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for a sustainable Blue Economy

Circular Business Models Theory and Tools

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AGENDA

- Brief intro (5 mins) – Eleni Manousiadi (DOORS)
- Brief Introduction on the mentoring sessions provided EMBRC (10 mins)- Mery Pina (EMBRC)
- Circular Business Model Theory and Tools (45 mins) – Lydia Papadaki (DOORS)
  - Introduction to Circular Economy
  - Circular Business Model Canvas
  - Q&A
- Evaluating sustainability performance (45 mins) – Dr. Ebun Akinsete (DOORS)
  - Reporting Obligations
  - ESG and SDG Key Performance Indicators
  - Tools
  - Q&A
- Wrap-up and next steps (5 mins) – Eleni Manousiadi (DOORS)

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TRAINING OBJECTIVES

- Understand the principles and importance of circular economy concepts in the context of business development.
- Introduce participants to the Canvas Business Model Canvas as a practical tool for designing circular business models.

- Guide participants through the process of applying circular economy principles to develop their own innovative and circular business models.
- Provide participants information and guidance on how to monitor and evaluate their sustainability performance

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EXPECTED LEARNING OUTCOME

By the end of this training session, participants should be able to:

- ✓ Explain the concept and benefits of circular economy thinking and its application to business models.
- ✓ Identify opportunities for implementing circular strategies within their business operations and value chains.
- ✓ Utilize the Canvas Business Model framework to map out key components of their circular business models, including value proposition, customer segments, revenue streams, and resource loops.
- ✓ Analyze and evaluate the feasibility and potential impact of their circular business models in terms of economic, environmental, and social sustainability.
- ✓ Iterate and refine their circular business models based on feedback, insights, and best practices shared during the training.
- ✓ Design an approach and identify relevant KPIs for evaluating their sustainability performance.

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Circular Economy Business Models

How can I identify new market opportunities using Circularity concepts?

Impacts of today’s Linear Economy

- ✓ To ensure a healthy, prosperous and sustainable future for all, businesses need to change **what** and **how** they consume and produce as soon as possible.
- ✓ Businesses are facing significant **technological innovations.**
- ✓ External **drivers of change:**
  - ✓ policy environment changes
  - ✓ investor demands
  - ✓ the need for greater business and supply chain resilience
  - ✓ changing consumer preferences
  - ✓ the impact of COVID-19.

Smarter product use and manufacture	**R0**	**Refuse**	Make product redundant by abandoning its function or by offering the same function with a radically different product
	R1	**Rethink**	Make product use more intensive (e.g. through sharing products or by putting multi-functional products on market).
	R2	**Reduce**	Increase efficiency in product manufacture or use by consuming fewer natural resources
Extend lifespan of product and its parts	**R3**	**Reuse**	Re-use by another consumer of discarded product which is still in good condition and fulfils its original function
	R4	**Repair**	Repair and maintenance of defective product so it can be used with its original function
	R5	**Refurbish**	Restore an old product and bring it up to date
	R6	**Remanufacture**	Use parts of discarded product in a new product with the same function
	R7	**Repurpose**	Use discarded products or its part in a new product with a different function
Useful application of materials	**R8**	**Recycle**	Process materials to obtain the same (high grade) or lower (low grade) quality
	R9	**Recovery**	Incineration of material with energy recovery

Circular strategies within the production chain, in order of priority Source: (Morseletto, 2020)

B. Circular Economy

B1. Circular Economy Tools

B2. “Circular Business Model Canvas”

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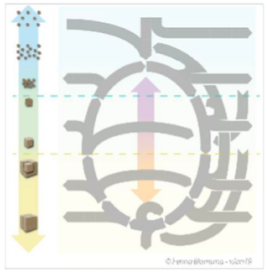
Circularity Thinking tools and flow

Circularity Compass



Map the resource flows

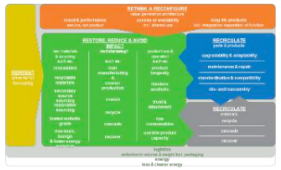
The Circularity Compass helps to understand, how resources flow in the current (product) system and how they could flow instead. In a first step, the user draws the a rough reflection of the current resource flows into the template, where they enter the system and where they leave it.

Big Five Structural Wastes

Hunt the waste

The Big Five Structural Wastes tool helps identify five types of structural waste. Used in combination, the Circularity Compass and the Big Five Structural Wastes help to indicate and illustrate wasteful practices along the life cycle of a product system.

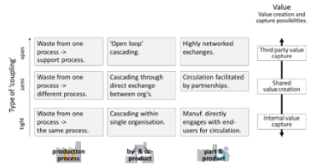
Circular Strategy Scanner



Identify suitable circular strategies

The Circular Strategy Scanner allows for linking circular strategies, business processes and eco-design principles on different levels. It helps the user to get an overview and understanding of potential circular strategies.

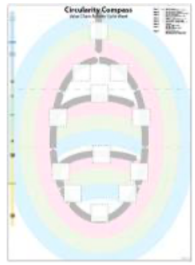
Circularity Grid



Organize couplings and system implications

The Circularity Grid systematically analyses the manner in which circular systems are different from linear ones, and what makes them more complex by understanding the different types of coupling between systems.

Activity Cycle



Manage stakeholder activities

The Activity Cycle can help to identify what the key stakeholders need to do to make the new value chain along the chosen circular solution a reality and help to consider the potential of certain stakeholder collaborations.

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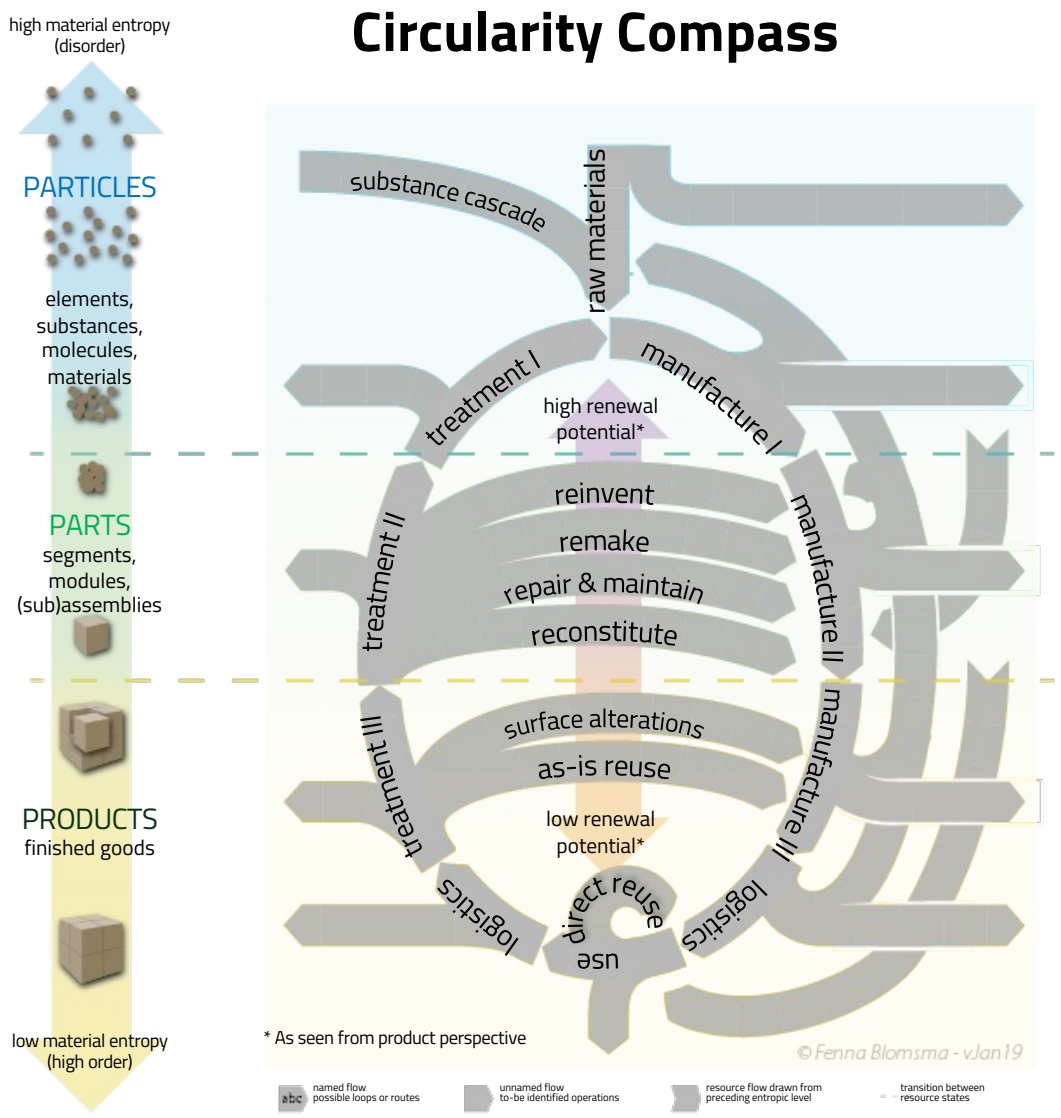
STEP 1: Circularity Compass

