

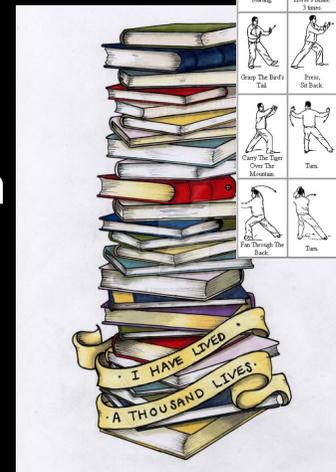
A Puzzle-Based Approach to Circular Business Model Innovation and a closer look at collaborative Business Modelling

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Why I work with "Innovation"

- 15 years in the "innovation support system"
 - Saab (the Military company)
 - TTO office of Linköping University
 - Consultant to industry
 - Almi Business Partners
 - Swedish Innovation Agency, Vinnova
 - Co-founded 3 femtech startups – using technology to make a better world for women
- Research:
How startups and industrial companies can scale environmental innovations together





Circular economy – setting the scene

Being naked is the #1 most sustainable option. We're #2.

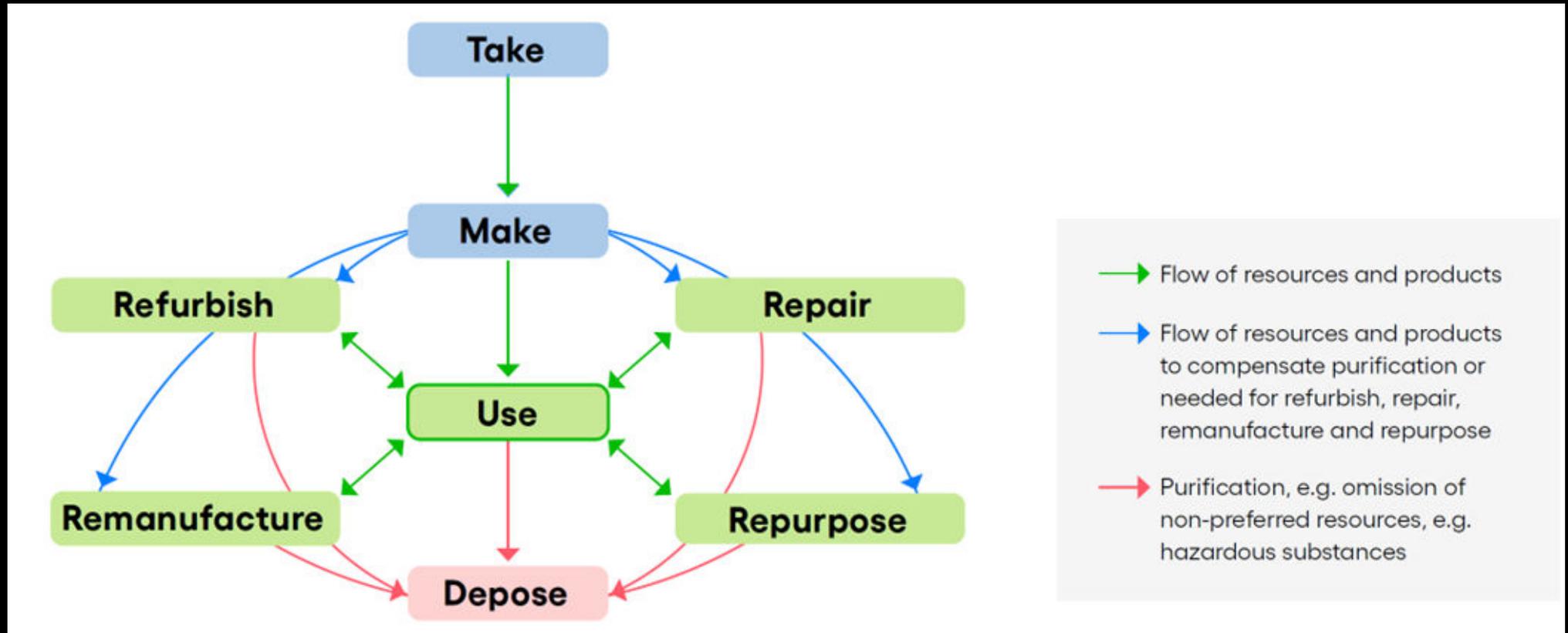


The ISO definition of Circular Economy (CE)

circular economy

- *economic system* that uses a systemic approach to maintain a *circular flow of resources*, by recovering, retaining or adding to their *value*, while contributing to *sustainable development*
 - *Resources* can be considered concerning both *stocks* and *flows*.
 - The inflow of *virgin resources* is kept as low as possible, and the circular flow of resources is kept as closed as possible to minimize *waste, losses, and releases* from the economic system.

From a business perspective



Few companies can be circular on their own



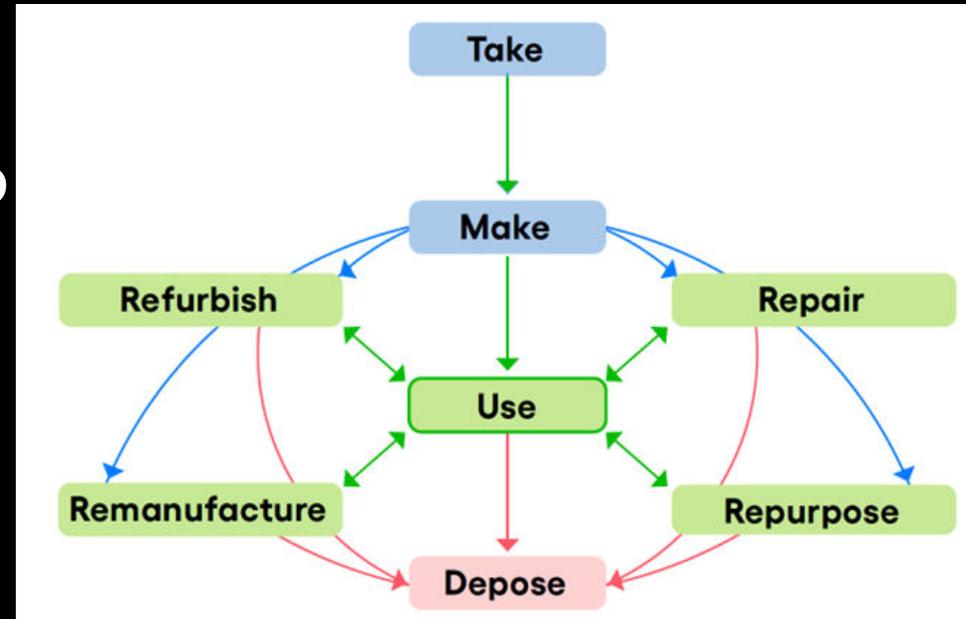
A circular economy
consists of many
linear business models

