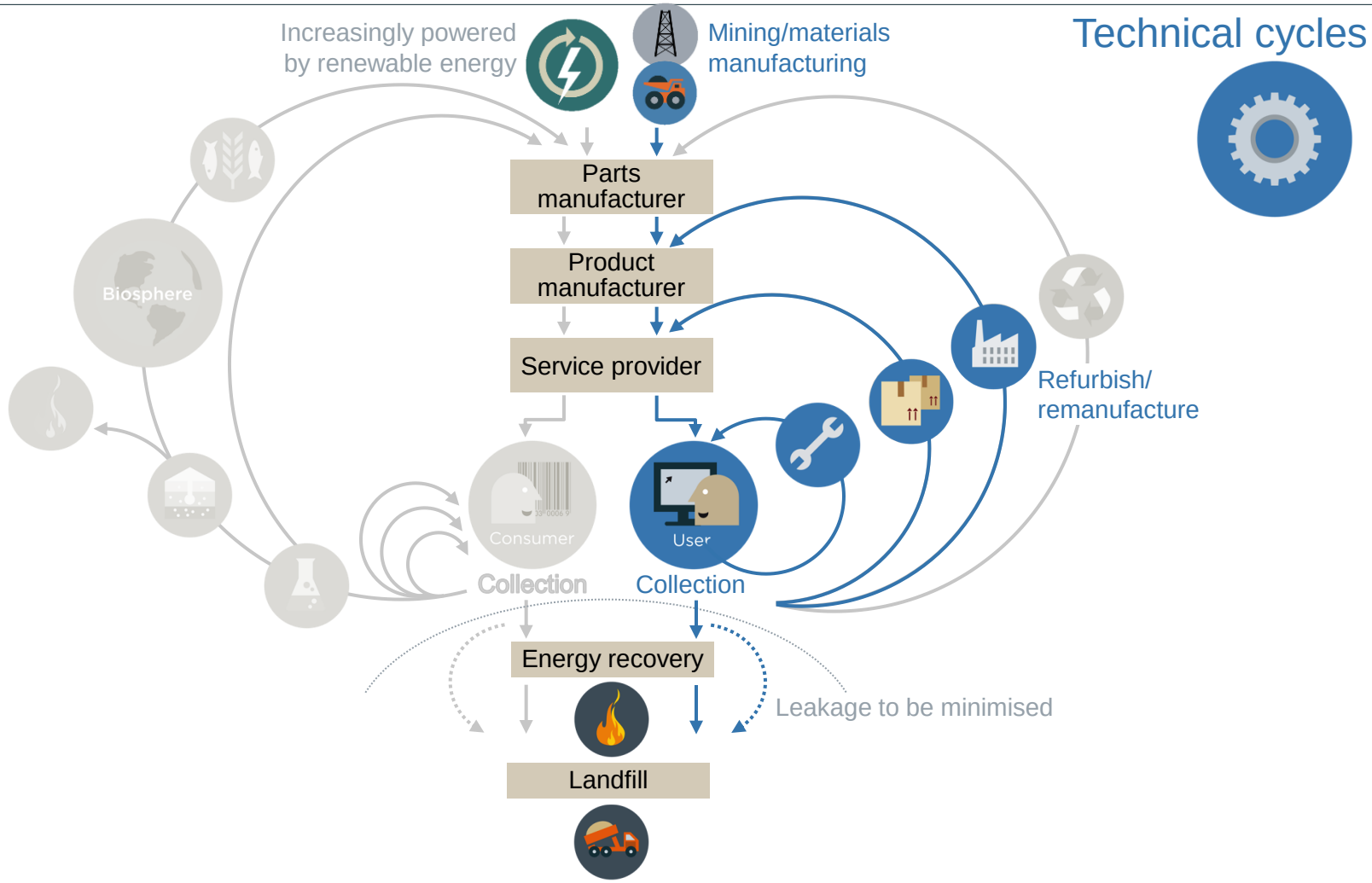
Technical Cycles: Refurbish/Remanufacture