B. Circular Economy

B1. Circular Economy Tools

B2. “Circular Business Model Canvas”



- It presents a classification of all stages that a manufacturer faces
- It maps all resource flows considering life-cycle stage of the product
- It considers all forms of resources (particles, parts, products)

STEP 2: The Value Hill

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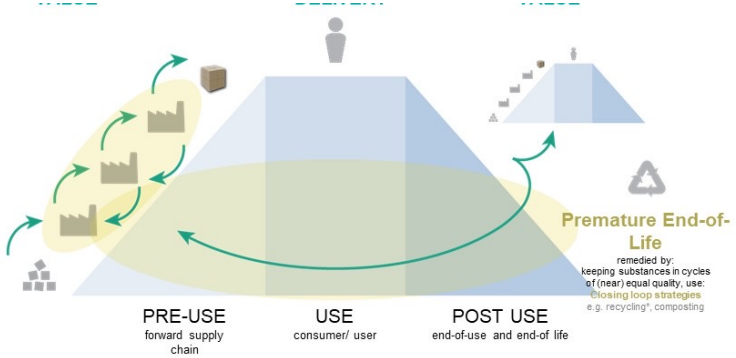
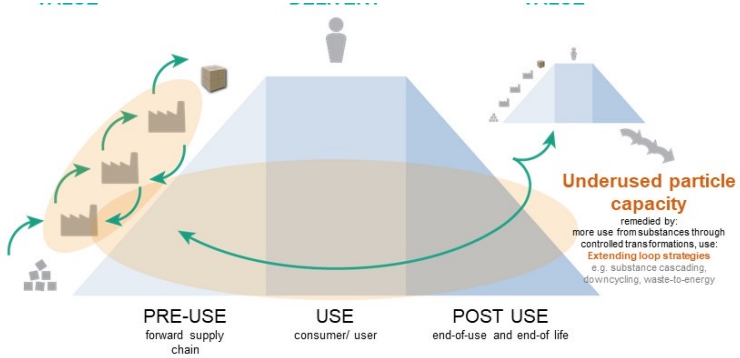
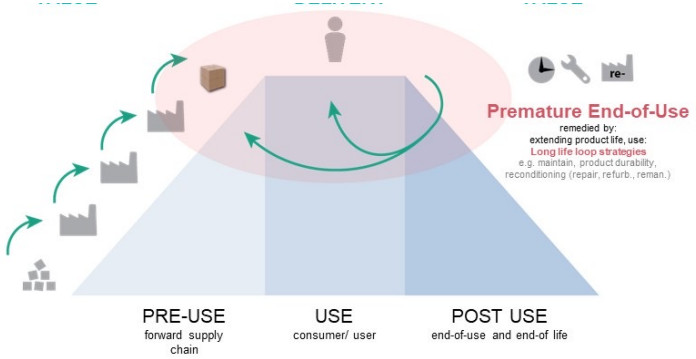
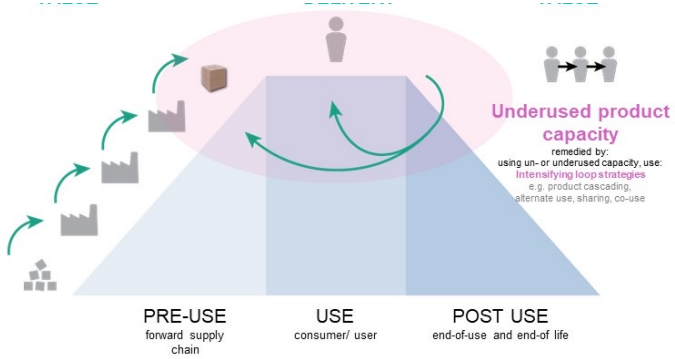
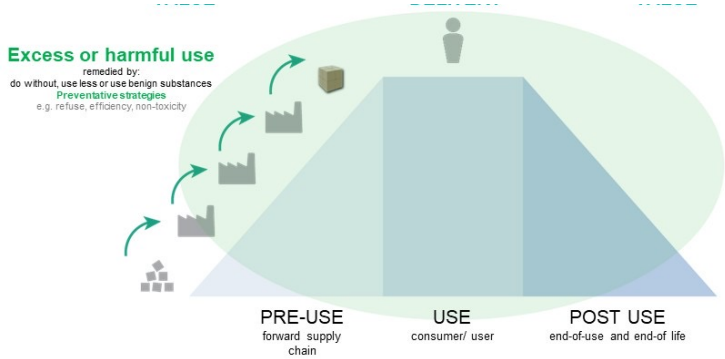