System of systems

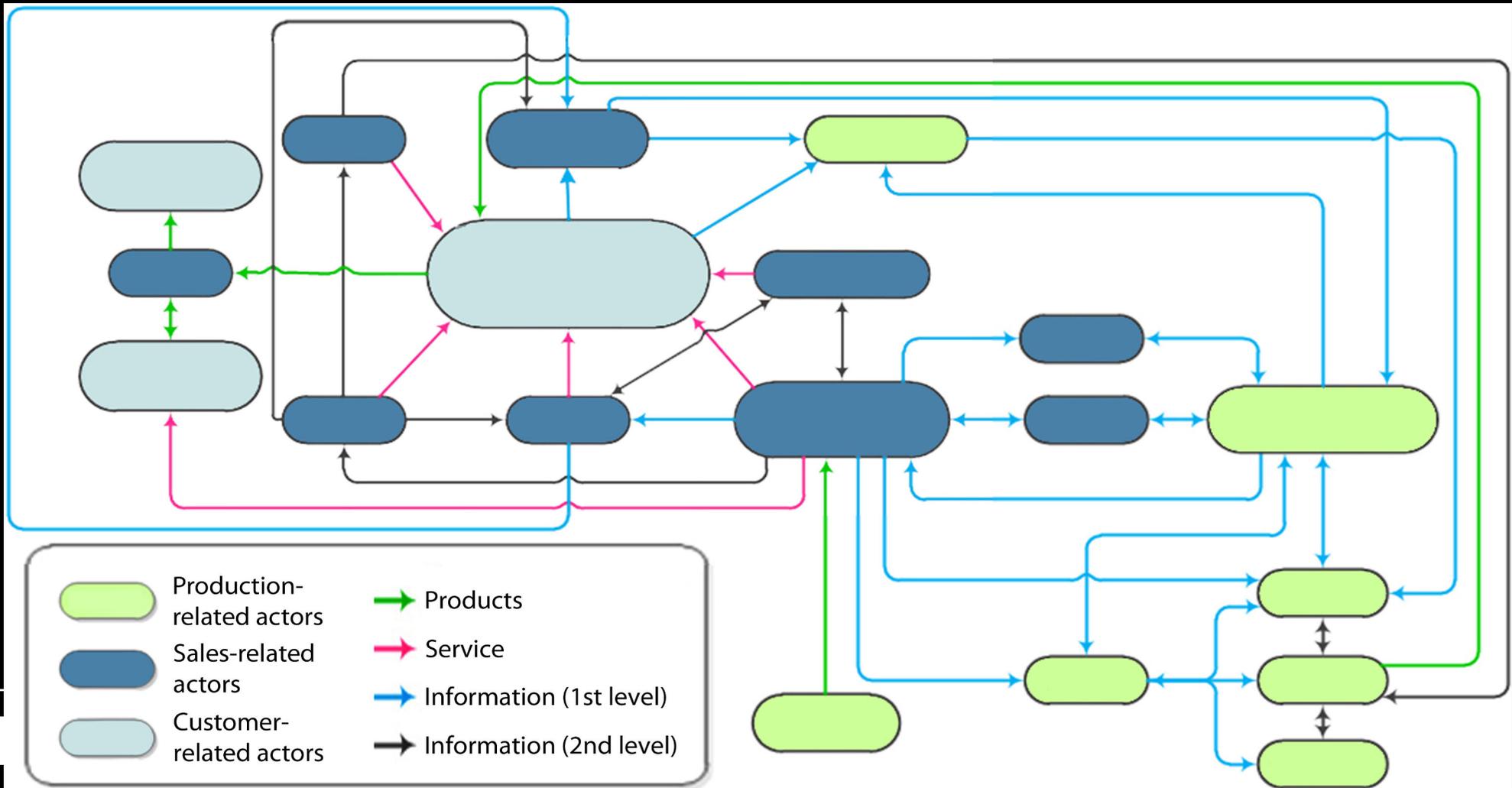
Ecosystems of companies

The **maker of a bike** usually do not make money on its repairs...

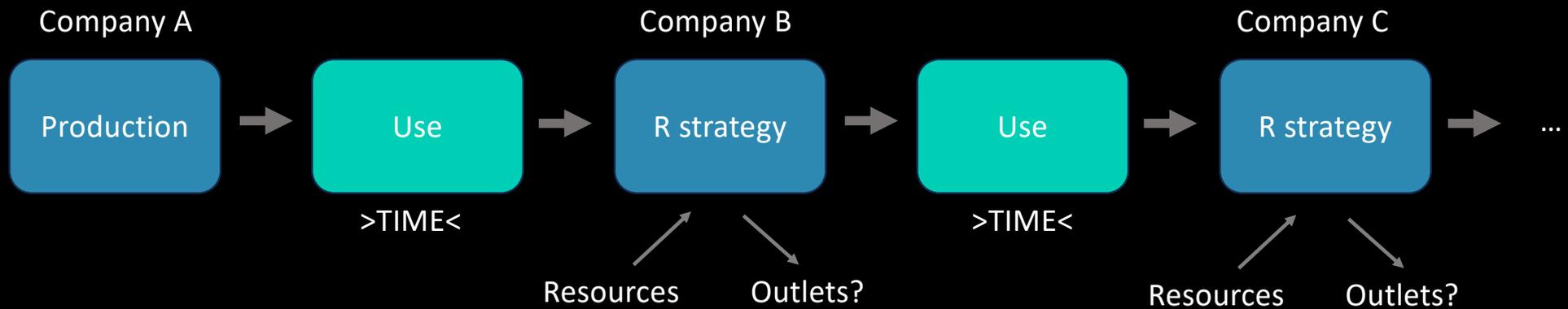
- Many stakeholders
- Complex relationships
- ... or sometimes no relationship



Systems mapping



And in this... Business models...



What is a Business model (BM)

BM as a *model* of the company's organization

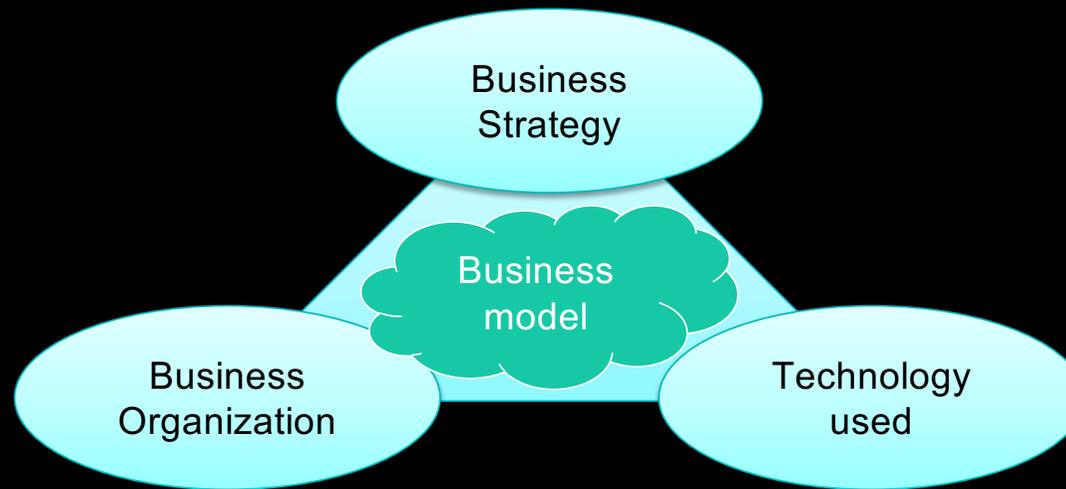
BM as *a part of* a company's value delivery

BM as something which can be "*successful*"
(and, thus, also be imitated)

BM as something which can be an *innovation*
(e.g. deliberately changed / developed)



Theory of BM



Three distinct parts:

Value Creation -> Value Delivery - > Value Capture

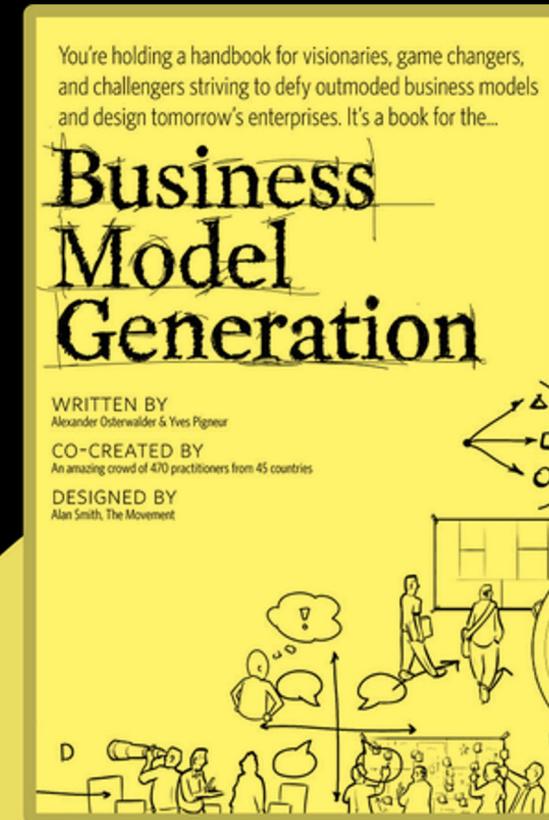
The practice of BM (and BM innovation)

“Clearly technological innovation by itself does not automatically guarantee business or economic success”.

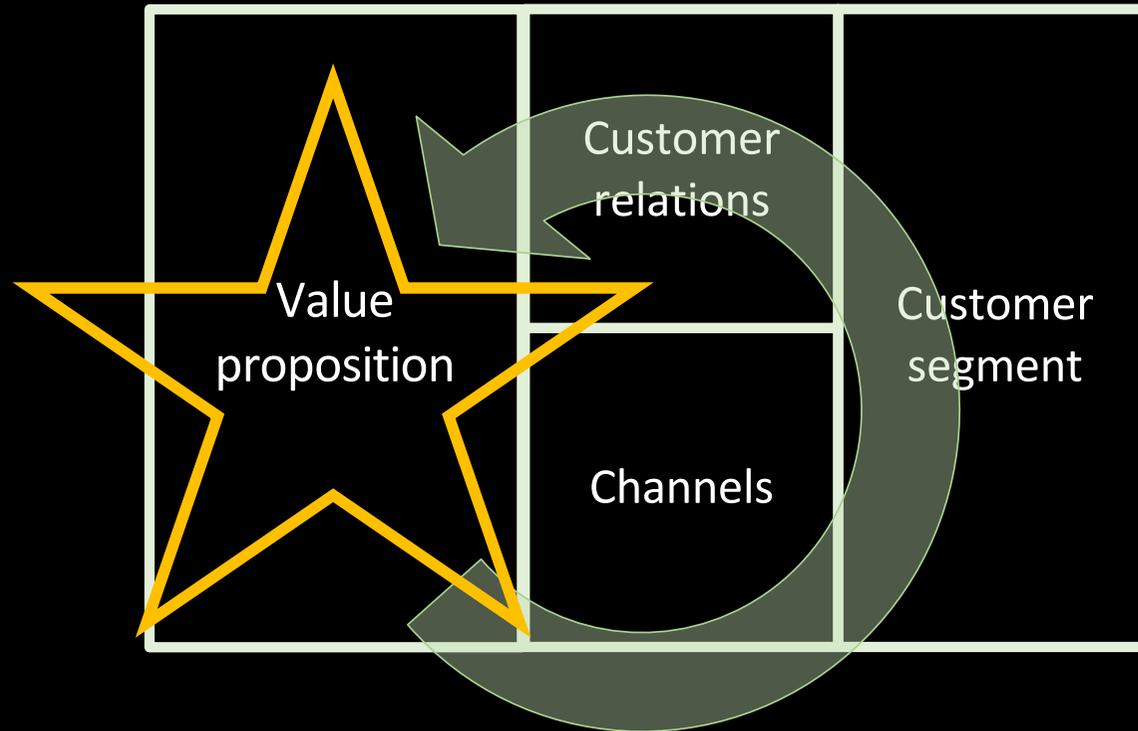
Zott and Amit (2010)

“One promising approach is to construct maps of BMs, to clarify the processes underlying them, which then allows them to become a source of experiments considering alternate combinations of the processes.”

