



Ecosystems in chemicals

A largely untapped potential

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Your speakers today



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BCG Budapest

Expertise

Expert for ecosystem strategies & transformation programs

Ambassador at the BCG Henderson Institute on the topic of business ecosystems with a focus on ecosystem design, governance and strategies (Fellow: Ulrich Pidun)



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Associate Director Chemicals
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Expertise

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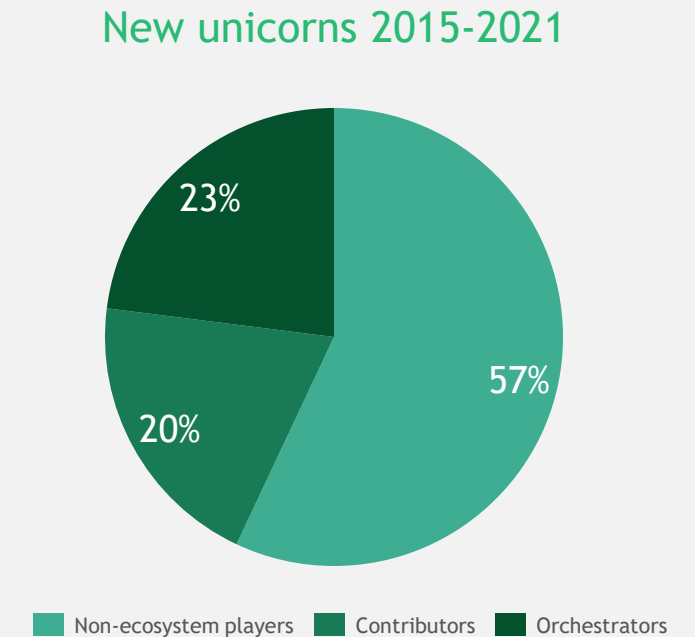
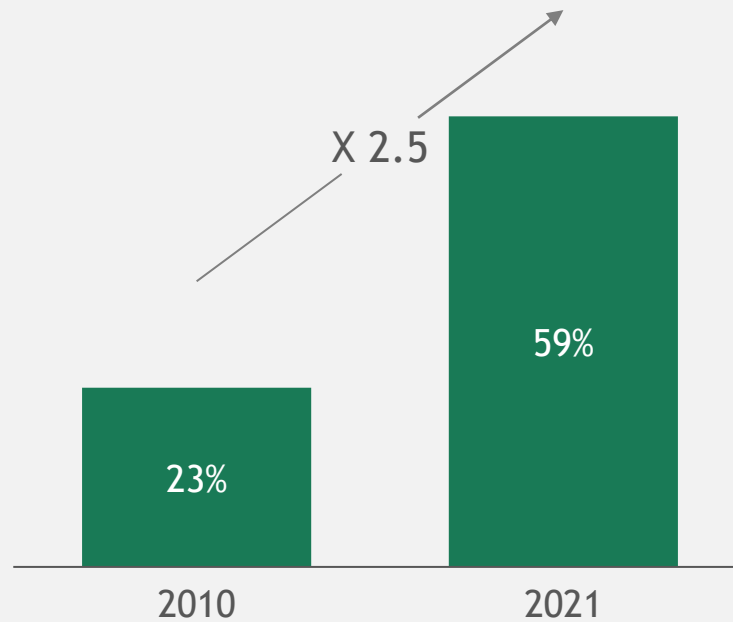
Core member of BCG's Chemicals practice area and deeply involved in client works combining Chemical industry perspective and sustainability transformation

Business ecosystems are high on the agenda

 7 out of the Top10 most valuable companies are ecosystem players

 59% of Top100 companies are already engaging in some sort of ecosystem play

 43% of new unicorns since 2015 based their business model on ecosystems



Why do companies engage in business ecosystems?



Expand **market access** for existing offering



Strengthen the core business through complements



Strengthen competitiveness of the core business



Tap revenue pools adjacent to the core business



Launch new ventures separate from the core business



What is your concept of a business ecosystem?

1

Ecosystem as affiliation

Ecosystems are communities of associated players, defined by their networks and affiliations