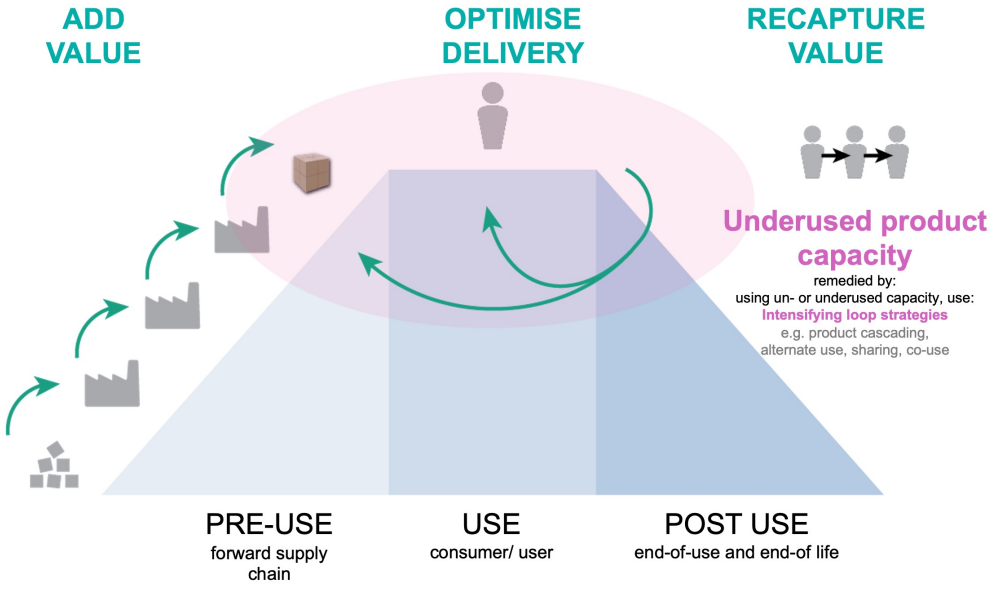






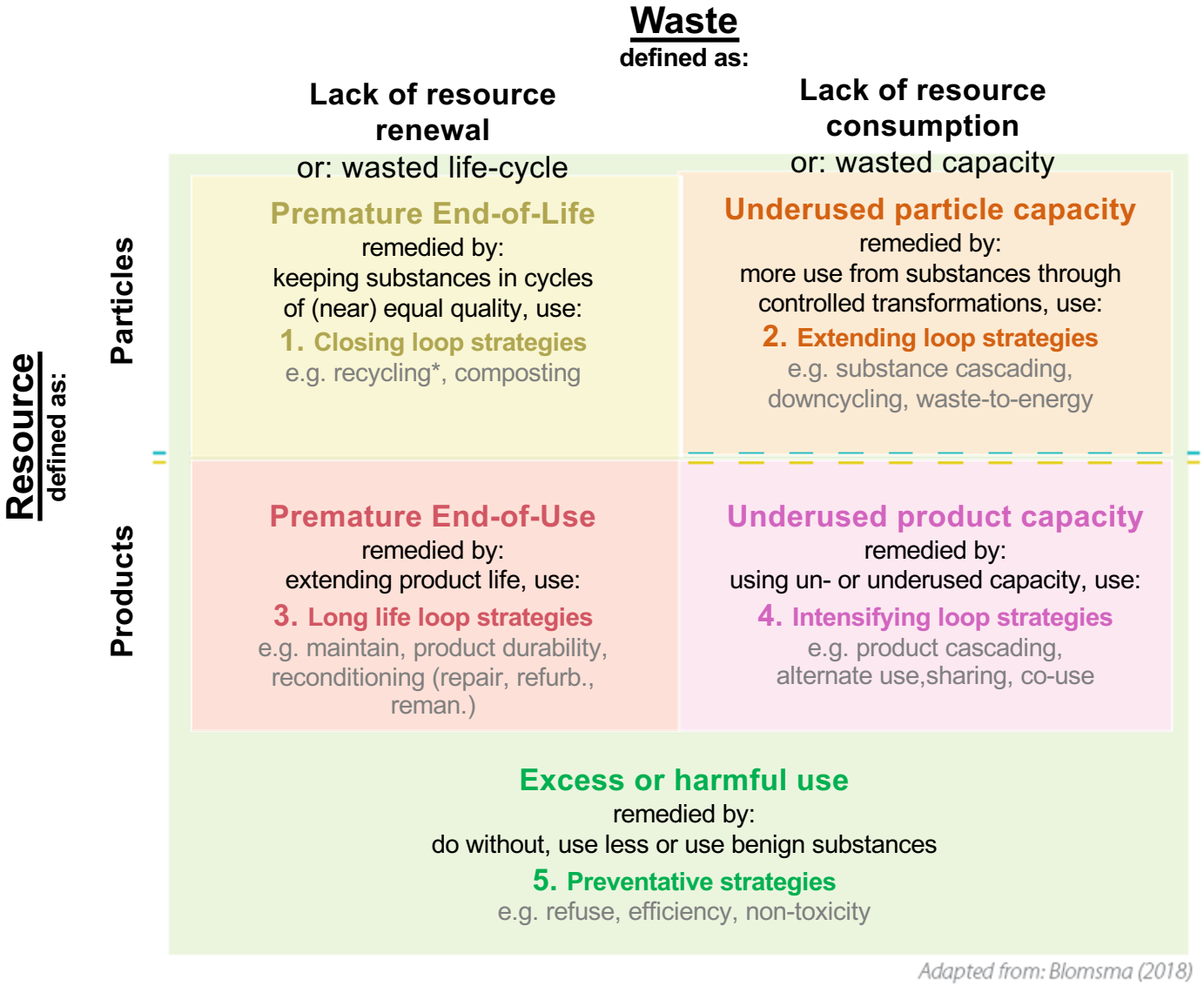
STEP 2: The Value Hill

- A company that went from nothing to being **worth $ 33 billion today**, serving masses all around the globe
- The company started off as a way for **Brian Chesky and his friend Joe Gebbia** to pay their rent back in 2007 in San Francisco **by renting out an air mattress on the living room floor.**
  - In fact, the use of “air” in the name is a tribute to the company’s roots.
  - Initial name: “**Air Bed and Breakfast**”
- Soon after, Harvard graduate and technical architect **Nathan Blecharczyk** joined the team as the third co-founder.
- In the beginning, not many users. Why?
  - They discover that the main problem is that the **pictures of most listings aren't good**. They buy a camera and go door-to-door to take better pictures of the listings.

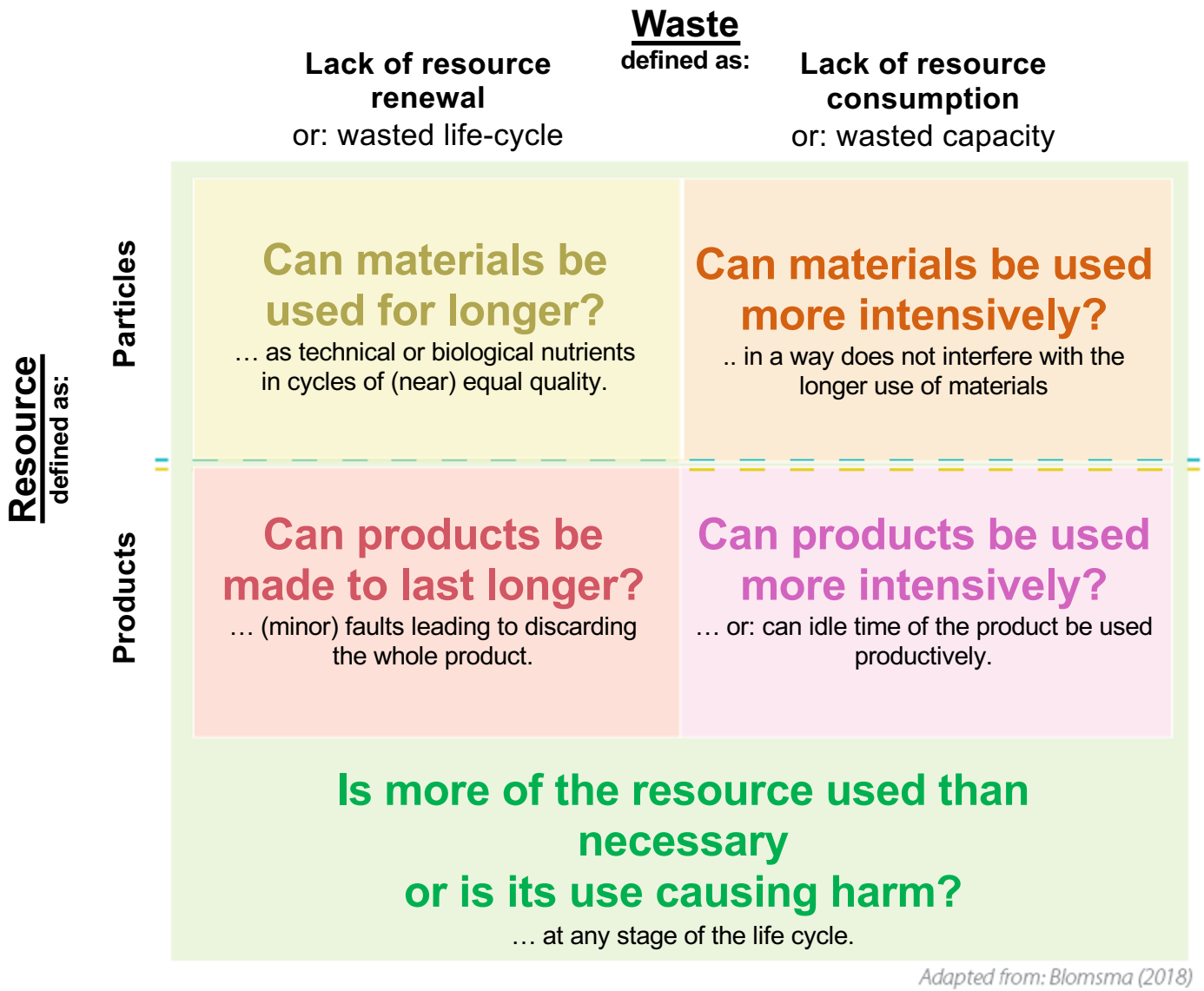


- The rest is history. Airbnb history. Today, it has **more than 4.5 million Airbnb listings** in about **81,000 cities around the world**.