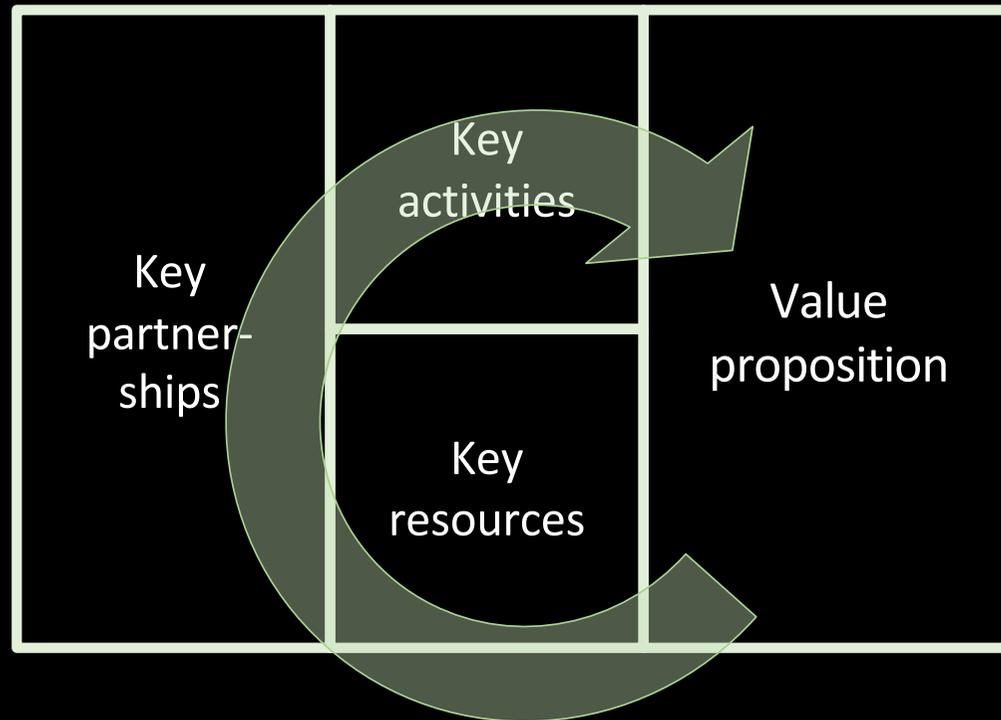
Chesbrough (2010)



