# Paying to Change

*An overview of revenue models fostering sustainability and circularity*

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A study commissioned by
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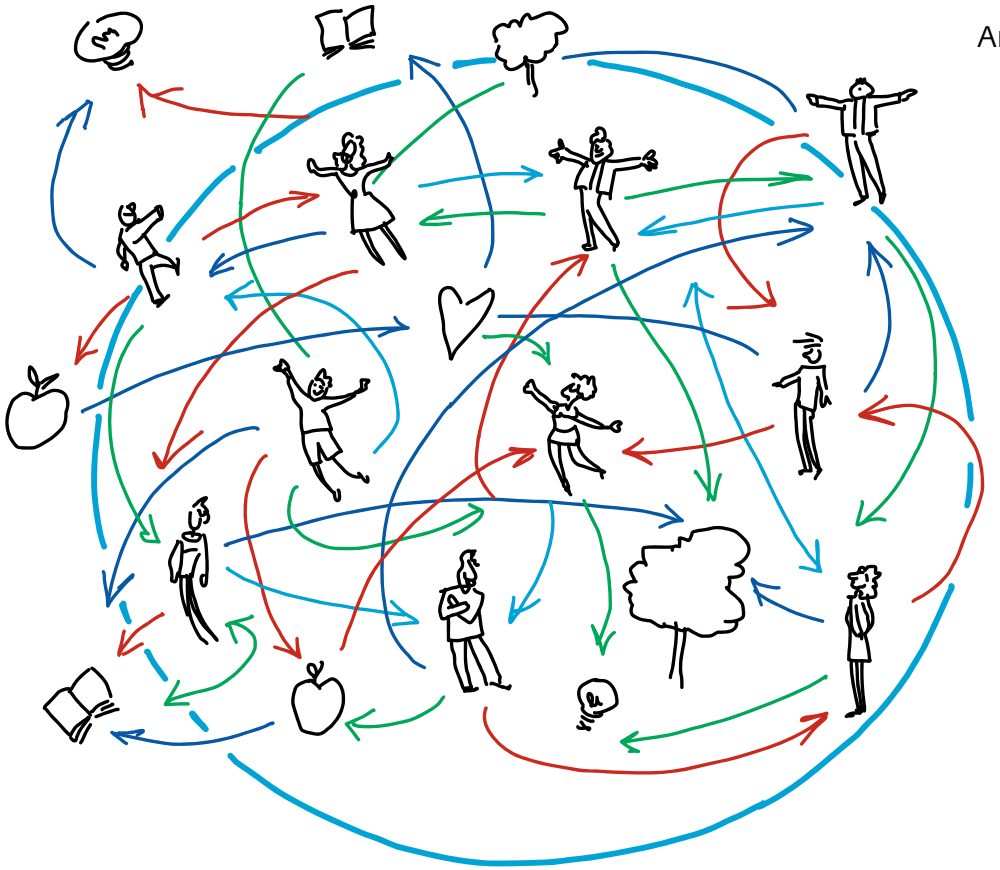

WHITEPAPER
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The transition to a circular economy is essential for strengthening long-term economic resilience and reducing dependence on scarce resources. It is an immediate economic necessity. However, many circular initiatives struggle to scale, not for lack of innovation, but because revenue models are insufficiently developed and aligned with strategy and the business model

Although circular business models have been widely explored, the underlying revenue logic remains underdeveloped. This directly affects companies' earning capacity and, consequently, their ability to attract financing. Without clear, robust revenue models, circular propositions remain difficult to fund. To address this gap, Invest-NL commissioned this exploratory research into revenue models that support sustainability and circularity. The study provides a structured overview of more than 100 revenue models, supported by a wide range of international cases, offering practical insights into how value can be created in a circular context.

The findings show that the challenge is not a lack of available revenue models, but a lack of application and alignment. it is an immediate economic necessity. This whitepaper aims to contribute to that objective by offering clarity and direction. It is a first step towards enabling circular businesses to scale, attract financing, and realise their impact.

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## SUMMARY

Circular business models often struggle to succeed because they fail to generate sufficient revenue. There is limited understanding of how revenue models can support sustainability and circularity. The research explored how businesses can align their revenue models with circular economy principles to enhance sustainability, resilience, and economic value. It highlights the urgent need for Europe to reduce its dependence on virgin materials and transition towards circularity, especially amid geopolitical instability and resource scarcity. The research, commissioned by Invest-NL, aims to help companies select revenue models that support the necessary transformation by fostering earning capacity and securing financing.

## KEY CONCEPTS

- Circularity focuses on preserving value through redesign, refurbishment, and reuse. Sustainability aims to reduce resource use and negative impacts. Both require fundamental changes to business models and value chains.
- Business models present a logic for value creation based on three elements: value proposition, strategy, and revenue model. Circular business models must integrate these elements to enable closed loops that preserve value.
- Valuing is the process of determining what something is worth, using a mix of data, methods, and (personal) judgment. It should align with circular principles to incentivise durability, reuse, and waste reduction throughout the entire lifecycle(s).
- Revenue models define what is of value and how this is exchanged (e.g., subscriptions, pay-per-use, leasing). It results in a mix of financial and non-financial outcomes that can be realised within a business model.