STEP 2: The Big Five Structural Wastes



STEP 2: The Big Five Structural Wastes



Adapted from: Blomsma (2018)

STEP 3: Circular Strategy Scanner

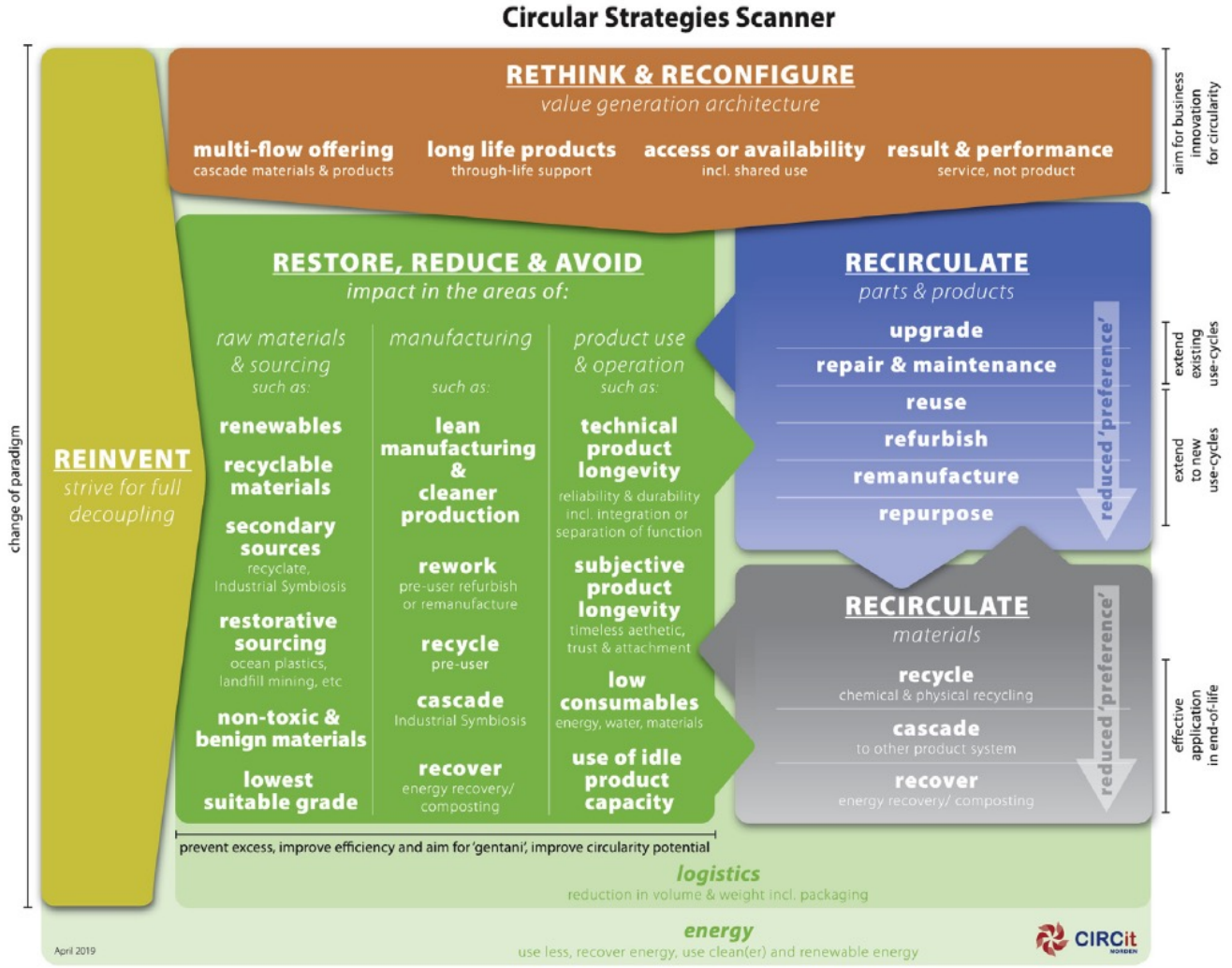
B. Circular Economy

B1. Circular Economy Tools

B2. “Circular Business Model Canvas”

The framework is more of a **visual diagram of Circular**

Strategies to view and inspire rather than to “fill in”.
However, you may want to circle strategies of interest. Exploring the different **Circular Strategy Dimensions** (identified by colour groupings) it’s also important to be aware of synergies and potential conflicts between them. Overlapping the scanner on the Value Hill can really help to identify potential circular strategy areas to explore of higher value.



STEP 3: Circular Strategy Scanner

B. Circular Economy

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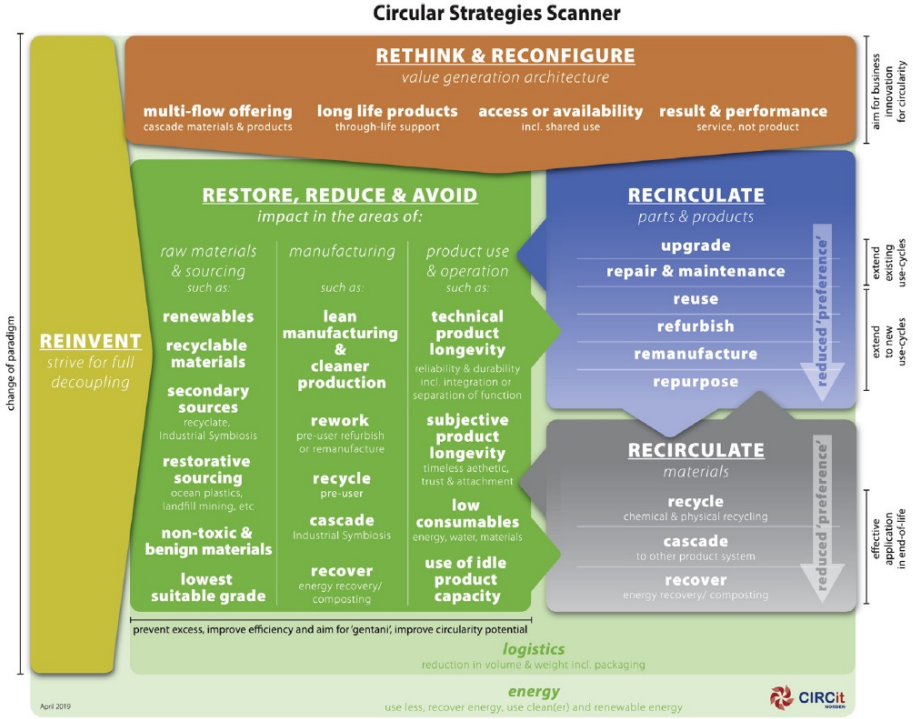
The Circular Strategy Scanner is a framework developed to provide inspiration and guidance on potential circular product, process and business concepts that could be explored and developed.

It can be used to both reflect on current strategies and to find (scan) for opportunities , from incremental part, product or process improvements to rethinking business model and complete reinvention.