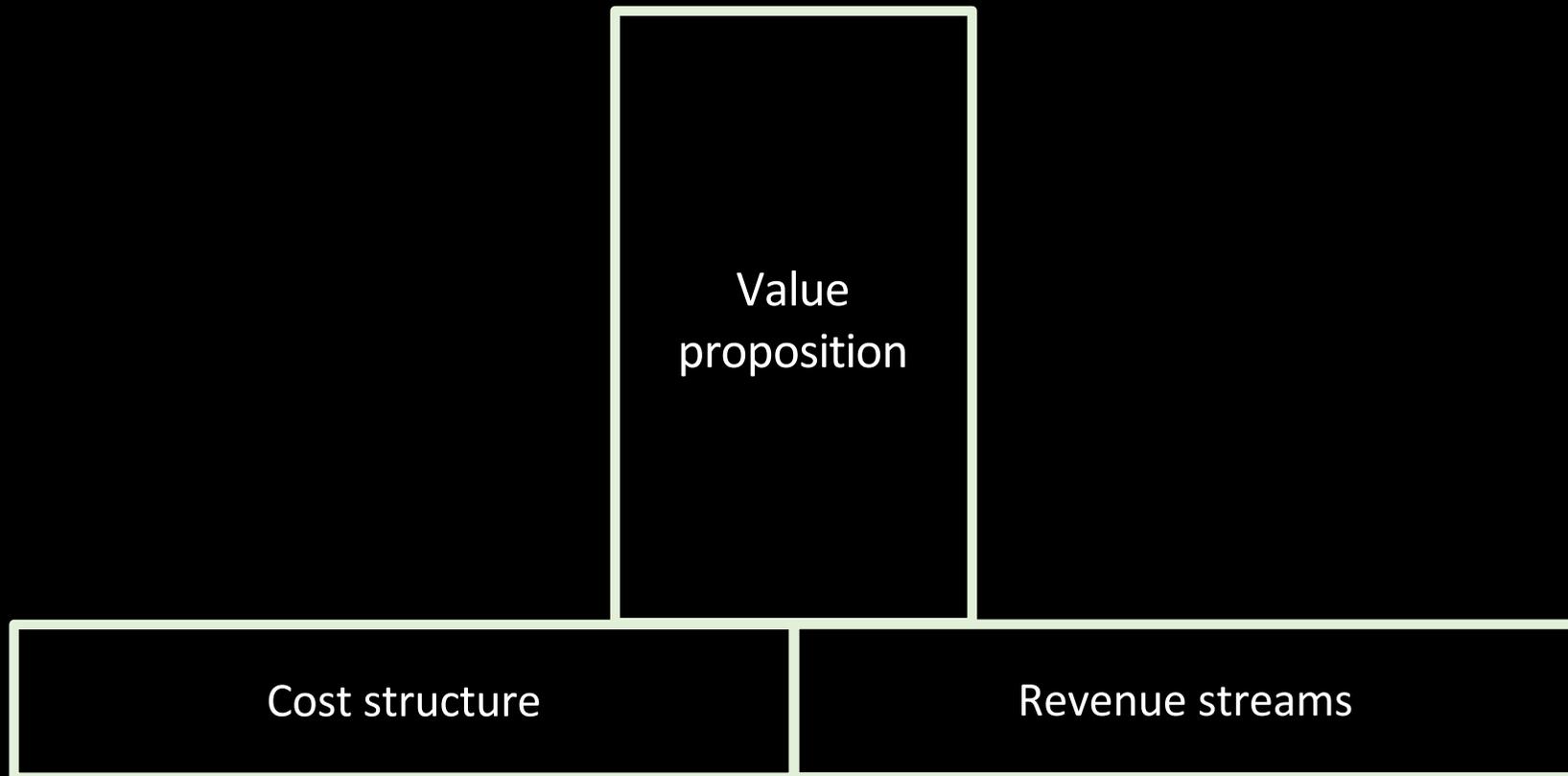
Delivering value



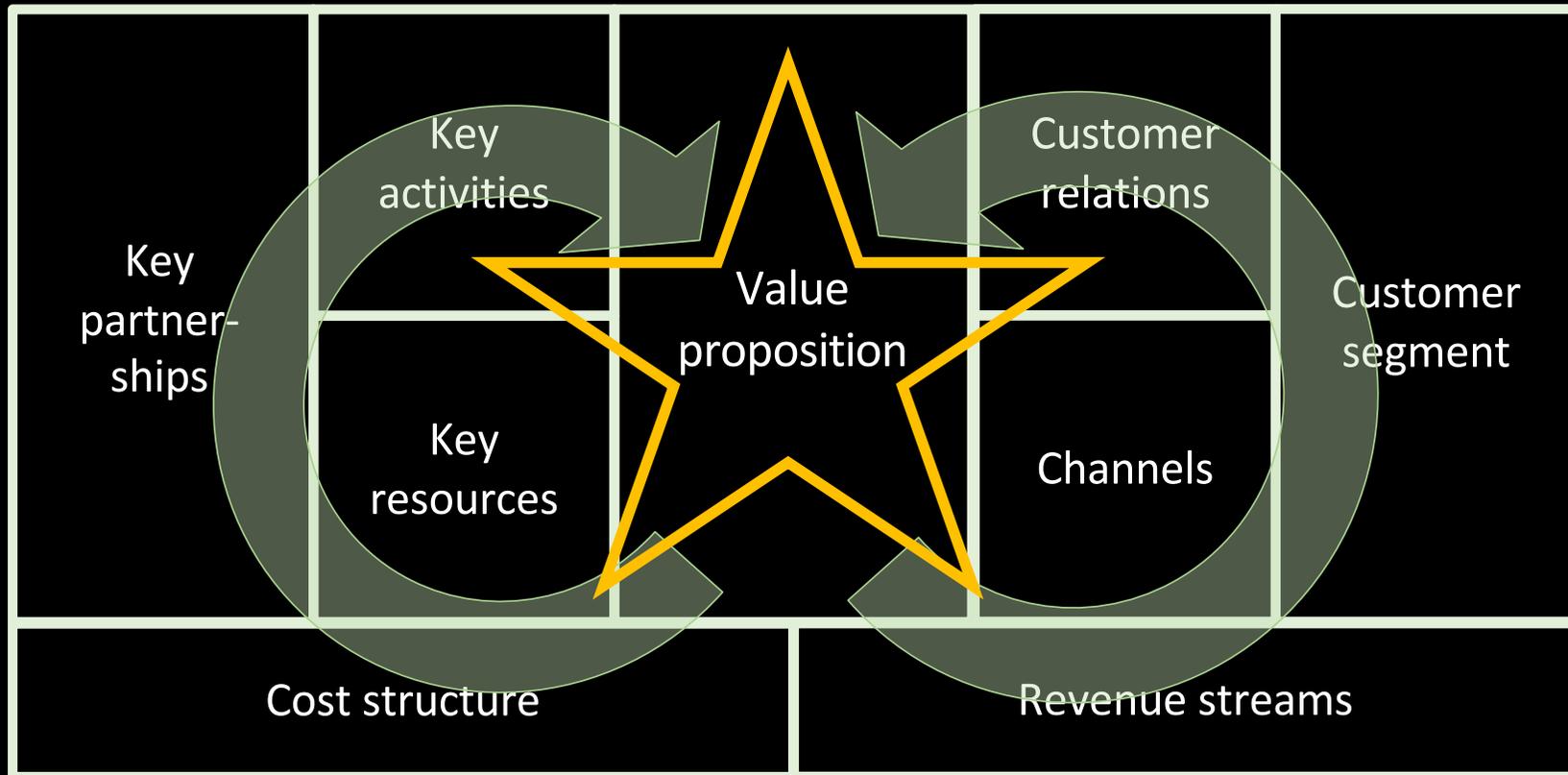
Creating value



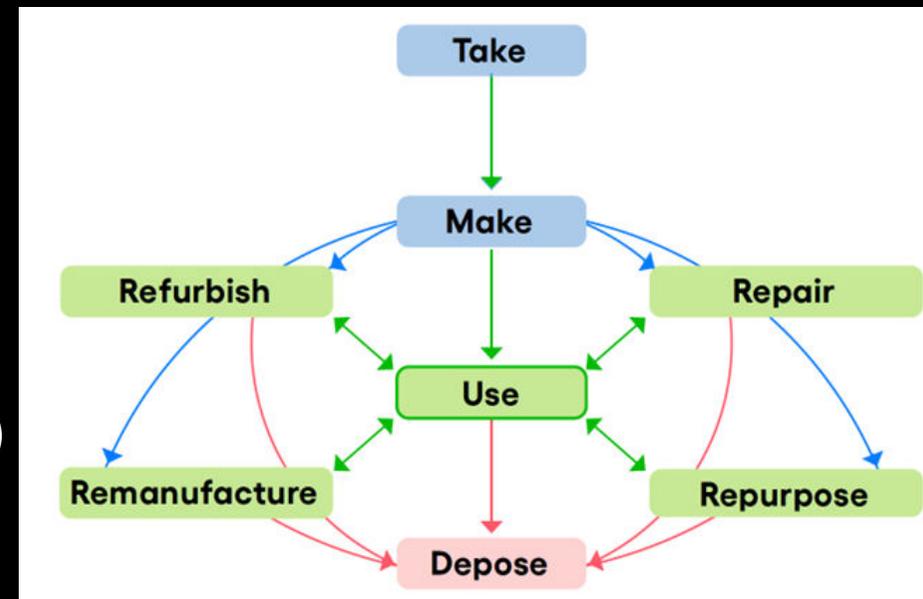
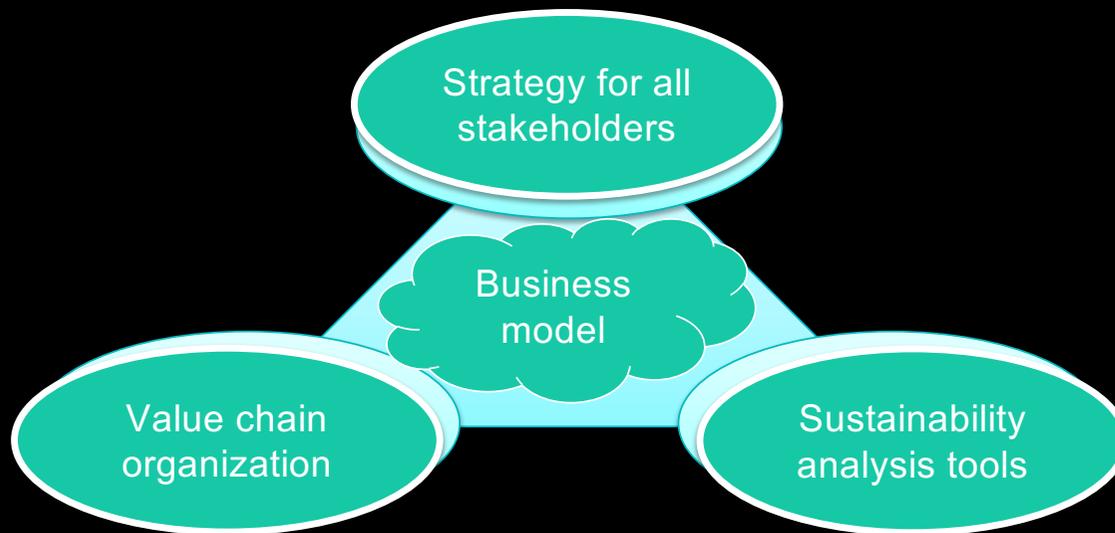
Capturing value



The business model canvas



Business modelling in the circular economy...



Four *strategies* for circular BMs

Dematerialize resource flows

Sell services instead of goods

Examples:

- Spotify / Netflix / Kindle
- Car leasing – don't buy the car

Close resource flows

“Waste to wealth”

Examples:

Recycled clothing etc

Intensify resource flows

Increase usage of existing goods

Examples:

- Airbnb – lease out your summer place
- Ghost breweries – leasing facilities of existing breweries

Extend resource flows

Increase lifespan of existing goods

Examples:

- Ebay – things with little value for you becomes valuable for someone else
- Bike repair shops

For a resource-efficient CE, it is important to design products for the respective strategies!

The Business Model Puzzle

A new way to use the BMC to *experiment* with circular business models.

1. The focal company

Three boxes:

Proposed solution

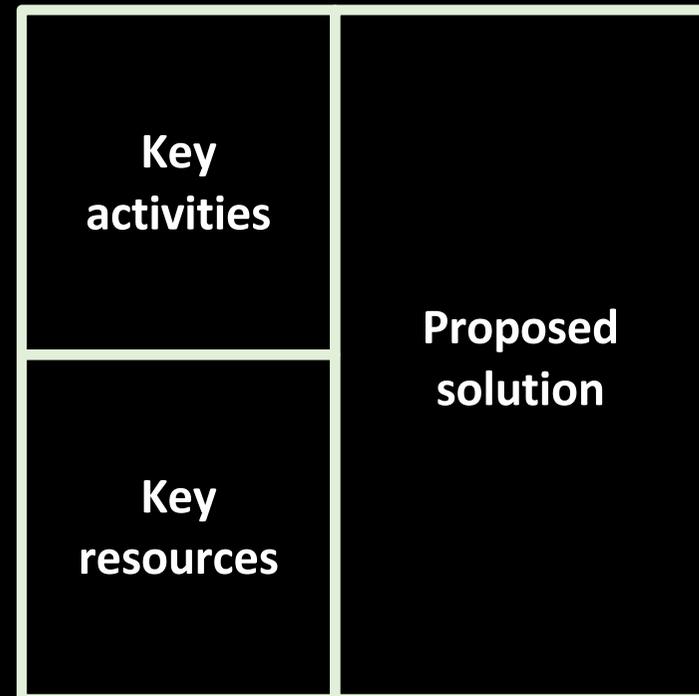
Description of the solution which is investigated
(value propositions come soon...)