Google and its network of partners

Boston biotech cluster

Zurich startup ecosystem

2

Ecosystem as structure

Ecosystems are configurations of activities, defined by their value propositions

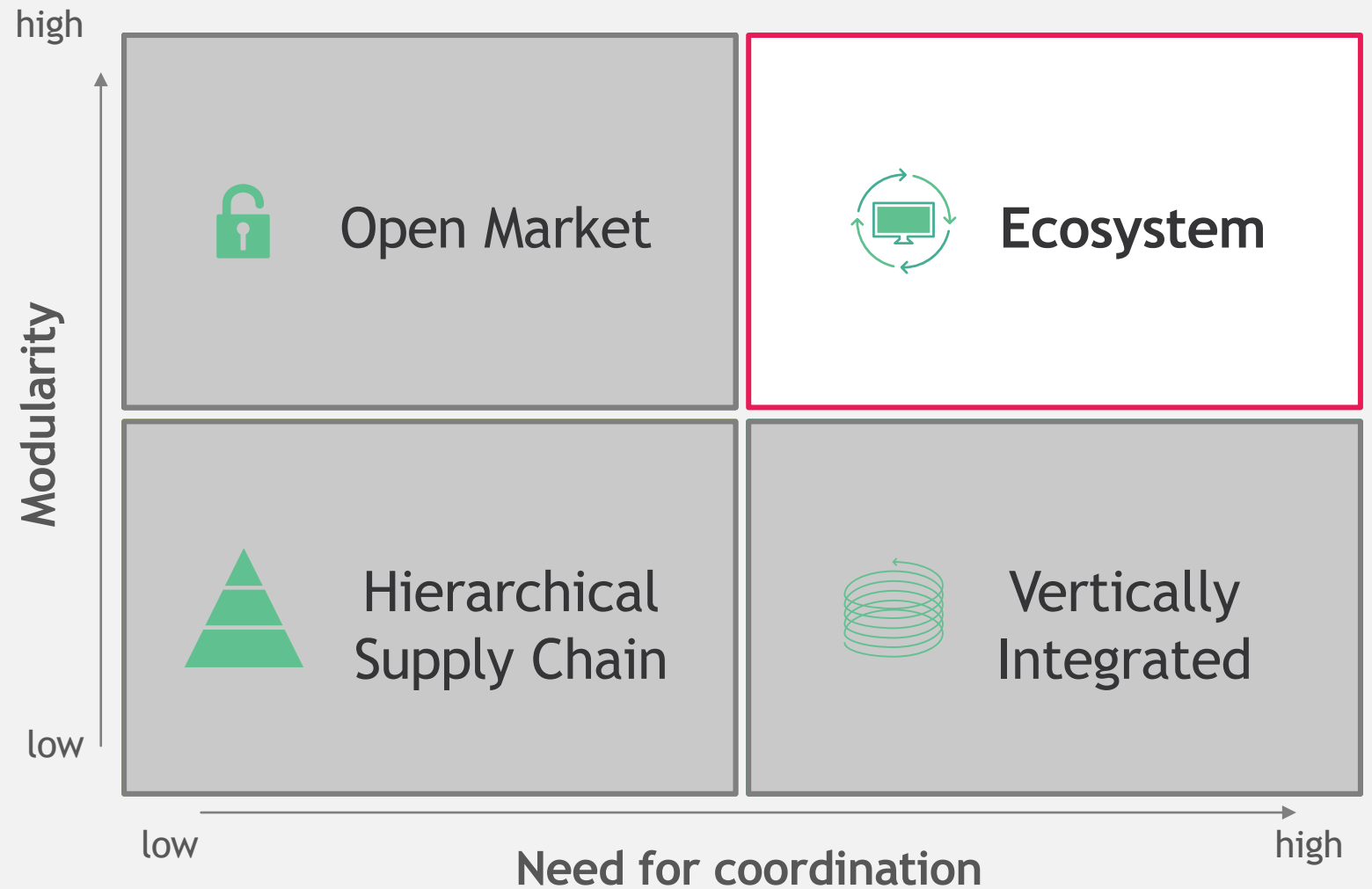
Android, Apple iOS

Ebay, Uber, Airbnb

Working definition of a business ecosystem

"A business ecosystem is a dynamic group of largely independent economic players that create products or services that together constitute a coherent solution"

Ecosystems present a specific way of organizing a business, competing with other models



Ecosystem business models have strong benefits



Access to
new capabilities

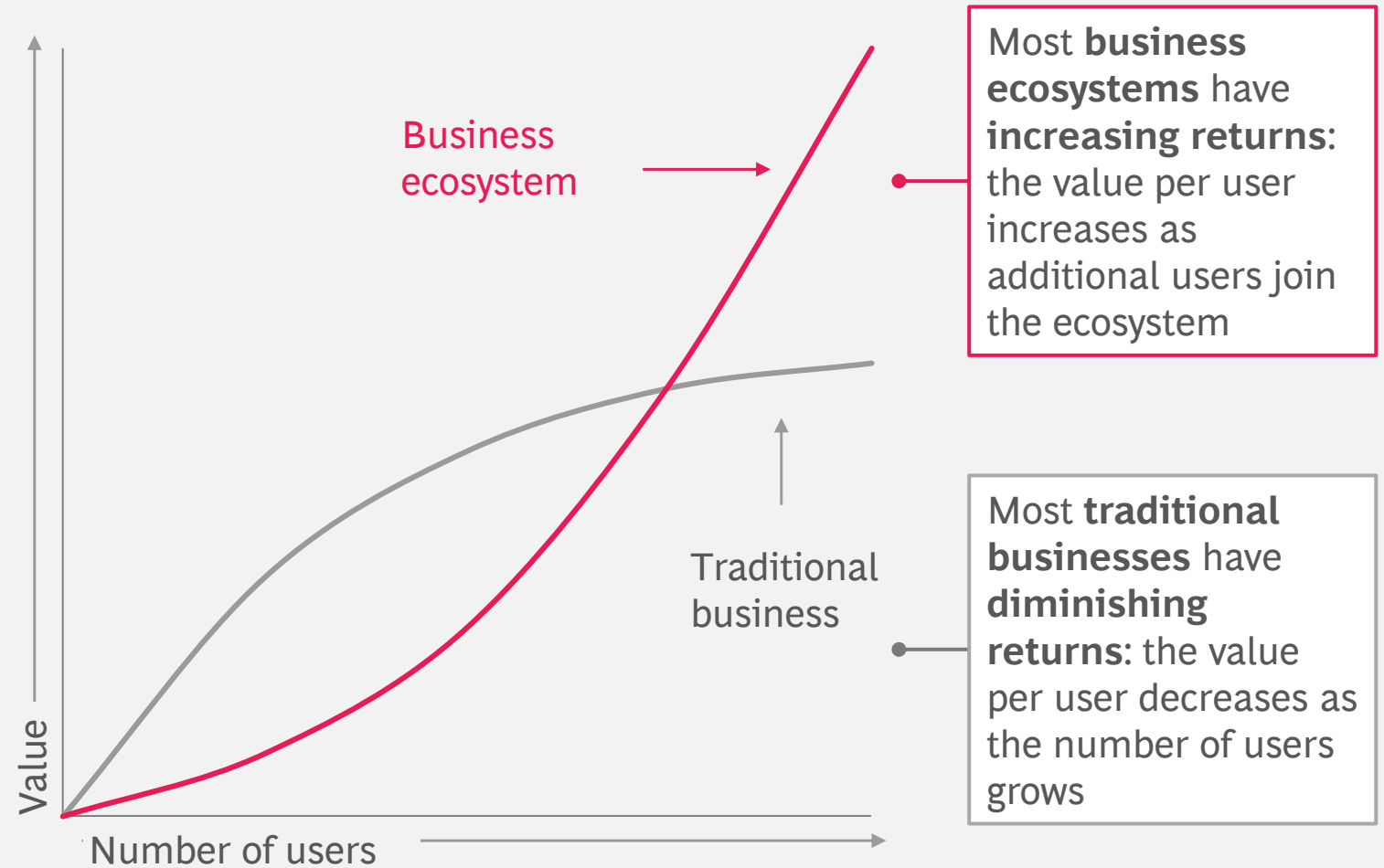


Ability to
scale fast



Flexibility
and resilience

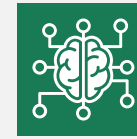
Most business ecosystems have an attractive financial profile



