

Business innovation for a circular economy

An ecosystem perspective

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Business Innovation Towards a Circular Economy

An Ecosystem Perspective

Jan Konietzko

We currently live in a carbon intensive linear economy. On the basis of burning fossil fuels, we take, make and waste an increasing amount of materials. This has pushed us against serious planetary boundaries. Radical reductions in environmental impact are needed over the coming decades. Entire economies and societies will have to reorganize. A promising candidate to support this reorganizing is a circular economy. It cuts waste, emissions and pollution, and it keeps the value of products, components and materials high over time. Companies can innovate towards a circular economy by following five key resource strategies: narrow, slow, close, regenerate, and inform. This thesis explores these strategies – through case research and a design science approach. It shows that an ecosystem perspective is necessary to implement these strategies – and provides tools and methods that can help to put an ecosystem perspective into action. This can help companies to develop circular ecosystem value propositions: that propose a positive collective outcome, fulfill user needs in exciting ways, and minimize environmental impact.

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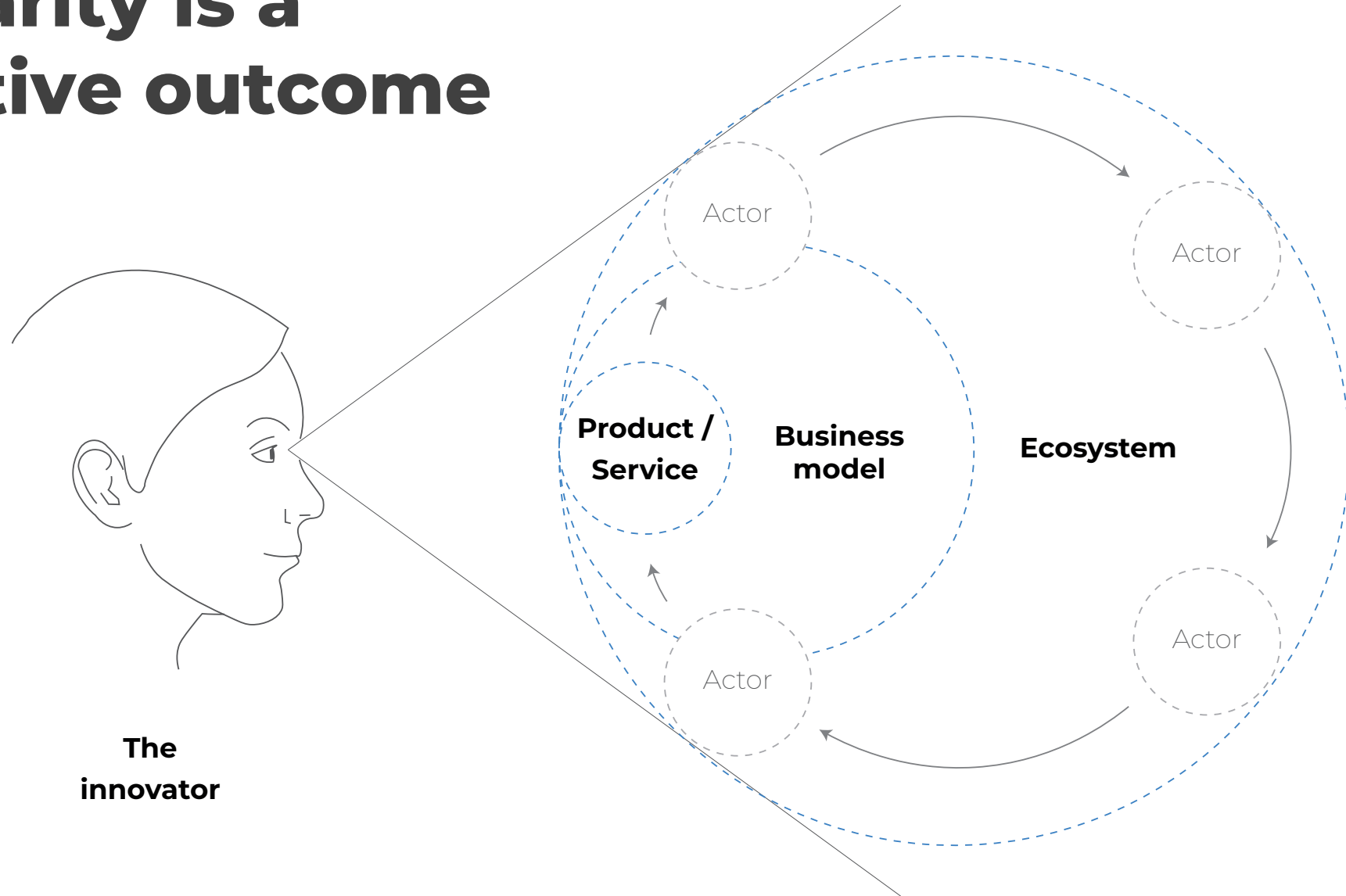
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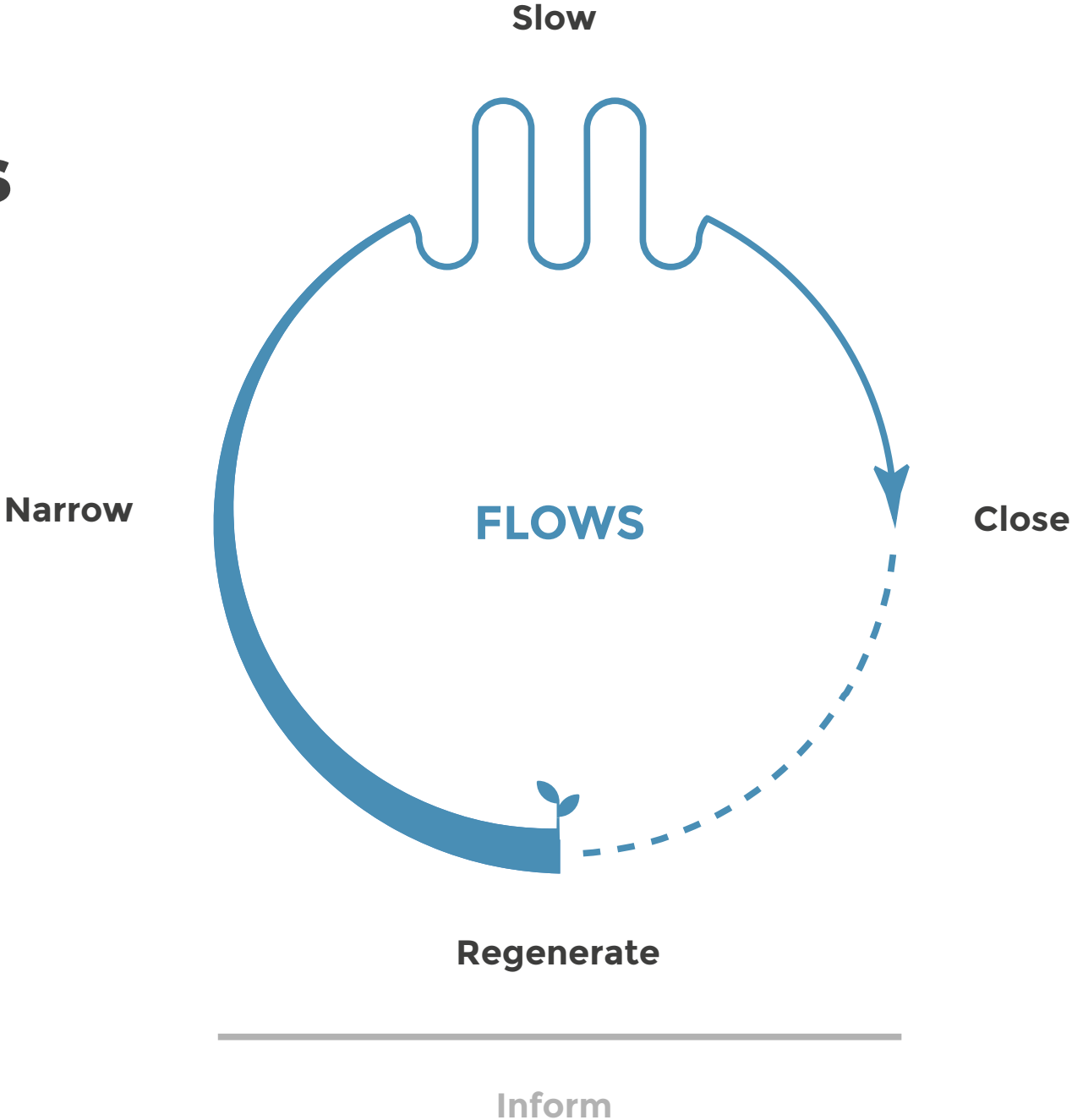
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Circularity is a collective outcome