Key resources

Internal resources which are instrumental for
creation of the value propositions

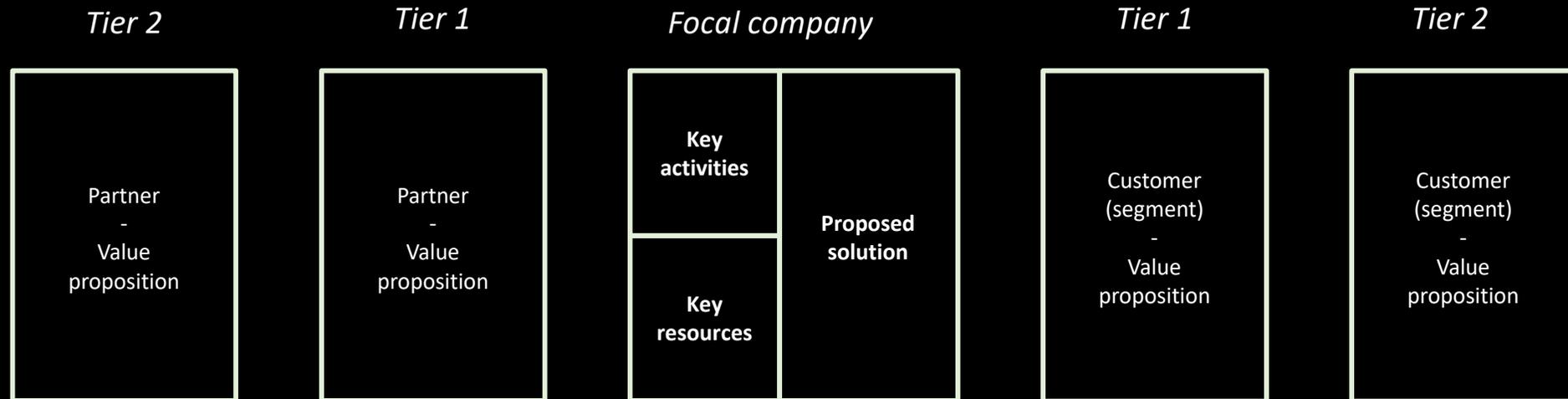
Key activities

Internal activities of most importance for value
creation – a tough one!



2. The value chain needs to be analyzed

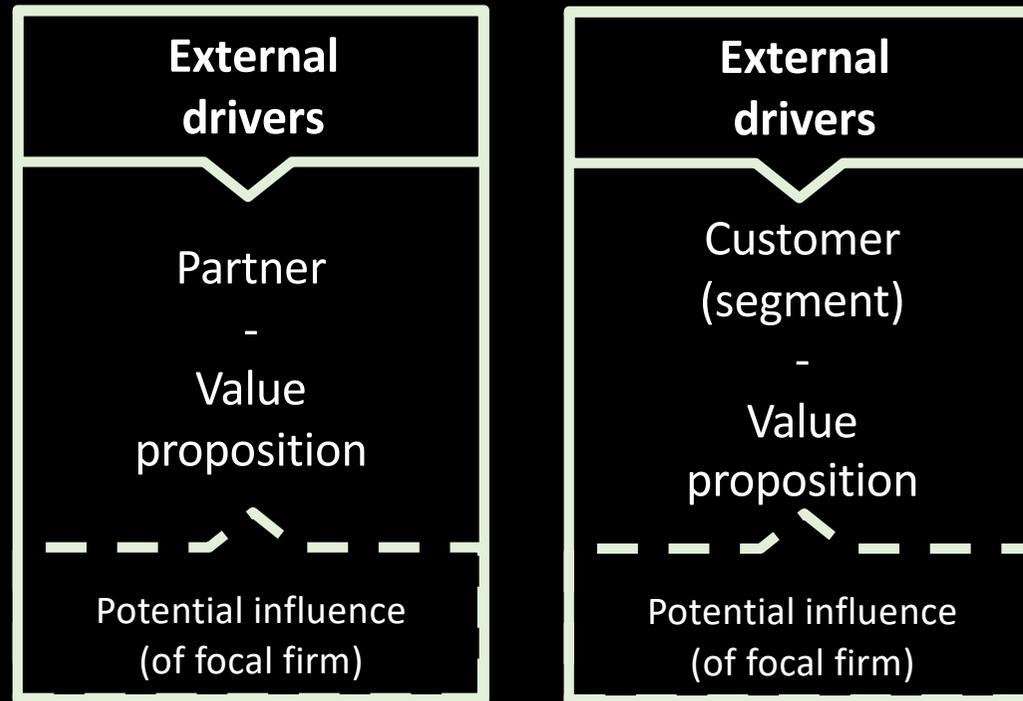
With **value proposition** to all relevant parties. (*It will alter between them*)



3. Drivers and possible influences to all

External drivers for sustainability for each party

Possible means of influence should be mapped.



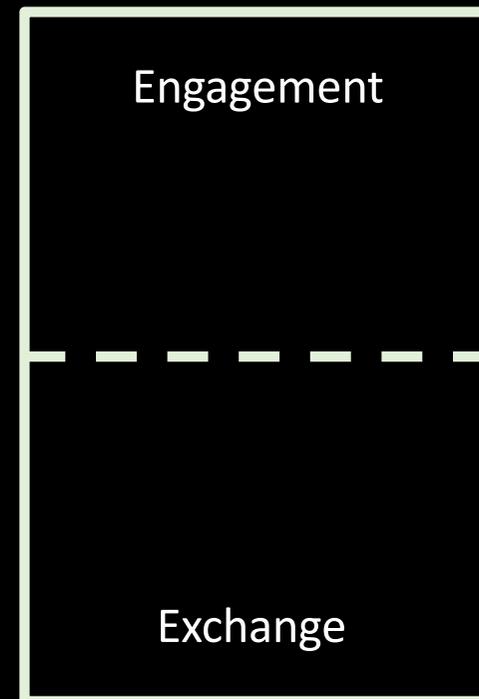
4. One new "box" - Long-term commitments

Engagement

The structure and level of formal commitment

Exchange

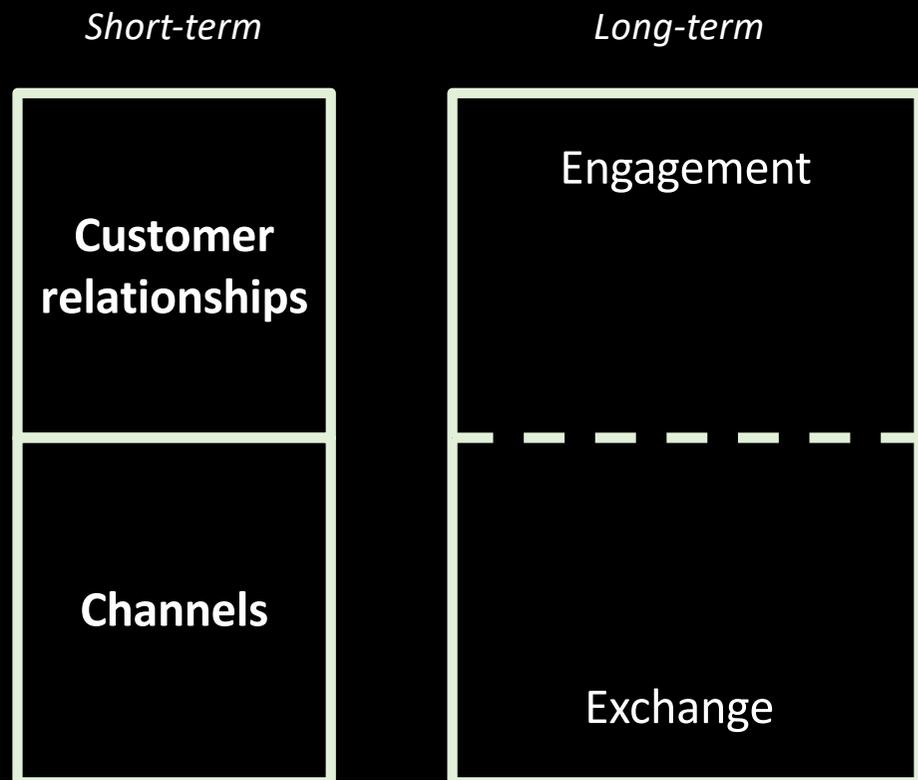
What values are exchanged



Commercial relations: Long-term or short-term?