Increasing returns are driven by three flywheel effects



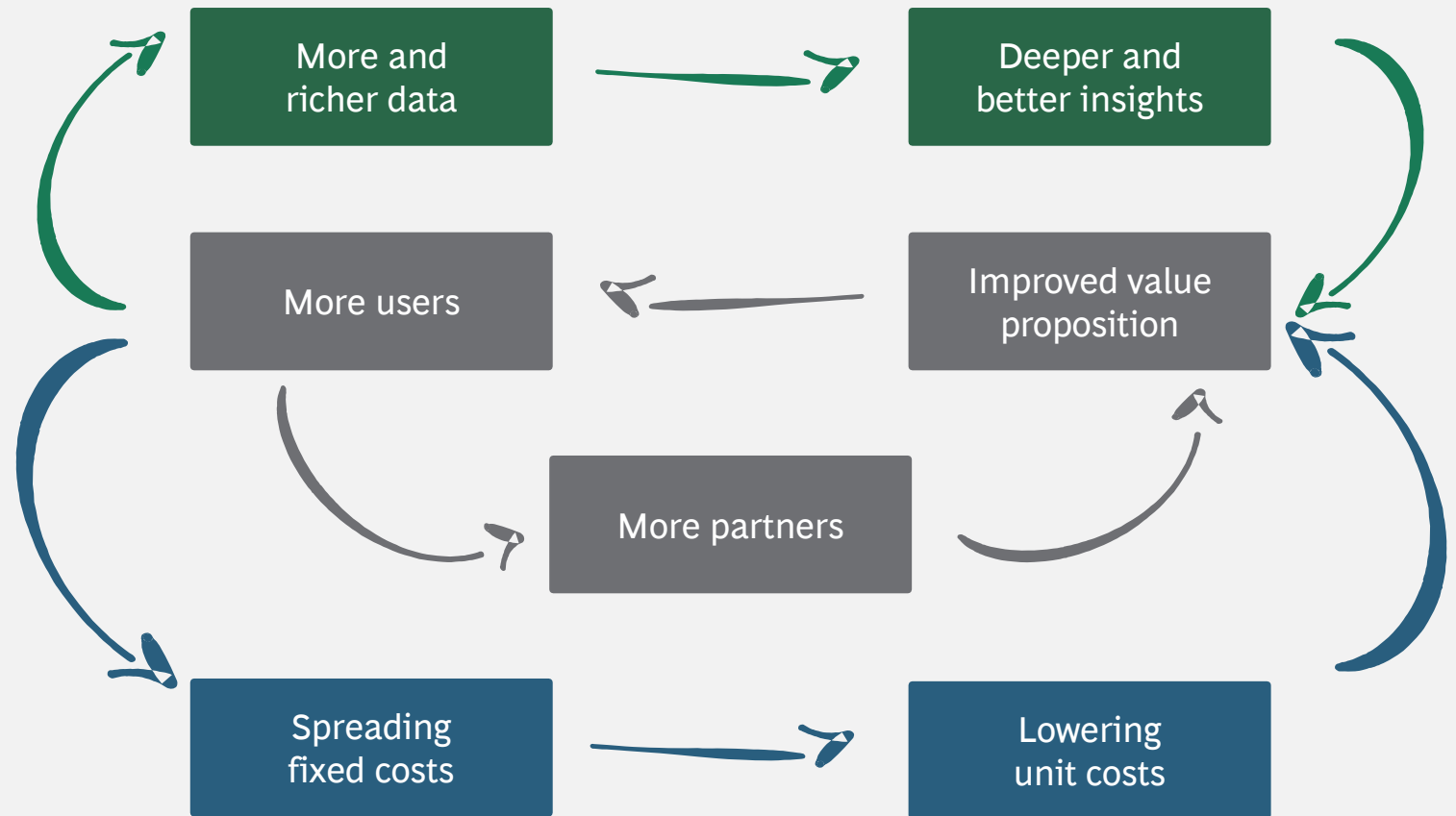
Flywheel 1
Network effects



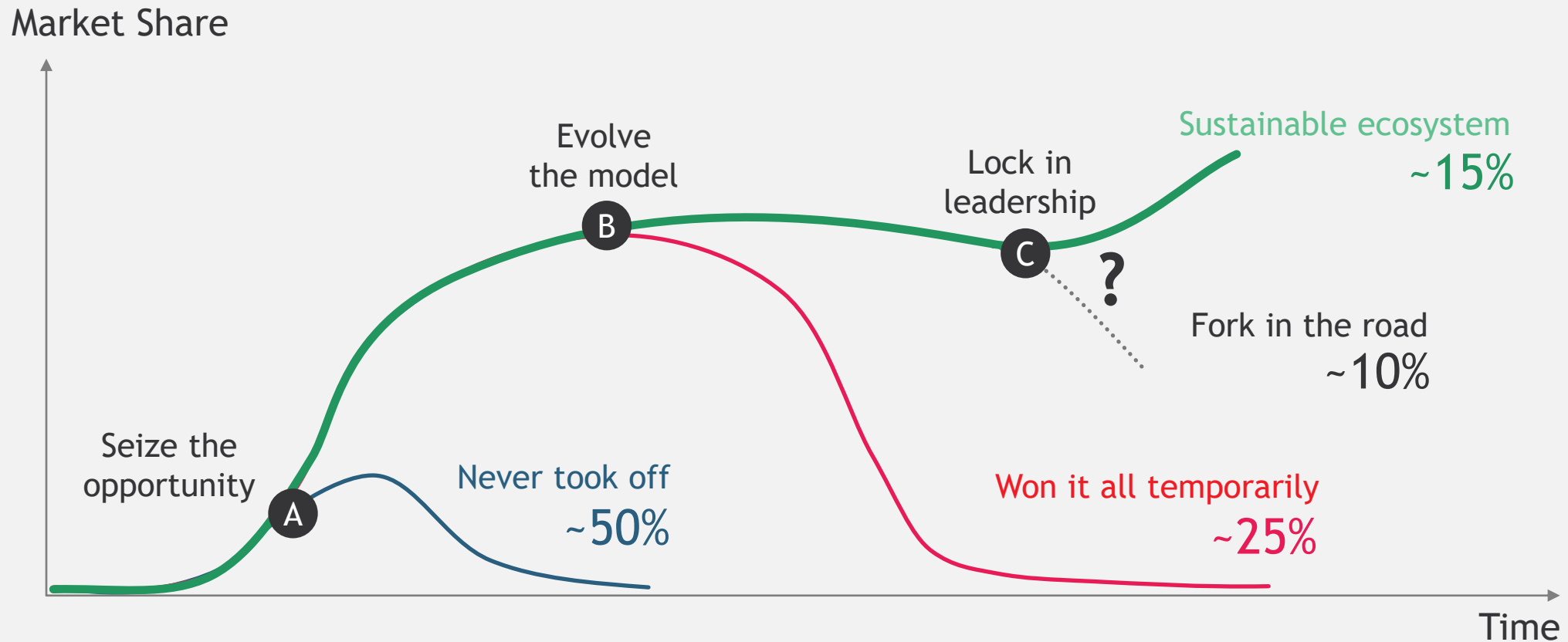
Flywheel 2
Learning effects



Flywheel 3
Economies of scale

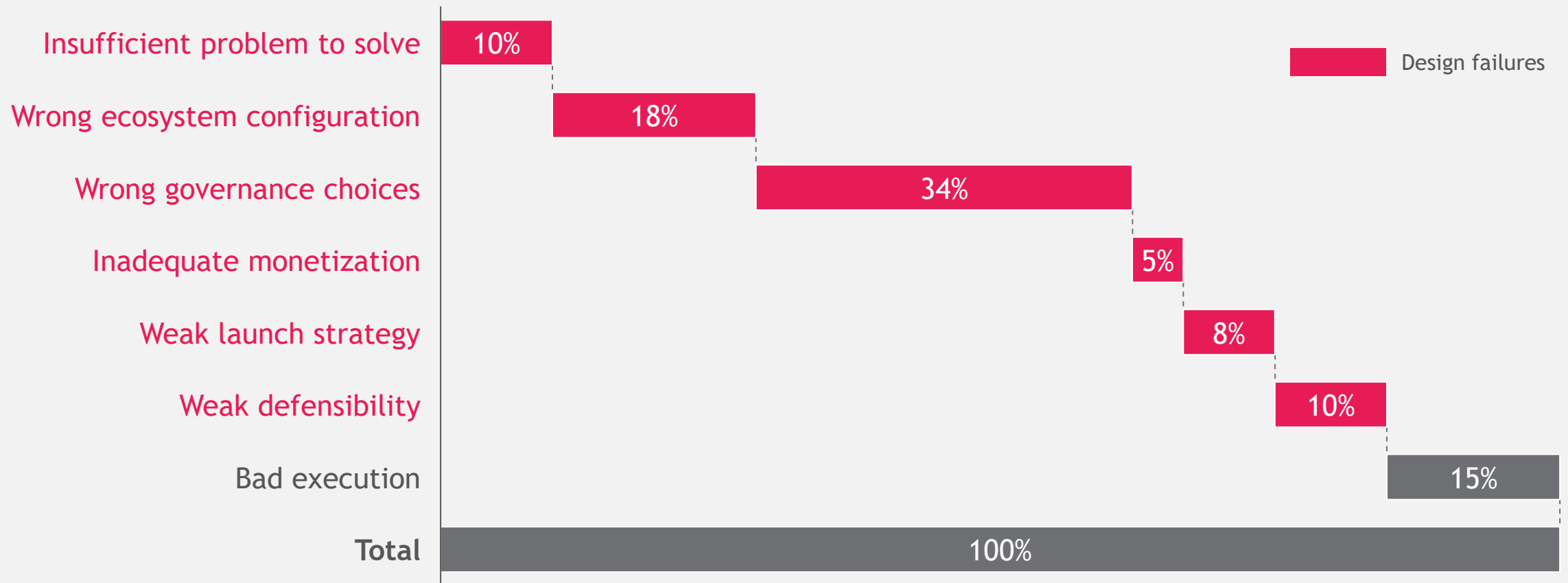


An inconvenient truth: Most business ecosystems fail



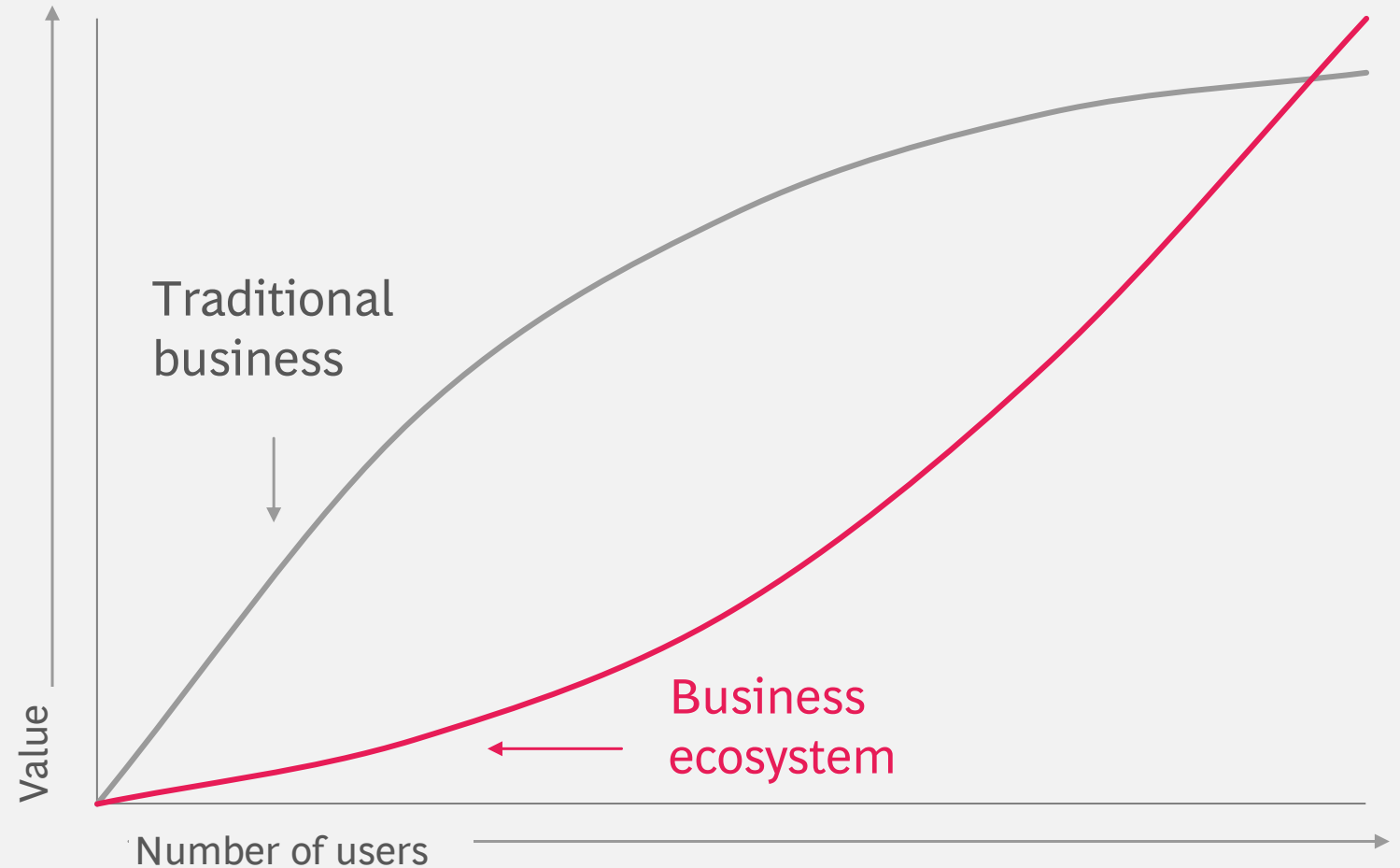
Why do business ecosystems fail?

Relative share of primary failure modes of the investigated business ecosystems



Note: N=110 ecosystems in total
Source: BCG Henderson Institute Analysis

Creating a business ecosystem requires time, patience and stamina