Integrity and complexity are partially preserved



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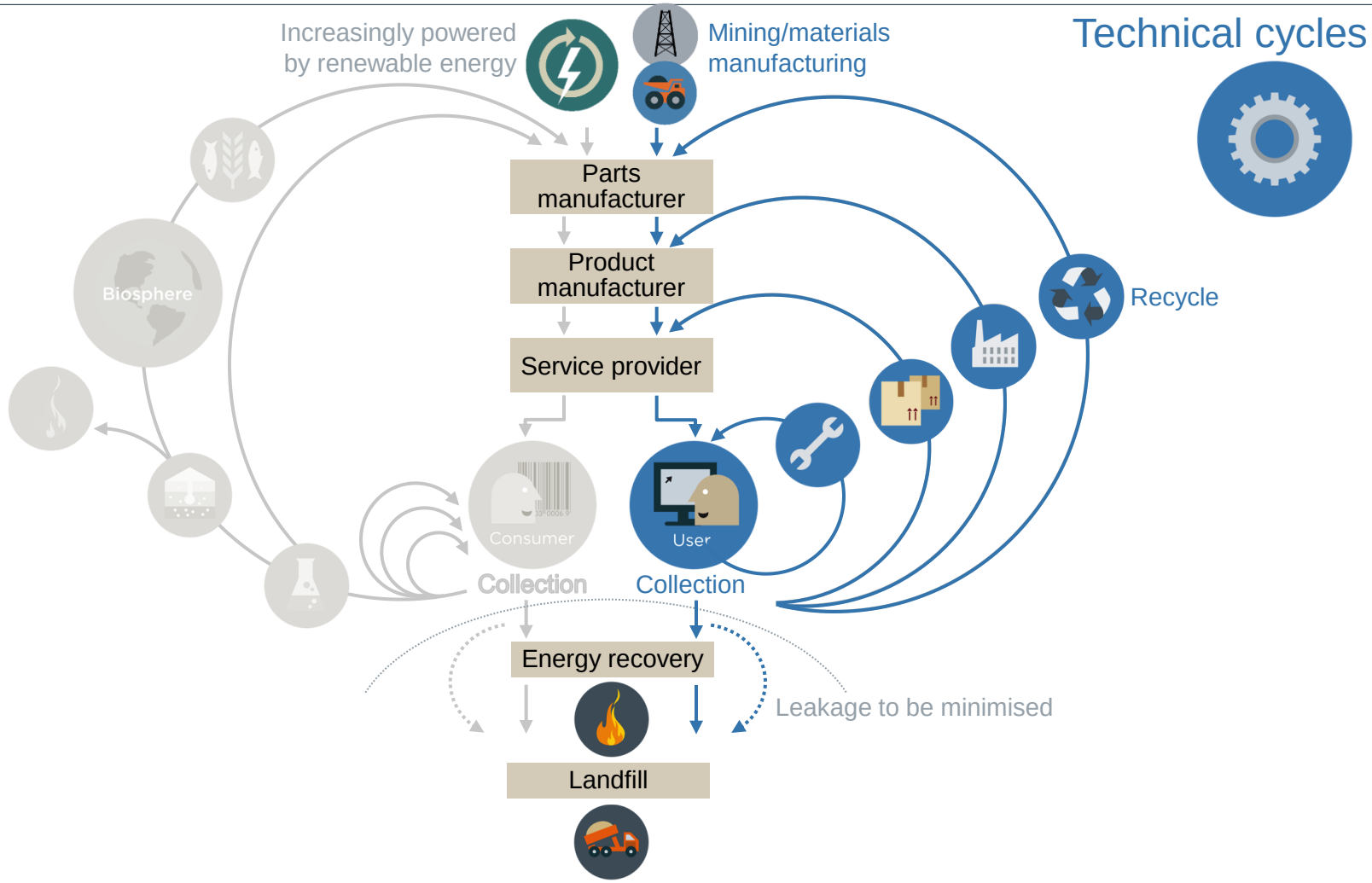
Technical Cycles: Recycle