If short-term or mass market,
use BMC “Relationships” and
“Channels”

If long-term commitment, use
“Engagement / Exchange”

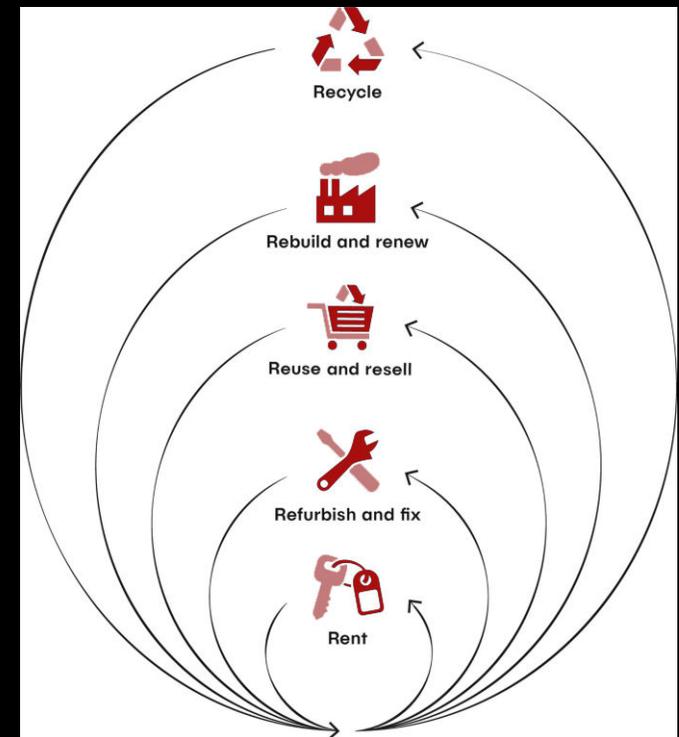


6 Circular business model *archetypes*

An “operationalization” of the strategies

- Classic long-life model
- Hybrid model - (built to repair)
- Access model - (leasing)
- Performance model - (functional leasing)
- Encourage sufficiency
- Industrial symbiosis

Practical examples from companies we have been working with in my department.



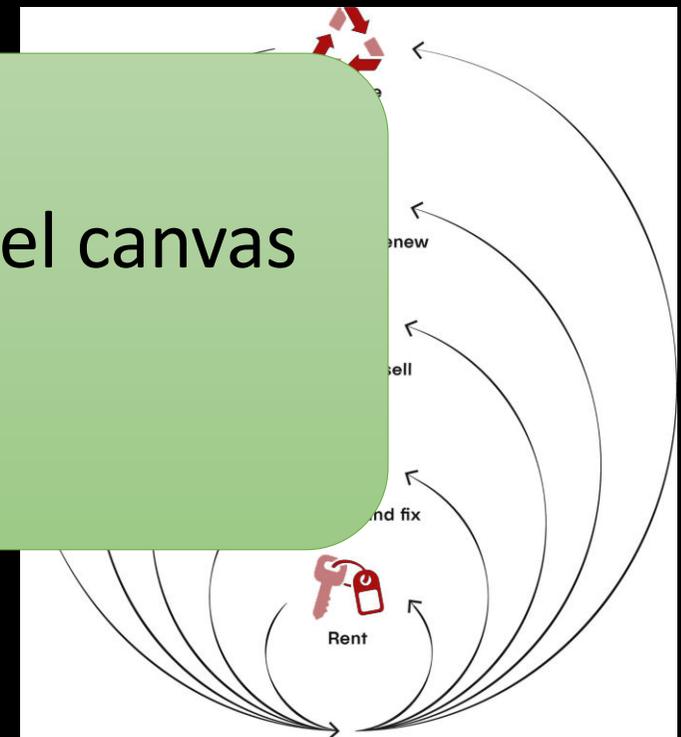
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Beyond the Business model canvas
no solutions are alike



Classic long-life model

Products designed for an extra-ordinary long life-span



Hybrid model

Long-life products designed for repair and upgrading



fairphone

 TRECE

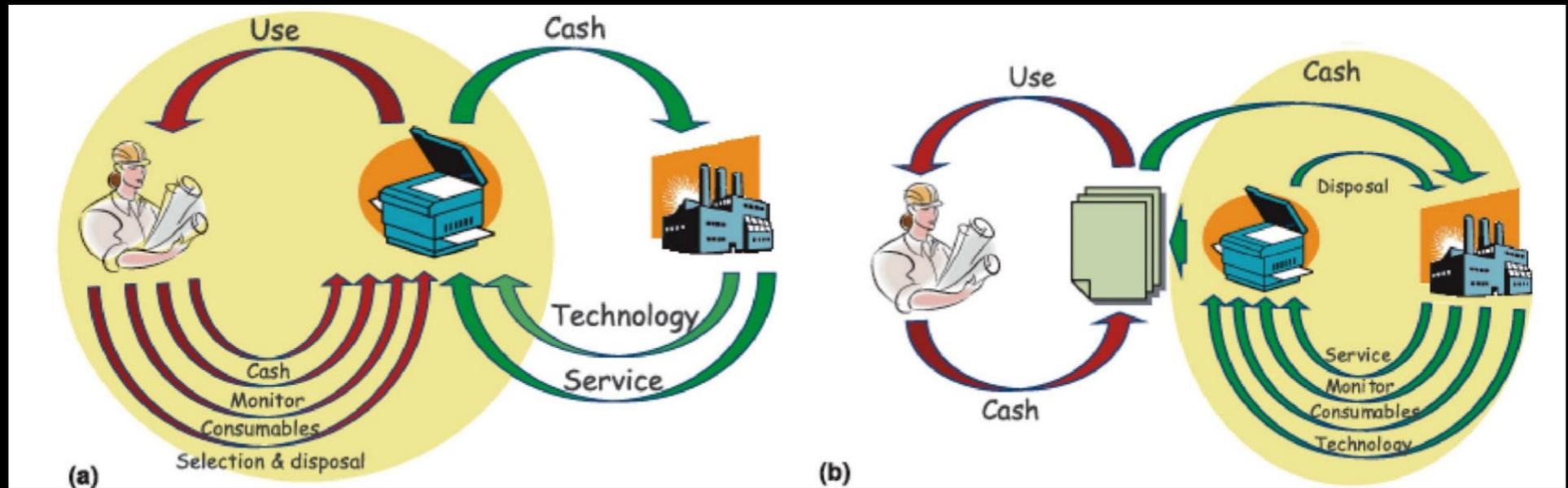


Access model

Leasing of products instead of selling

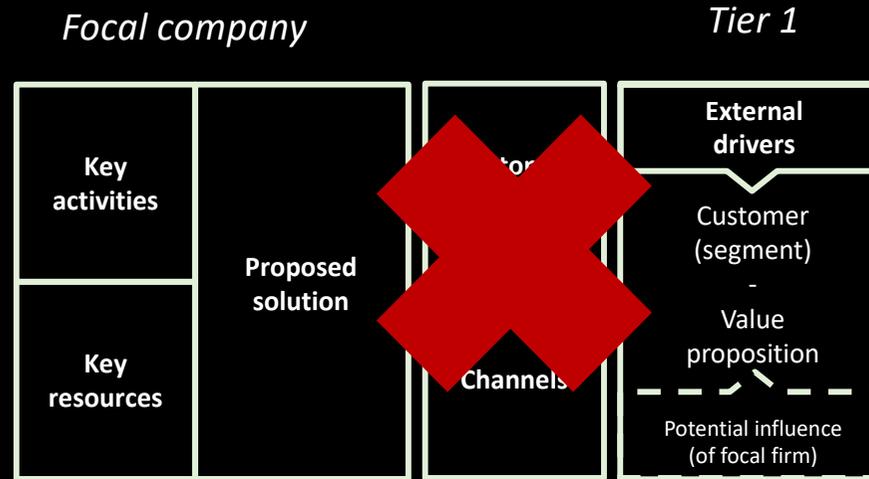
Works when product is designed for durability and minimal repairs!

EU Battery directive! – second life for returned batteries (large sizes)



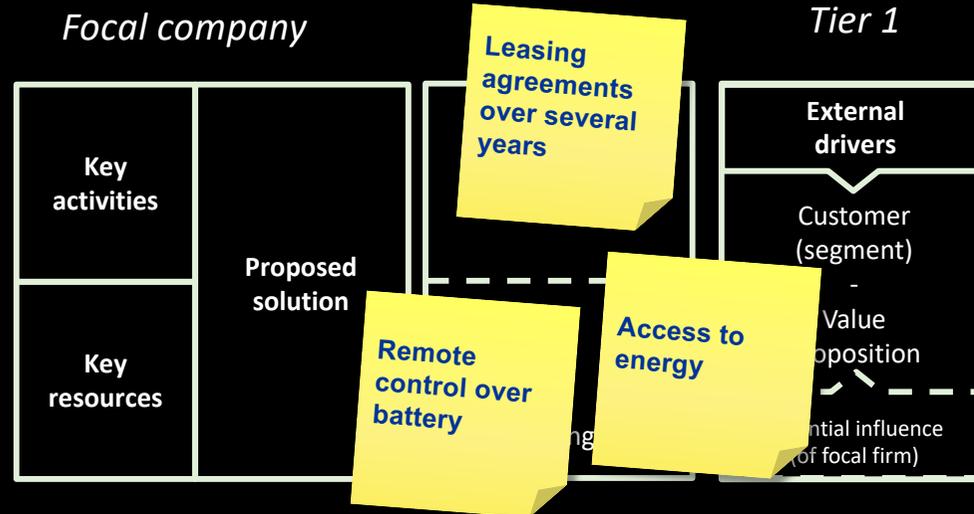
Access model – batteries in second life markets

*Lots of
suppliers...*



Access model – batteries in second life markets

Lots of suppliers...