How to become a successful ecosystem player?

Adapt your operating model



Upgrade the employee skillset



Update the management systems



Digitize the business model



Rethink the organization



Business ecosystems require a mindset change



Summary: New rules of strategy in an ecosystem world

 Fluid market boundaries, moving battlefields, changing competitors

 Winning at the ecosystem level, not at the company level

 Competition not only for customers, but also for ecosystem partners

 Delicate balance of cooperation and competition within the ecosystem

 Limited strategic control, emergent strategies, more frequent adaptation

 Importance of network and learning effects, winner-takes-all dynamics

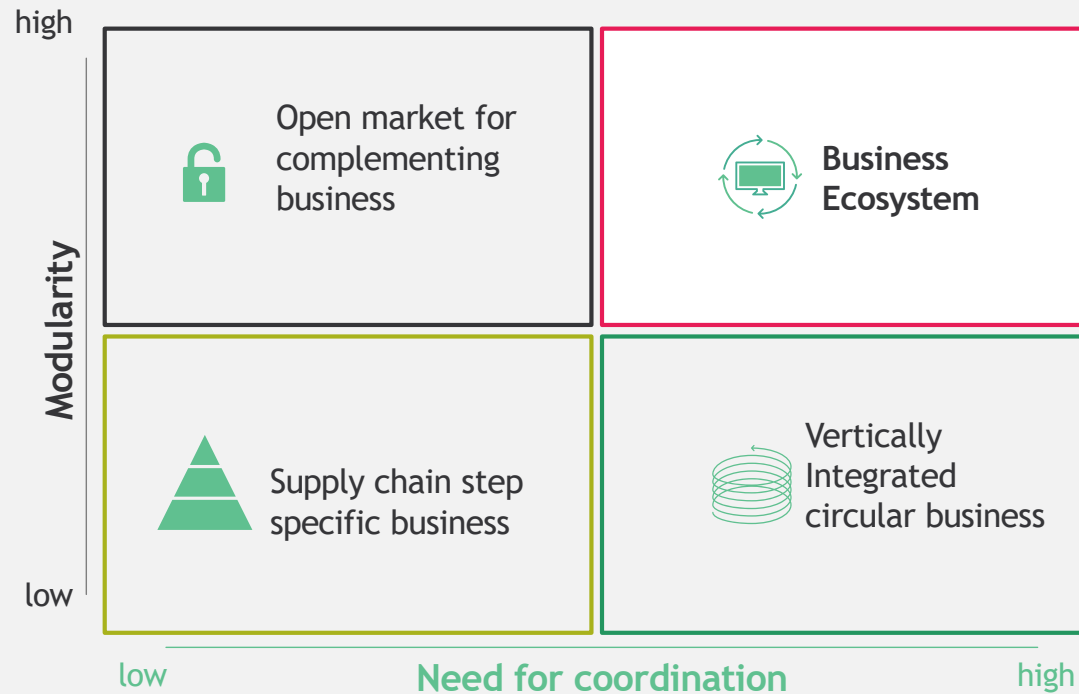


Circularity with clear case for ecosystem approach

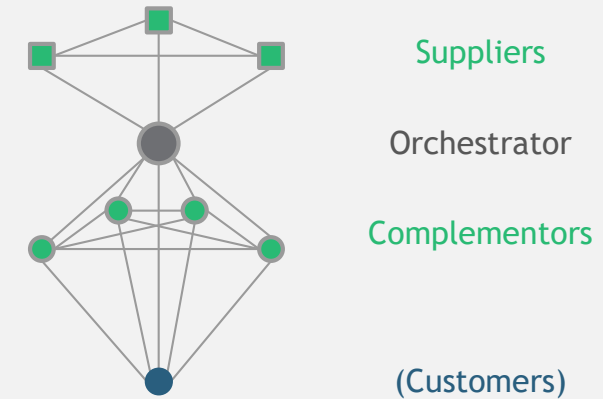
- Lack of fully mature standards, supply chains, and preferred technologies with few exceptions
- Individual excellence in technology, backward integration and push to capture value has not led to success at scale
- Regulatory pressure to find reliable solutions - control over own value chain needs actions