It incorporates three core Circular Strategy Levels. These have then been grouped into five Circular Strategy Dimensions (indicated be the different colours in the framework).

Their placing also indicates connections between different circular strategies and how choices may affect others (particularly at the Business Model or Paradigm Redesign level)

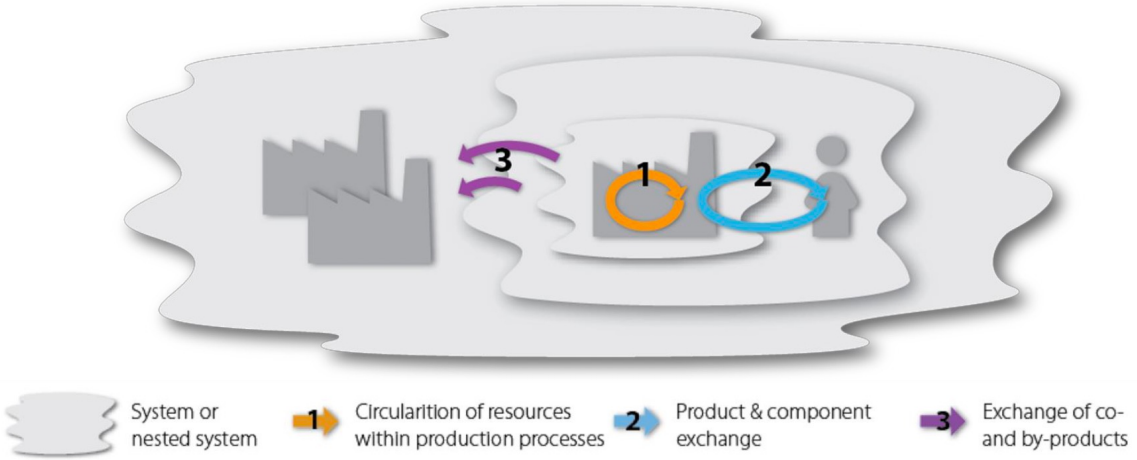


1. REINVENT: Paradigm Redesign
   - Dimension 1 - Reinvent (Strive for full decoupling)
2. RETHINK: Business Model Redesign
   - Dimension 2 - Rethink & Reconfigure (value generation architecture)
3. RESTORE, REUSE, AVOID & RECIRCULATE: Process and Product Redesign
   - Dimension 3 - Restore, Reduce and Avoid
   - Dimension 4 - Recirculate (parts and products)
   - Dimension 5 - Recirculate (materials)

STEP 4: Circularity Grid

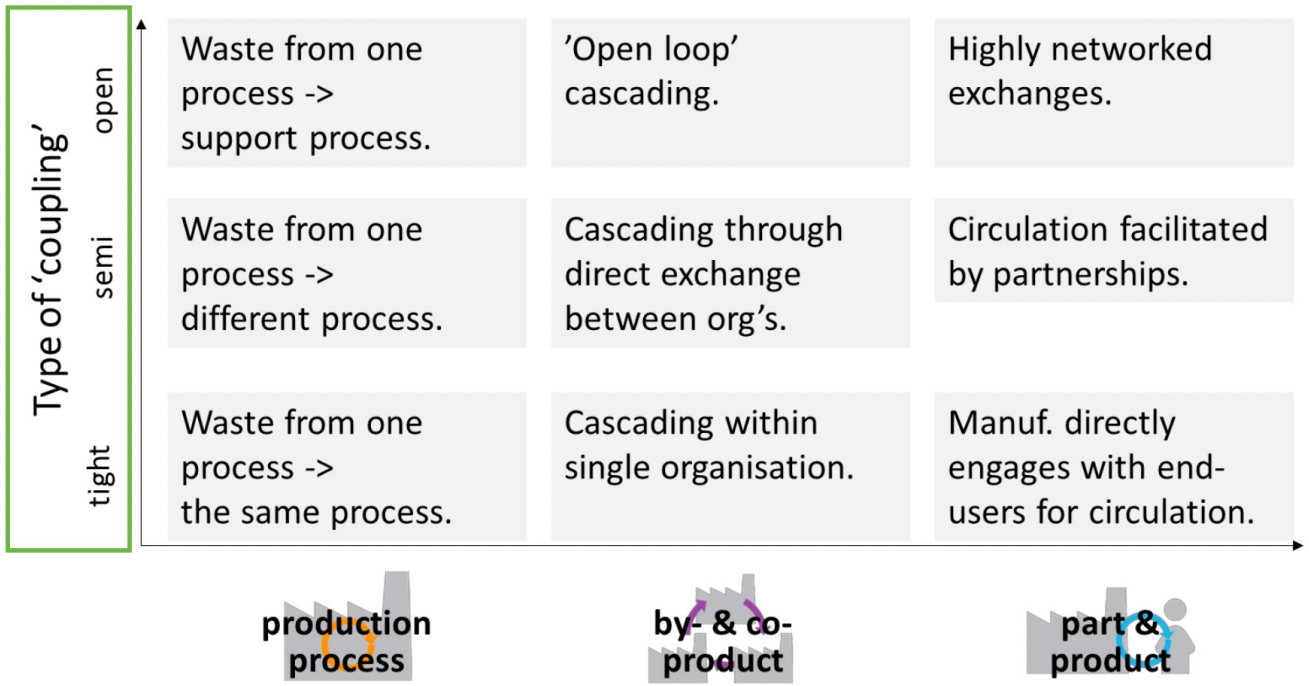
- Resource flow depends on:
  - **‘hard’ factors**, such as technologies and infrastructure, and
  - **‘soft’ factors**, such as management practices or culture.
- Circular systems tend to be connected **in more complex ways than linear systems**.
  - Any new circular solution also comes with new activities and stakeholder network interactions, as well as different infrastructure and knowledge requirements.
  - It is important to be aware of these **internal and external influences and relationships.**

- The **Circularity Grid** helps to examine the **complex connections** of circular systems and solutions and it helps to understand the system relationship more **systematically,** so that we could influence them to our advantage.
- This type of analysis also provides preliminary insights into **what enablers are already in place**, and **what barriers can be expected along the way**.
- On this basis, concrete actions can be outlined and prioritised.



Types of Coupling

- The Circularity Grid contains a set of **'archetypes'** or **'ideal examples'**.
- The Grid is presented as **nine discrete boxes** - archetypes - but hybrid or 'in-between' forms can be found, especially on the **'coupling'** dimension.
- Multiple examples within the same box could be placed on different ends of the spectrum a particular box covers.
- The Grid is a tool **to think through relationships by offering clear and contrasting cases.**