Performance model

Selling the defined function – not the product

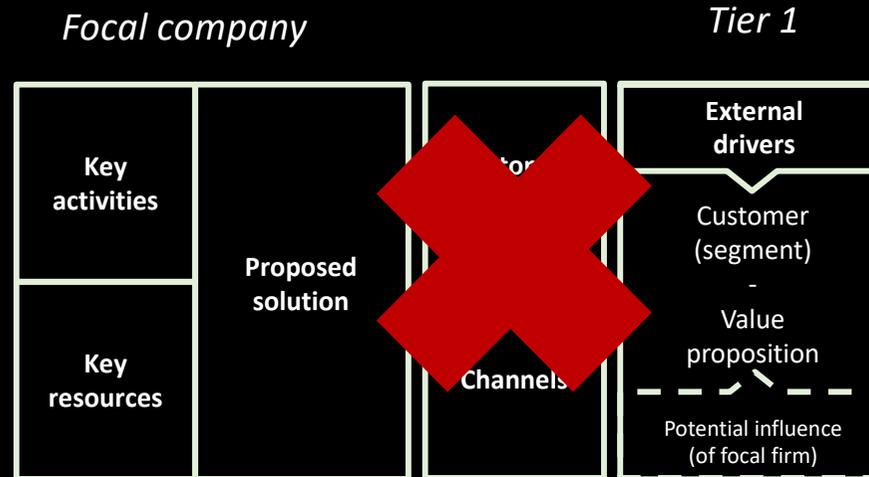
Toyota Material Handling
(forklifts)

“Warehouse as a service”



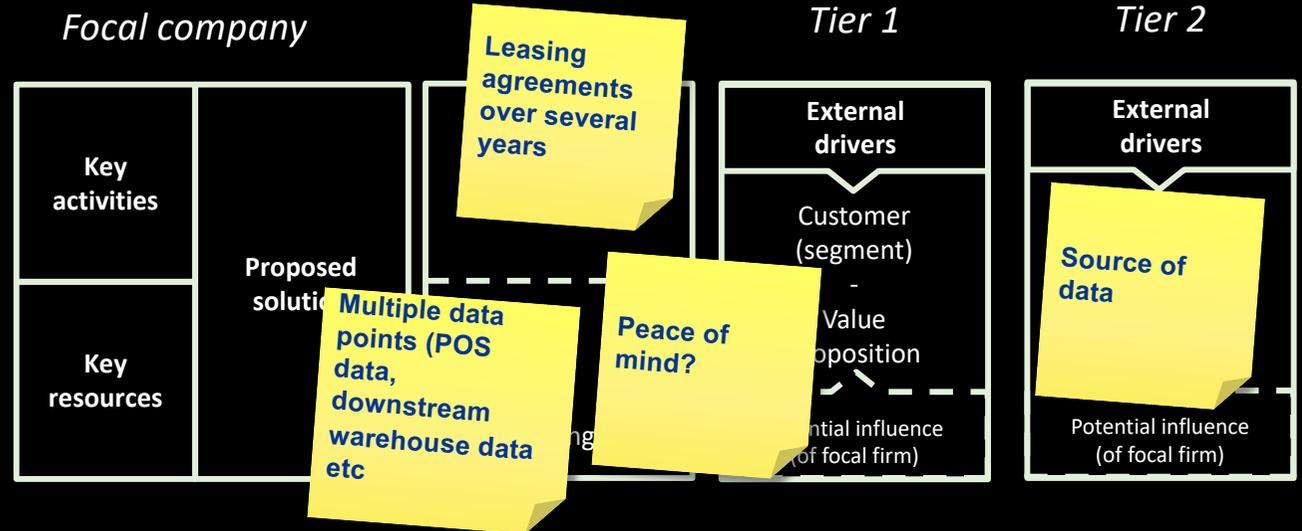
Performance model – warehouse as a service

*Lots of
suppliers...*



Performance model – warehouse as a service

Lots of suppliers...

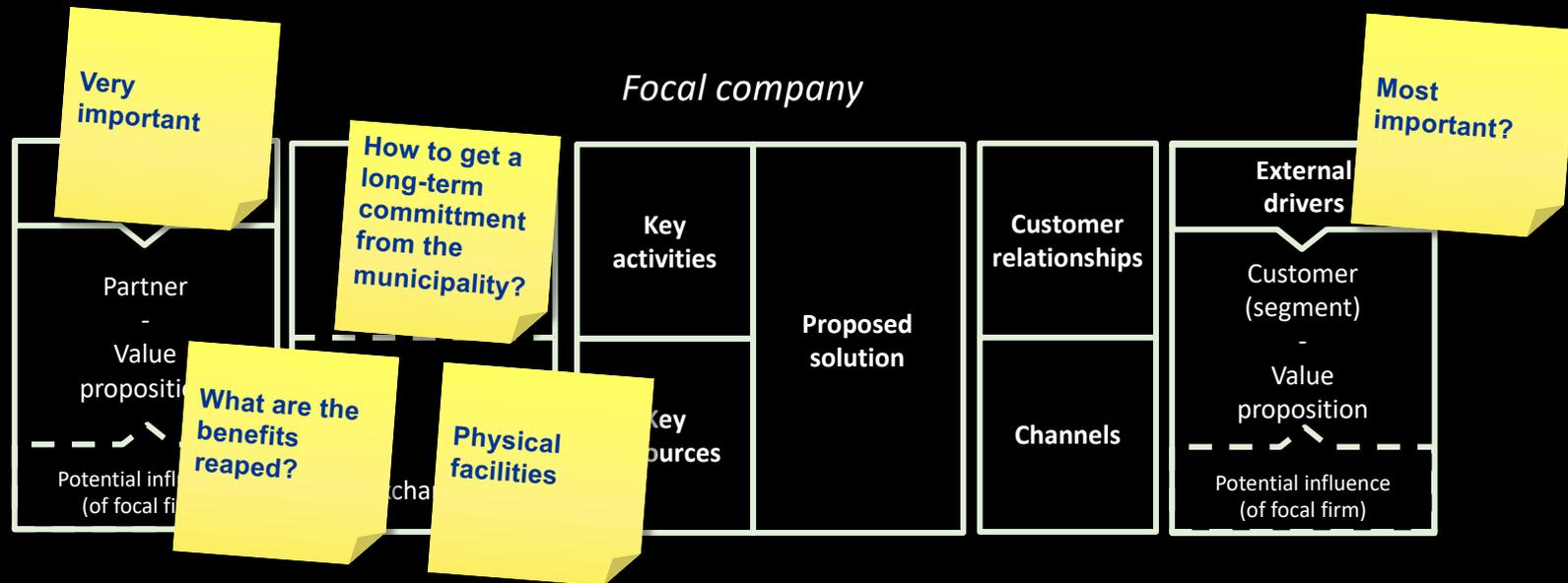


Encourage sufficiency

Encourage people not to buy more – a business idea?



Encourage sufficiency – repair shop for consumers

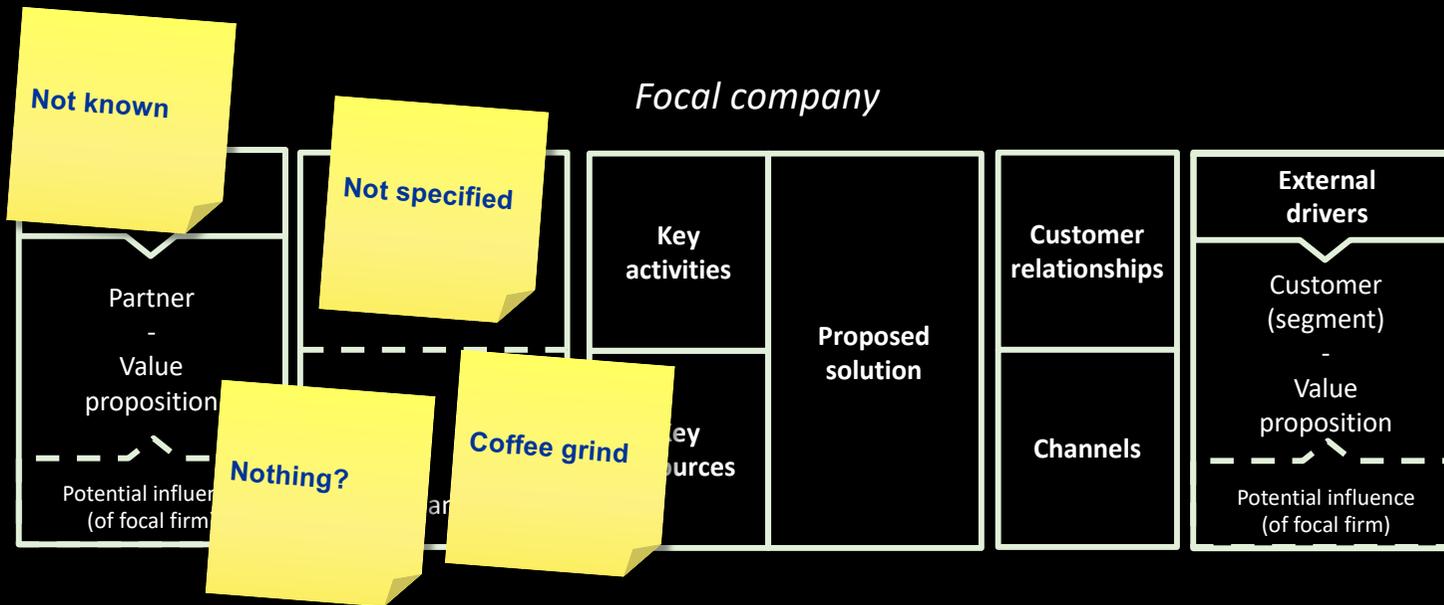


Industrial symbiosis

Using a network of industries to create wealth out of "waste"
One industry's output becomes the other's input