Circular strategies





QUICK INTRO (I)

The Circularity Deck is a collection of circular economy principles, organized according to five key strategies that you can apply to the material and energy flows of your business:

- 1) **Narrow** (use less material and energy during design, production, delivery and use)
- 2) **Slow** (use products, components and material longer)
- 3) **Close** (Use wasted products, components and materials again)
- 4) **Regenerate** (Use non-toxic and biodegradable materials and renewable energy)
- 5) **Inform** (Use information technology to narrow, slow, close and regenerate material and energy flows)

→



Design products with 'ingredients' and materials that require less land, energy, water and/or materials to produce.

Example

Impossible Foods
'meaty' Compared requires less an

Circularity Deck introduction

CIRCULARITY DECK

The Circularity Deck is a planning tool for designers, strategists and managers. Made to be easy to use, it helps create a common understanding and integrate circular economy strategies. The Deck also acts as a valuable starting point in your current approach and knowledge. It includes identity, culture and more up with the Deck, and to align them with your organization's goals. Use the Deck to align your organization with the circular economy.

With the website to help in different ways to help in finding your team, to get a consistent version of the Circularity Deck for your organization or industry.

Read the deck's introduction and the tool's use.

Created by [sp/inklab](#)



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Watch this video on how to use the Circularity Deck



Circularity Deck



(Konietzko et al., 2020)

<https://www.youtube.com/watch?v=cxy90TcMwoM>

<https://miro.com/miroverse/category/strategy-and-planning/circularity-deck/>

Collaboration

Define a partner selection process

Ensure fair value capture among involved actors

Develop a decentralized and collaborative governance structure

Involve new actors from different industries and sectors

Get commitment and buy-in

Align individual and shared interests

Re-define actor roles and responsibilities

Develop joint strategies and goals

Establish and maintain trust

Experimentation

Design an ecosystem value proposition

Reframe the meaning of resources

Map a local minimum viable ecosystem

Prototype the circular ecosystem assets

Test the minimum viable ecosystem in a local experimentation space

Get commitment from real customers early on

Platformization

Create a modular technological architecture with open interfaces

Enable others to build and innovate on top of the platform

Define platform openness

Govern and manage data flows

Decide upon pricing structures and platform control mechanisms

Specify key boundary resources

Thank you

Questions?

References

Konietzko, J., Bocken, N., Hultink, E.J., 2020a. Circular ecosystem innovation: An initial set of principles. J. Clean. Prod. 253, 119942. <https://doi.org/10.1016/j.jclepro.2019.119942>

Konietzko, J., Bocken, N., Hultink, E.J., 2020b. A Tool to Analyze, Ideate and Develop Circular Innovation Ecosystems. Sustainability 12, 417. <https://doi.org/10.3390/su12010417>