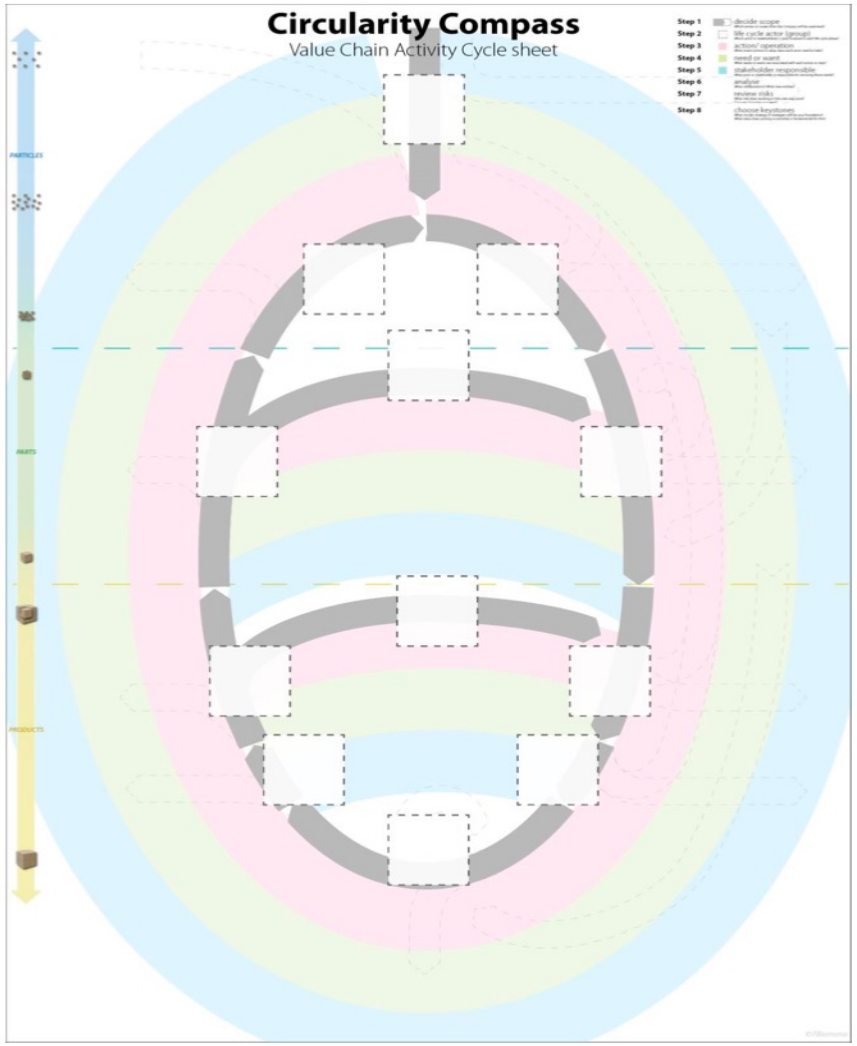


- It is meant to generate insight and learning.
- Reality is always much messier than the models: but that doesn't mean that the principles are not useful!

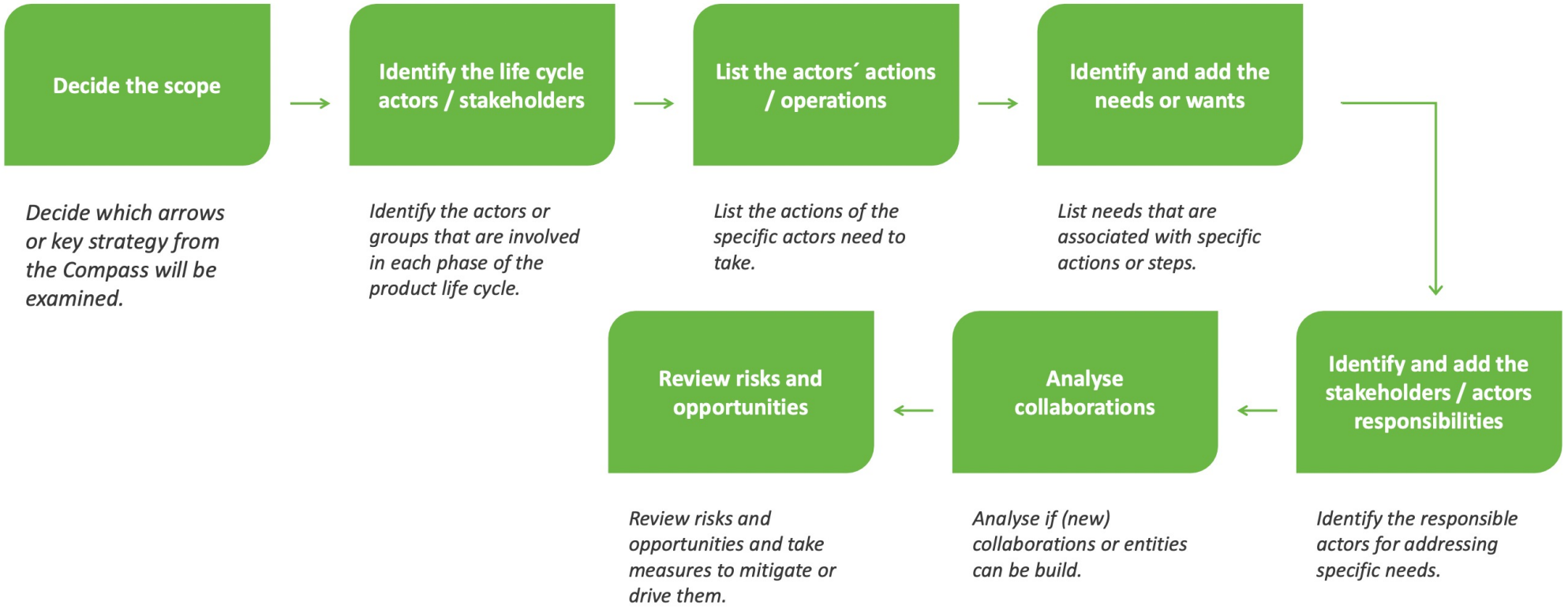
STEP 5: Activity Cycle

•The Activity Cycle is based on the characteristics of the Circularity Compass and allows us to illustrate and work along the resource flow of a (product) system along its life cycle.

•The Activity Cycle also provides coloured space to capture details along the value chain regarding specific actions, regarding actors or stakeholders as well as their needs, etc.

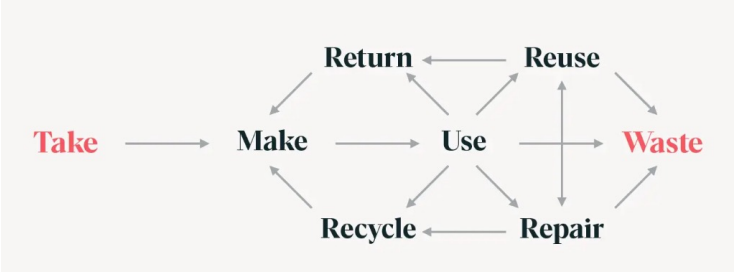


STEP 5: Activity Cycle



Circular business models

- A **circular business model** articulates the logic of how an organization creates, delivers, and captures value to its broader range of stakeholders **while minimizing ecological and social costs.**
- **Linear versus circular business models**
  - Linear business models are based on the following logic: **take** natural resources, **make** products for consumers that eventually become **waste**.
  - Circular business models contribute to a circular economy by adhering to the circular economy's three fundamental principles:
    - ✓ **Design out waste and pollution**
    - ✓ **Keep products and materials in use**
    - ✓ **Regenerate natural systems**



- To better understand the relationship between a circular economy (the bigger picture) and circular business models (the smaller picture), it's helpful to understand how businesses form a value chain. No singular business is the circular economy. That is to say, the **circular economy is not one single vertically integrated business**.
- Companies are like dots along the circle, **forming a network between suppliers and customers called a value chain**. This network can either be organized as a straight line between natural resources and landfills (linear economy) or creating a perpetual cycle of value with zero waste (circular economy).

Circular business models

How to create a circular business model?

1. Source products and materials from the **economy**, not from ecological reserves.
2. Create value for customers by adding value to **existing** products and materials.
3. Create valuable inputs for **businesses** beyond your customers.

Different types of circular business models

1. Coordinating circular value chains through data: Creating products, from recycle to reuse.

2. Circular product design: Creating products, from recycle to reuse.

3. Use, reuse, share, and repair: Creating durable goods from recycled and reused parts can be inputs for downstream circular business models.

4. Collection & reverse logistics: Close the material life-cycle loop by creating products that can be upcycled, repurposed, and re-sold.