*"Ecosystems can help to simplify
the collective action problem"*

Business ecosystems relevant for circular value chains



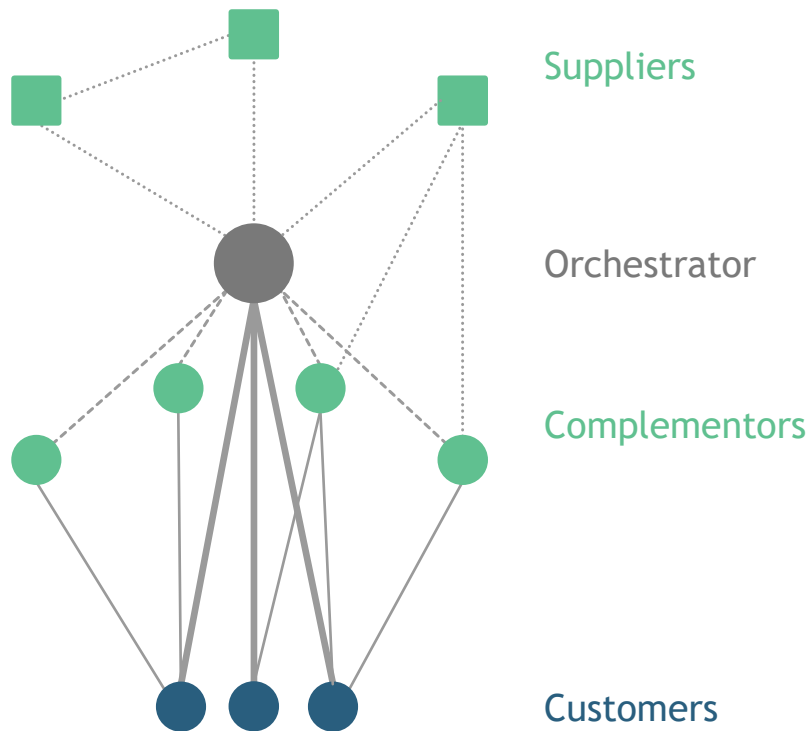
Ecosystems approach



Polymer recycling as example for a solution ecosystem

- Each player needs a solution working for the full circle
- Tech choices lack an industry wide consensus
- Customers desire end-to-end transparency

What are the roles you can take?



Orchestrator

They build the ecosystem, encourage others to join, define standards and rules, and act as arbiter in cases of conflict



Contributors

Complementors

Contribute to the ecosystem solution by directly providing customers with products/services that enhance the value of components of the ecosystem



Suppliers

Upstream providers of products or services to other partners in the ecosystem



Customers (OEMs)

They interact with the value proposition, not just with the individual firms/offerings (modularity), while also having decision rights regarding the involved contributors

But there are certain trade-offs choosing a role

Orchestrator



Power & Control

By removing bottlenecks from the overall ecosystem and orchestrating key connections between participants, it is possible to secure an attractive share of overall profits and setting guardrails for future developments

High upfront investment

The initial investment is significant, which means orchestrators have to commit fully to their ecosystem.