As a last resort, recycling preserves material value



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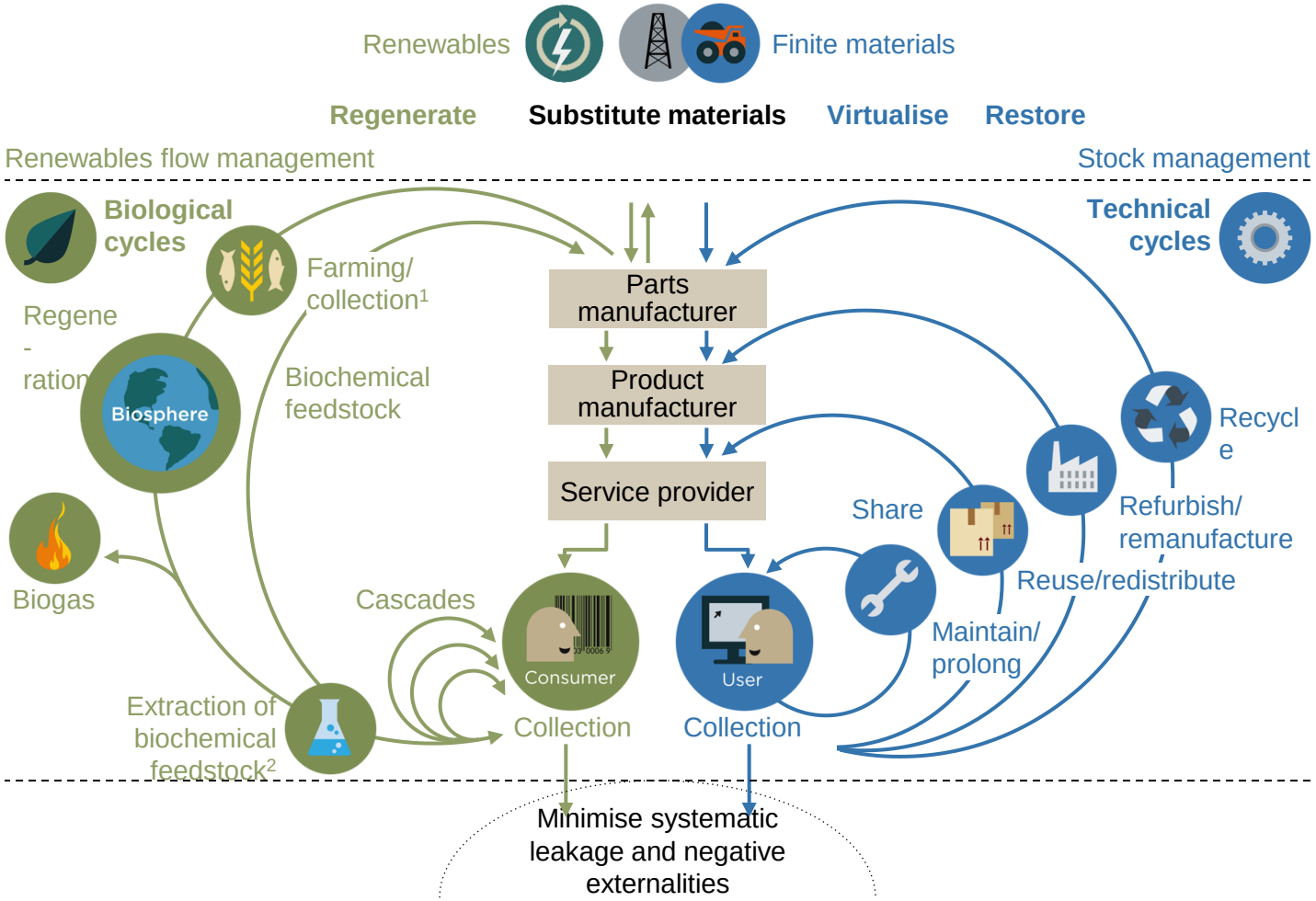