5. Sorting & preprocessing: Finding alternative value in the parts that make a product whole.

STEP 6: Business Architecture

B. Circular Economy

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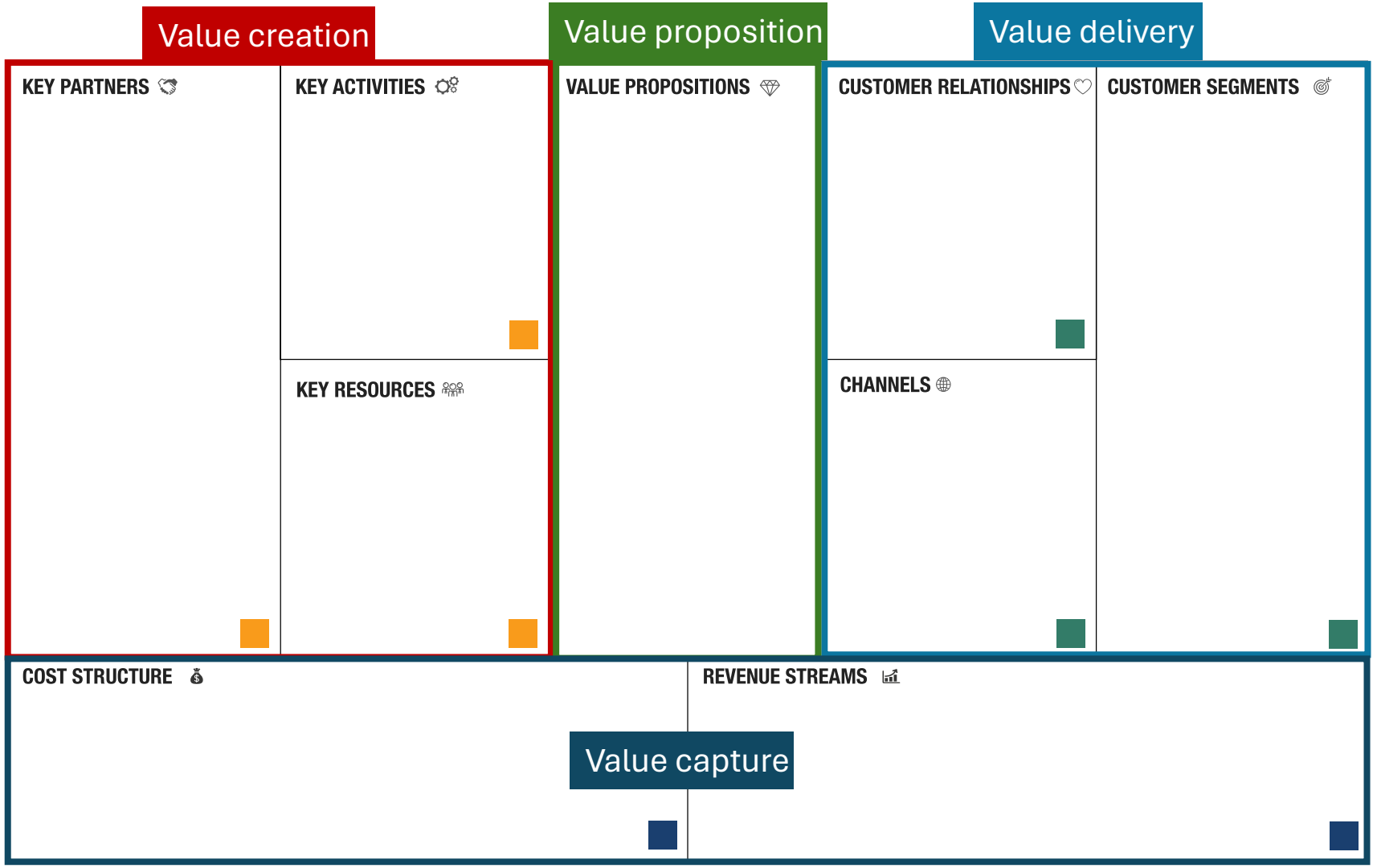

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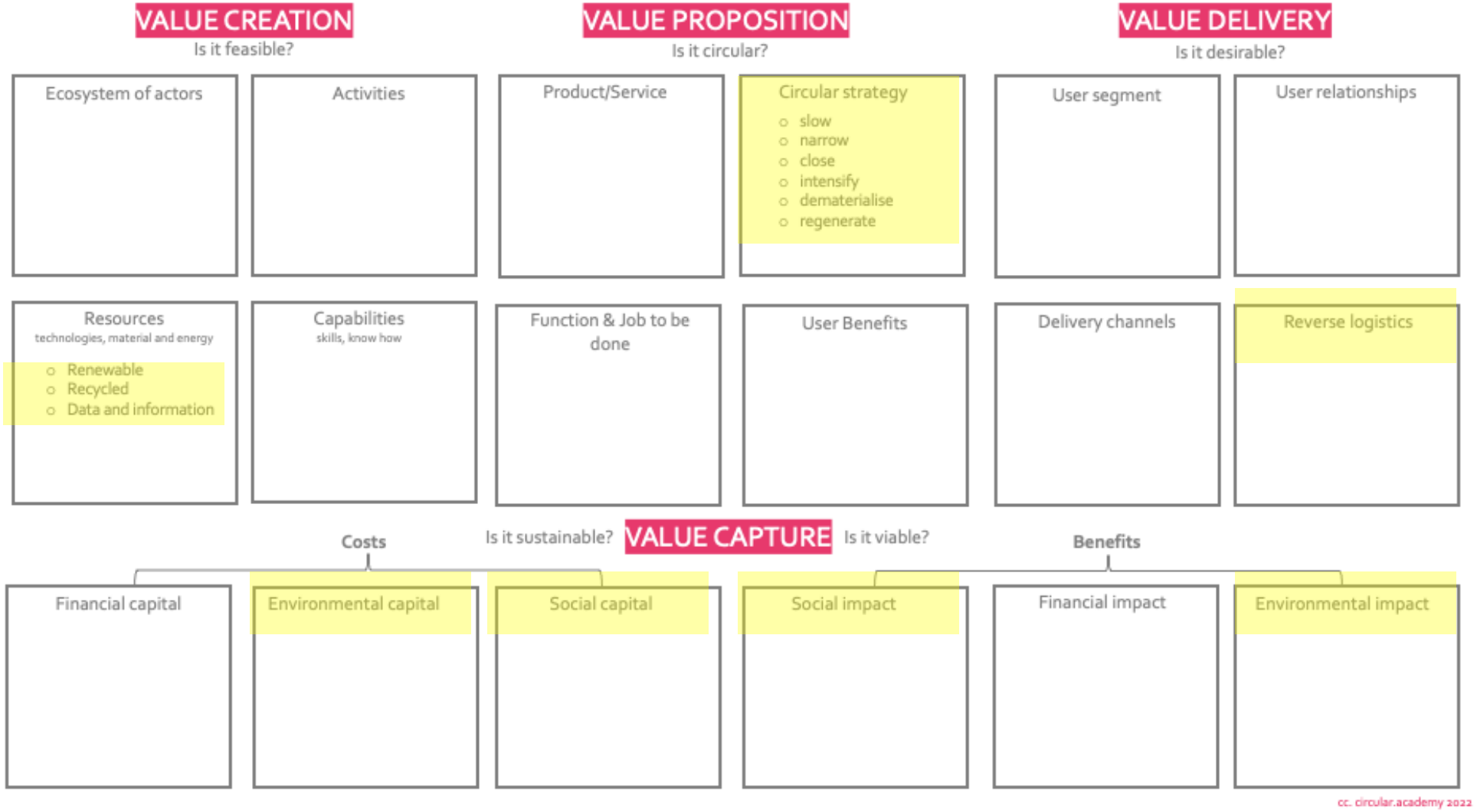
Circular business model canvas