Contributor



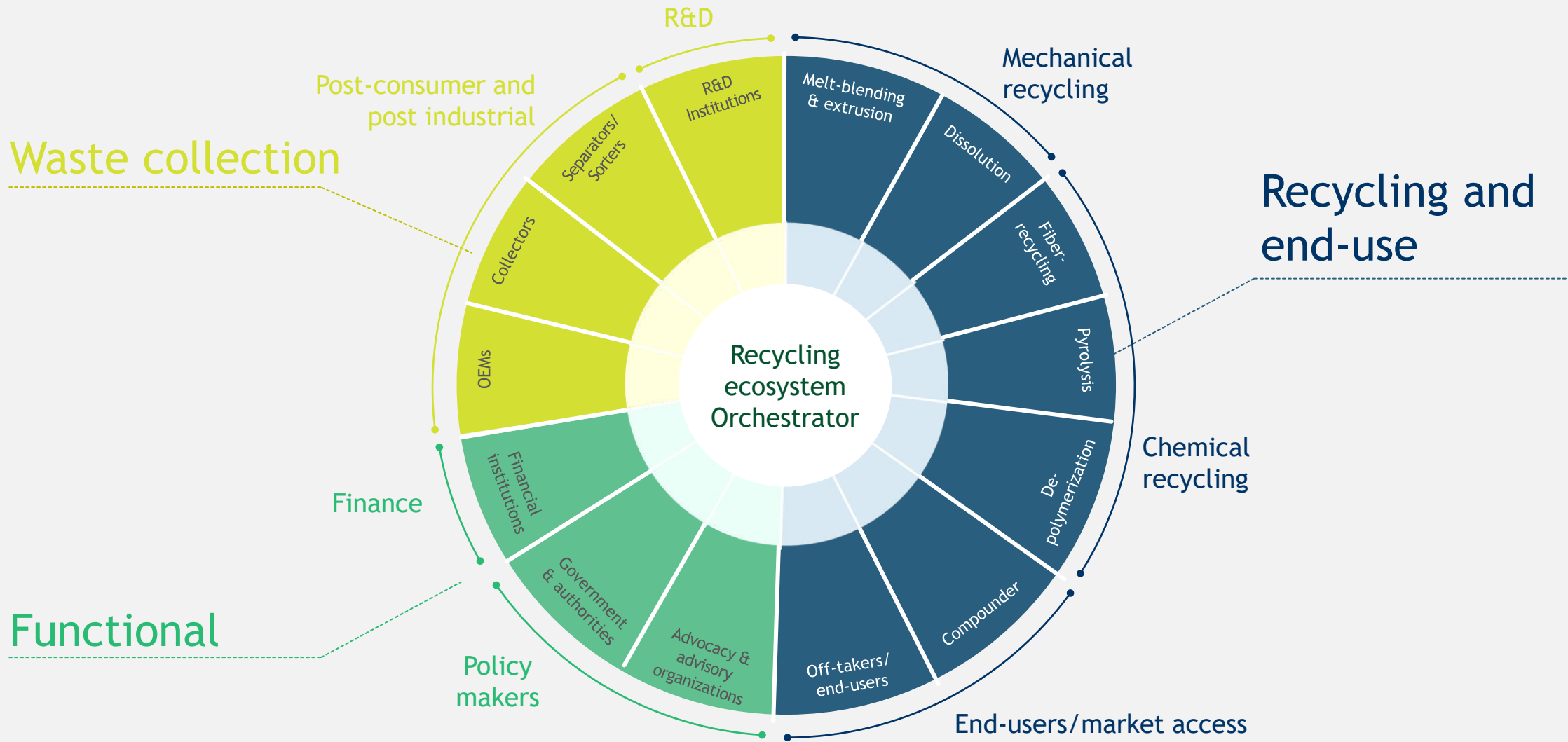
Threat of being commoditized

Uncertainty regarding the development of scope, composition and governance of the ecosystem. Contributors may be forced to share critical data or may be cut from direct access to their customers

Flexibility

Relatively lower investment requirements to reach viability, less responsibility compared to orchestrators. Adjustable level of engagement, possibility to diversify and to choose the most attractive ecosystem

Ecosystem mapping of partnerships



Orchestrators need to balance contributor needs

Waste collection

- Balance value share for separators/sorters vs. recyclers
- Guarantee demand to justify investments in collecting and sorting infrastructure
- Align quality standards and preparation guidelines in line with downstream technologies

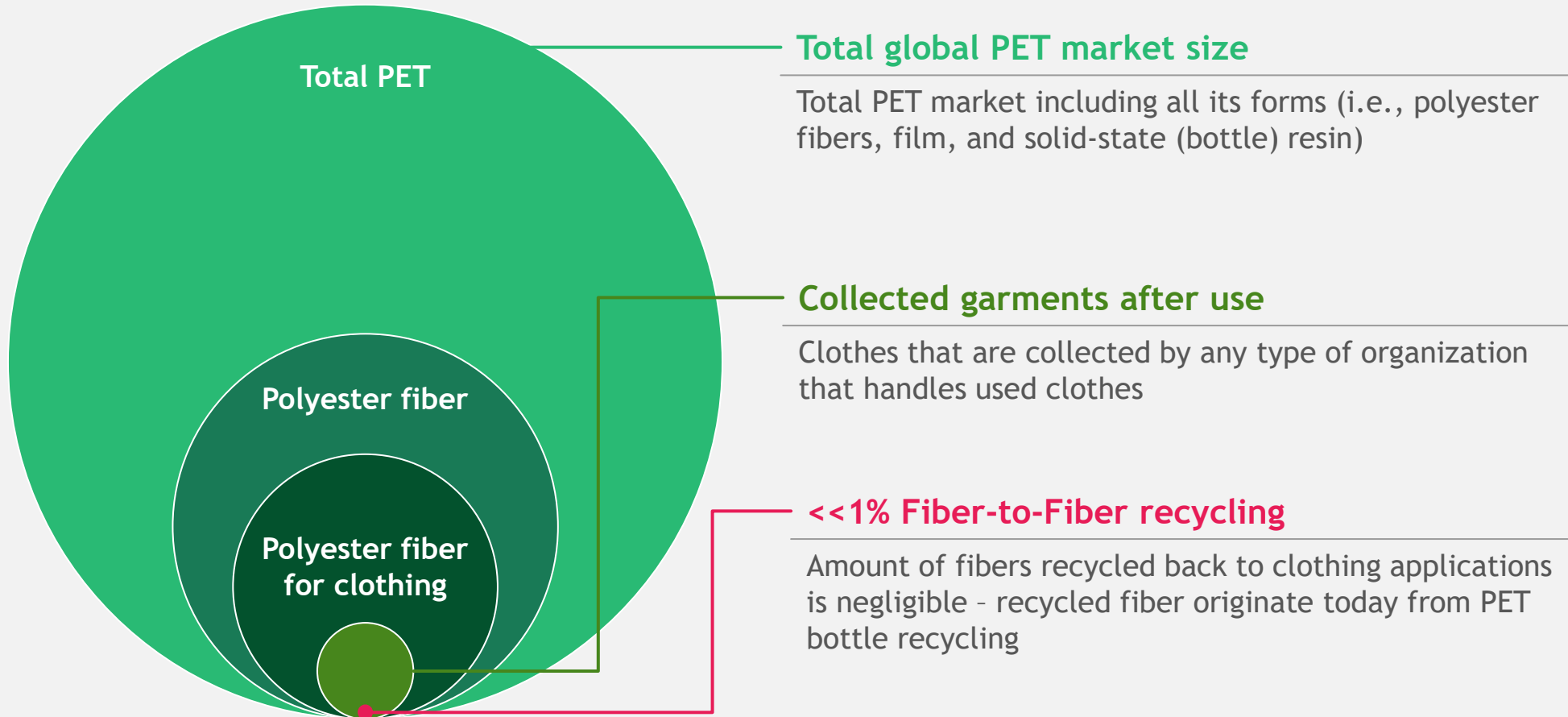
Recycling & end-use

- Drive consensus on technology pathways to optimize unit cost via interchangeable feedstocks
- Improve and/or establish E2E transparency on recycled materials
- Facilitate R&D collaborations to remove technology barriers