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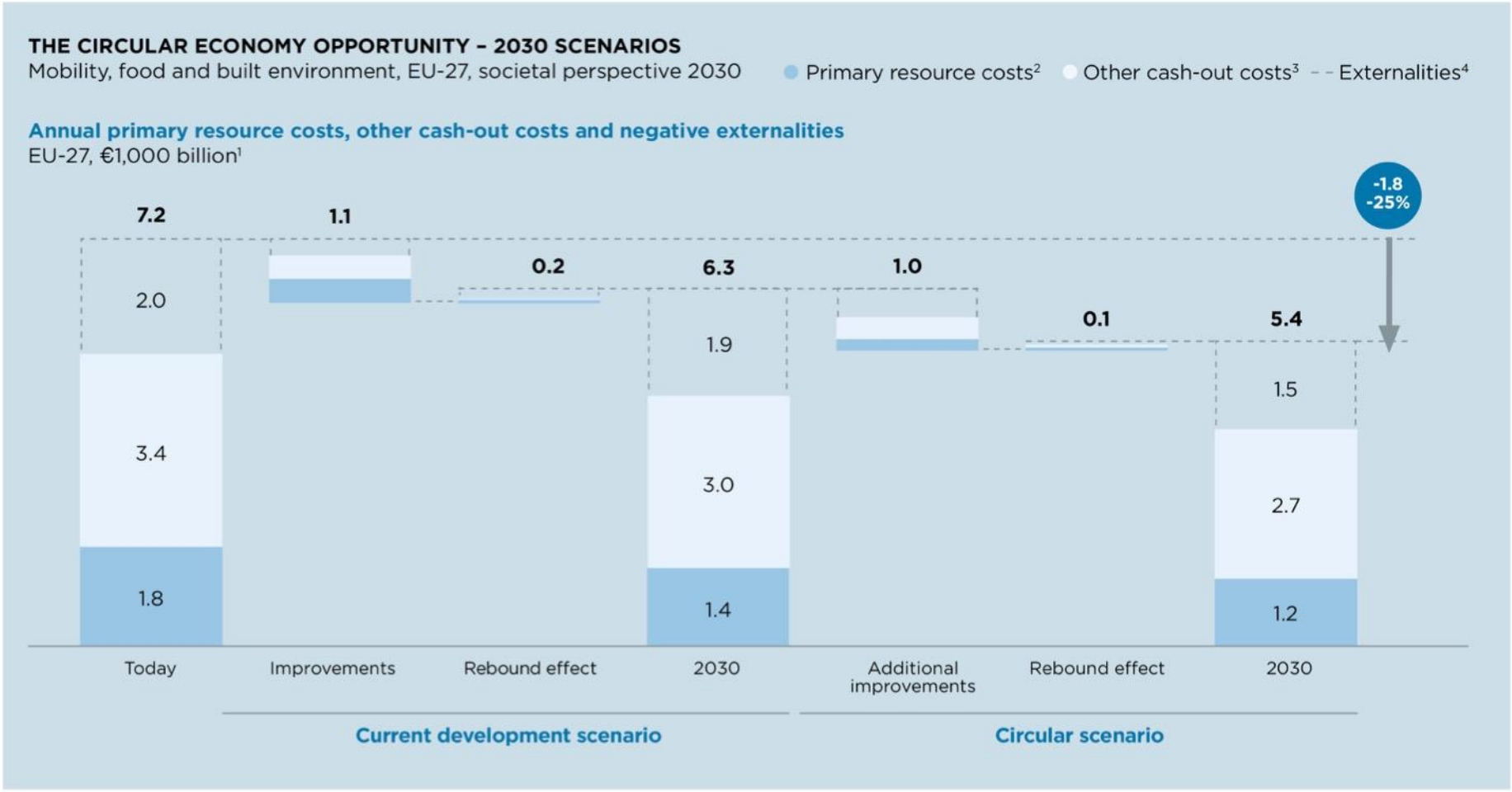
Circular Economy Opportunity by 2030

Analyses from Growth Within



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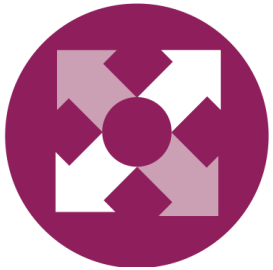
4 key building blocks for successful circular set-ups

To capture the economic opportunities in practice, we need to consider four inter-related building blocks

CIRCULAR DESIGN & PRODUCTION

REVERSE CYCLE

NEW BUSINESS MODELS



ENABLERS & FAVOURABLE SYSTEM CONDITIONS

Ecovative

Splosh


Desso


Philips


Caterpillar


Native

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Global Partners of the
Ellen MacArthur Foundation:

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THE ELLEN MACARTHUR FOUNDATION

The Ellen MacArthur Foundation works across four areas, with the aim of accelerating the transition towards a circular economy:

1 INSIGHT & ANALYSIS

Providing robust evidence about the benefits of the circular economy transition

2 EDUCATION & TRAINING

Inspiring learners to re-think the future through the circular economy framework

3 BUSINESS & GOVERNMENT

Catalysing circular activities across the global economy

GLOBAL PARTNERS

4 COMMUNICA-TIONS

Engaging a global audience around the circular economy