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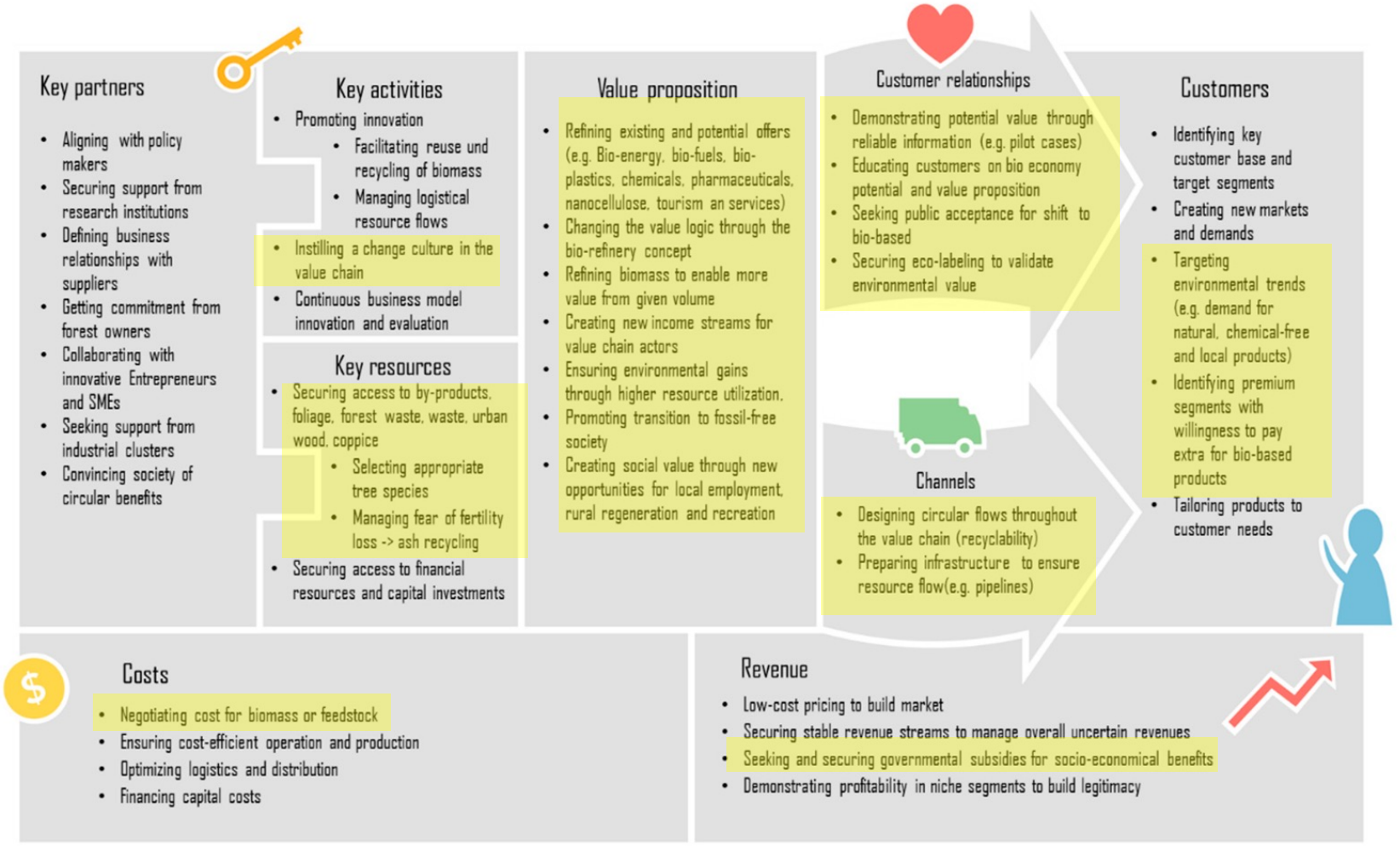
Circular business model canvas EXAMPLE

Business model canvas for circular business models in a forest-based bio-economy.



Source: Reim et al. (2019)

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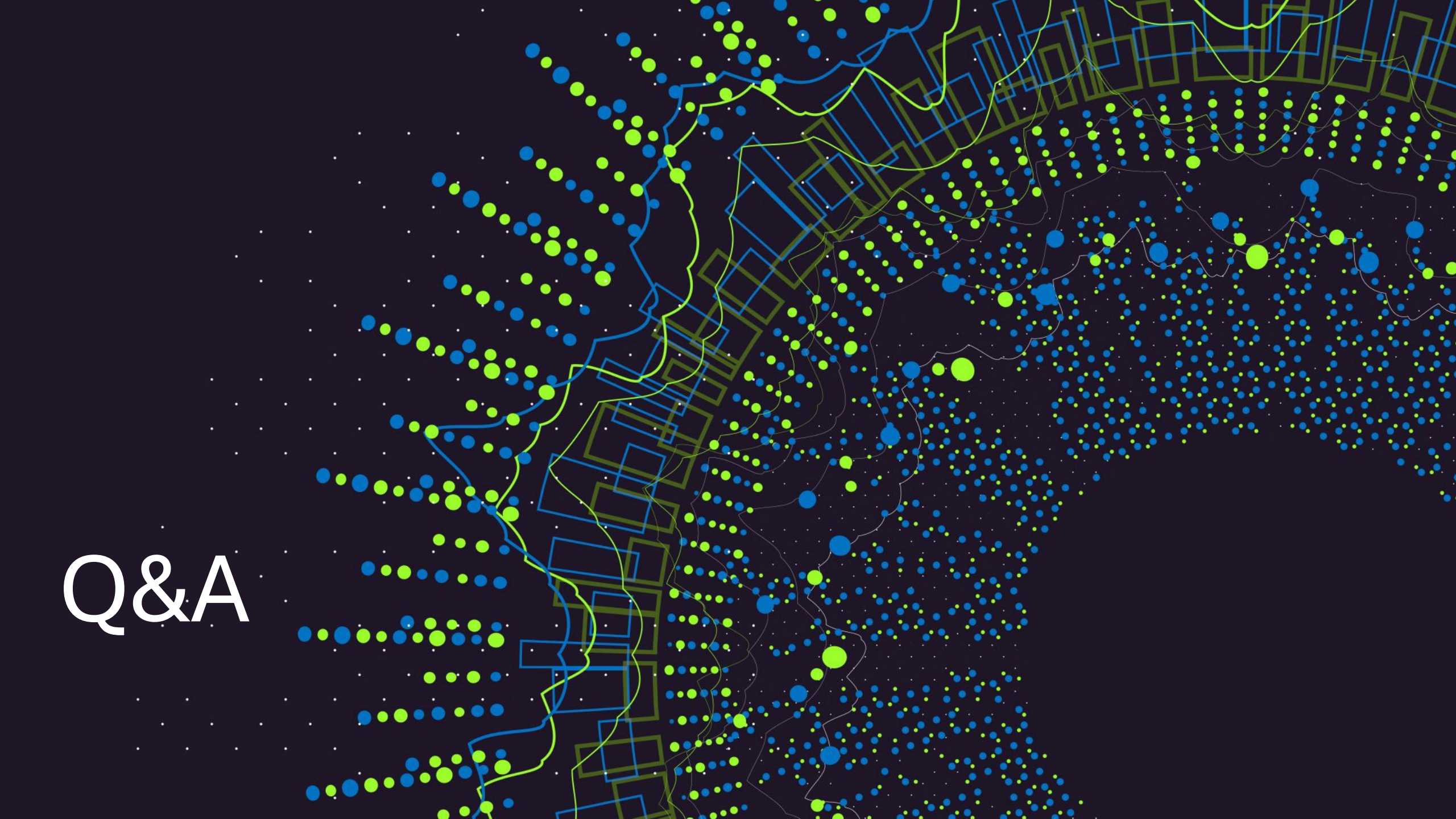
Q&A

BLACK SEA ACCELERATOR

Navigating Innovation, Empowering Growth

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