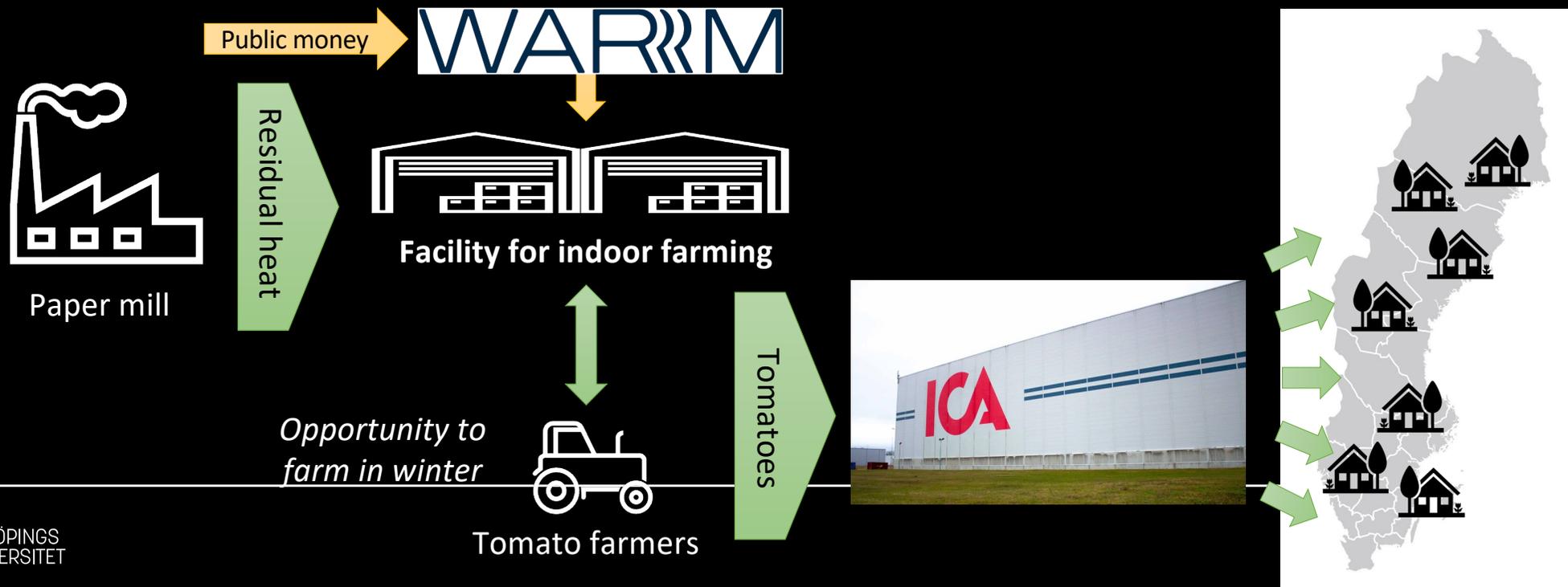
Industrial symbiosis / Waste to wealth



Industrial symbiosis

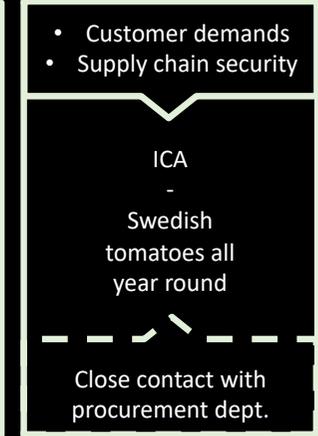
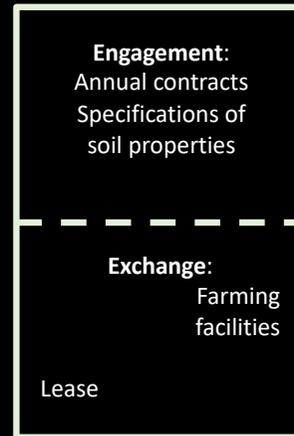
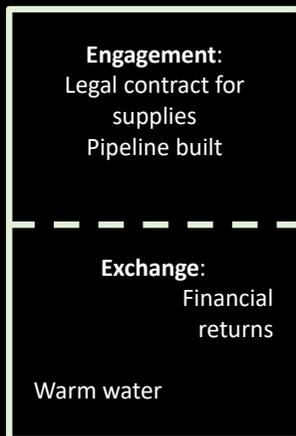
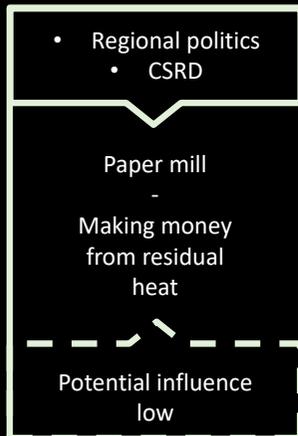
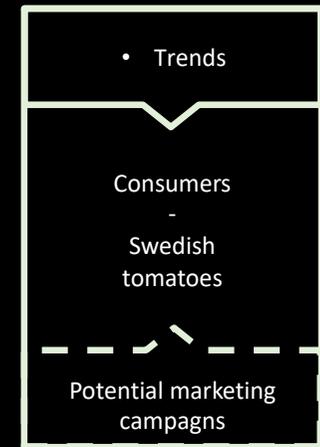
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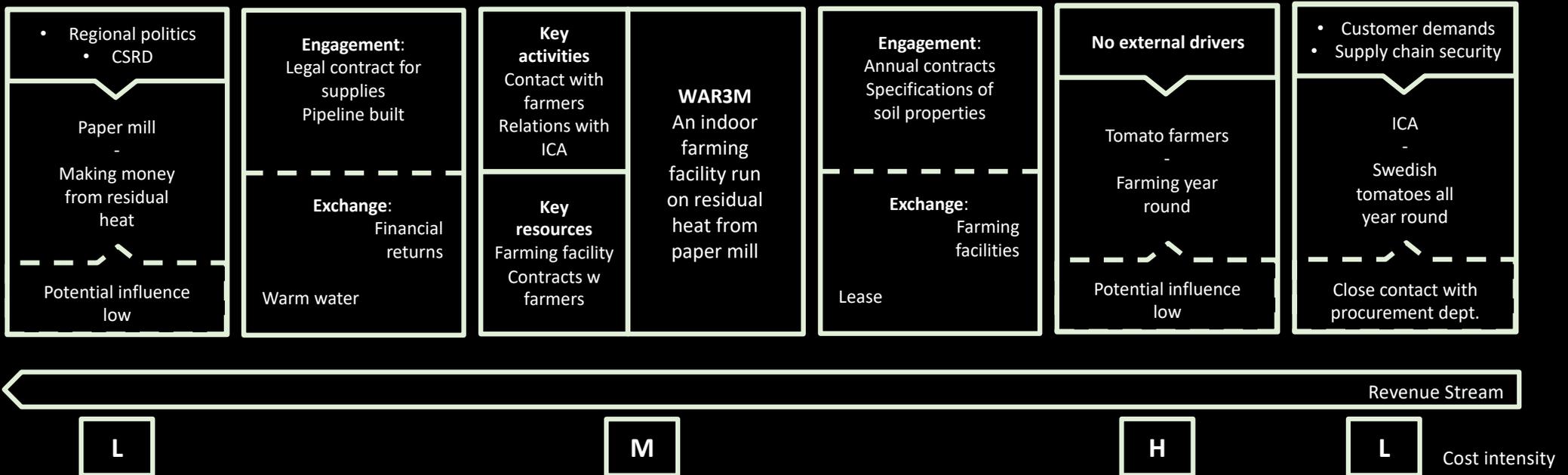
Beyond the canvas - no solutions are alike

The puzzle approach:



One last step - Financial returns

Value should be distributed to ensure value chain survival.



The End... If you have ideas or questions:

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Or add me on LinkedIn:

<https://se.linkedin.com/in/eldebo/>