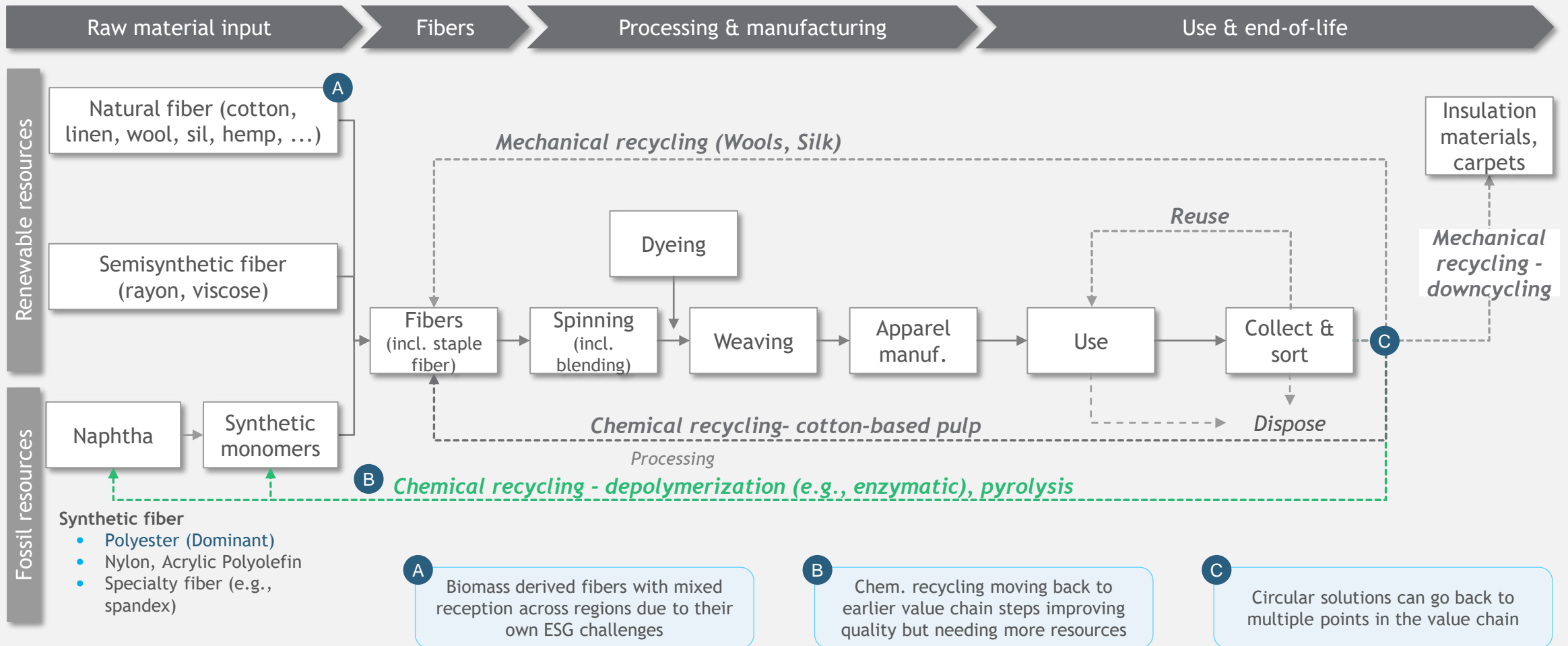
Functional

- Advocate key positions towards institutions and policy makers
- Position joint projects and collaborations with investors

Textile fiber-to-fiber recycling exemplifies challenges



Ecosystem has to cover complex circular material flows









1. Main pathways only, some niche options neglected
Source: BCG

Critical success factors for setting up an ecosystem



- Ensure that essential partners join
You cannot force the required partners to join your ecosystem; instead, you must demonstrate how partners can benefit and set the right incentives
- Establish the right governance model
Balance open governance elements (to attract partners, grow fast, enable innovation) and closed governance elements (to ensure quality and alignment)
- Focus on scale before scope
Start with a simple and clear customer proposition and first focus on building scale (and network effects) before expanding the scope of the offering
- Solve the chicken-or-egg problem
Understand which side of the market you need to initially focus on (and subsidize) in order to achieve critical mass and have your ecosystem take off
- Create three flywheels
Establish three flywheels to expand your ecosystem: growth flywheel (network effects), data flywheel (learning effects), cost flywheel (economies of scale)
- Ensure social acceptance
Design your ecosystem not only for legal compliance but also for long-term social acceptance and robustness to shifts in public values and perceptions

If you want to learn more




Fundamentals

 <p>online pdf Do you need a business ecosystem?</p>	 <p>online pdf How do you 'design' a business ecosystem?</p>	 <p>online pdf Why do most business ecosystems fail?</p>	 <p>online pdf How do you manage a business ecosystem?</p>	 <p>MIT SMR Spring 2021 How healthy is your business ecosystem?</p>	 <p>online pdf How do you succeed as a business ecosystem contributor?</p>	 <p>MIT SMR Winter 21/22 Setting the rules of the road</p>
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Fundamentals

 <p>online pdf What is your business ecosystem strategy?</p>	 <p>online pdf Are you ready to become an ecosystem player?</p>
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Trust in ecosystems

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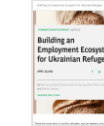
Sustainability

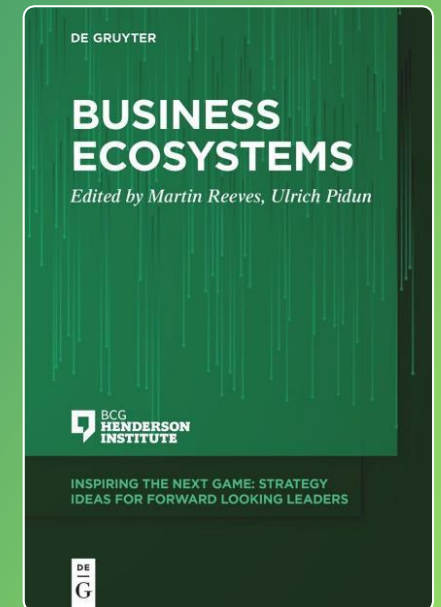
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Industry applications

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