## RESEARCH DESIGN

1. *Desk Research*: A comparative inventory and analysis of existing revenue models, resulting in an overview of 100+ models.
2. *Workshops*: Held in Gent, Prague, Lisbon, and Sofia, with over 100 participants (entrepreneurs, investors, academics, and other experts) who discussed the approach and identified 500+ real-world cases illustrating these models.
3. *Curation*: Cases and models were refined for clarity and relevance, with a focus on circularity and sustainability.
4. *Workshop exploring the use of AI to build an access tool to the data set with 10 AI experts from different fields*, linking business models, strategies, business-development stages, and revenue models.

## FINDINGS

- *Revenue Models Overview*: The research identified 120 revenue models illustrated by over 500 concise cases from around the globe. No final categorisation has been applied to the revenue models or the cases yet, as this would limit the data's applicability. Three potential categorisations are mentioned:
  - *An application approach*, with typical questions such as
    - *What one pays for* (e.g., ownership, access, use).
    - *Payment method* (e.g., money, time, data).
    - *Payment timing* (e.g., upfront, recurring).
  - A valuation approach
  - A community approach
- *Revenue models evolve with the transition* and tend to become more advanced and complex as they progress through subsequent stages. They evolve from a straightforward linear model to sustainable models and further to circular models, which are increasingly complex.
- Present dominant concepts of life-cycle are based on growth realised across development stages, which are rooted in a linear perspective.
- This study shows there is a *lack of a circular life-cycle model*. Therefore, one of the objectives of this study, namely, to assign revenue models to circular growth stages, is not yet possible.

## CHALLENGES AND OPPORTUNITIES

- *Barriers*: Linear economic structures, regulatory hurdles, and market hesitation often stall circular initiatives beyond the pilot stage.
- *Opportunities*: The advocated revenue model approach can reduce diverse costs, secure critical materials, and create new revenue streams (e.g., refurbishment, resale, sharing economy) for circular businesses.
- *Transition Path*: The document outlines a progression from linear to circular models, emphasising product and service models, modular design, digital tracking, and collaborative value chains.

## RECOMMENDATIONS

- *Adopt Hybrid Models*: Combine multiple revenue models (e.g., subscriptions and pay-per-use) to align with circular principles.
- *Policy Alignment*: Businesses should anticipate regulatory changes (e.g., the EU Circular Economy Act) and adapt their revenue models accordingly.
- *Collaboration*: Multi-stakeholder partnerships are essential to scaling circular solutions across value chains.

## CONCLUSIONS

- The overview of research on circular revenue models and business strategies highlights

significant untapped potential for developing sustainable, circular-economy revenue models. While the transition is complex, the potential benefits-resilience, life-cycle extension and value preservation- are substantial.

- Research and workshops demonstrate a lack of understanding of potential revenue model options and of how to select and align them with business models.
- As a result, organisations make limited, poorly informed choices and are disappointed with the outcomes because these choices do not generate sufficient revenue.
- Presenting these results showed strong interest in the approach and opened many opportunities for application and further, more applied research.
- A first step is to develop a proper access tool that enables both the application of the dataset to circular businesses and a basis for further research.
- The next steps in development include elaborating on the relationships among revenue models, company valuation, and financing.

*Key Takeaway*: Circular revenue models are not only environmentally necessary but also strategically advantageous, offering long-term economic resilience and fostering innovation. Businesses must proactively redesign their revenue models to thrive in a resource-constrained future.

# Introduction

**We live in geopolitically unstable times. The strategic use of commodities is crucial across many sectors, including mobility, energy, and warfare. Circularity within a European socio-economic context involves collecting, refurbishing, and reusing critical commodities. It signifies systematic, design-driven value preservation, leading to lifecycle management. Recent research (European Court of Auditors, 2026) shows that the actual reuse of these critical commodities is dangerously well below any acceptable threshold. This jeopardises vital transitions towards European independence, such as in energy, and slows the expansion of industrial capacity and economic revenue potential. We live in a society driven by economic principles. It is impossible to step outside this reality. This means that change, transformation or transition (just to name the three forms of change) can only take place within this economically shaped society. Companies are among the three leading stakeholders that shape society, alongside citizens and the government. Their operations are shaped by strategic choices given the markets in which they operate, leading in turn to business models. These developments highlight the need to examine how business models, strategies, and pricing frameworks can be aligned to support value preservation through circular lifecycle management**[1]

Invest-NL commissioned exploratory qualitative research to identify and describe revenue models that can support businesses in a circular

1 Circular lifecycle management is an (inter-)organisational concept that takes an integrated view of a product, process, or service from mining, design, and production through use, re-use, refurbishment, and recycling at the end of life, based on loops.

*The aim of this research is to provide companies with insights into potential circular revenue models with the aim of helping them select the most appropriate model for different (organisational) development stages. This enhances a company's earning capacity and improves its valuation. Ultimately, the appropriate choice of revenue models helps secure financing and reduce risks.*

economy. The aim of this research is to provide companies with insights into potential circular revenue models and to assist them in selecting the most suitable model for different stages of their organisational development. This improves a company's earning capacity and enhances its valuation. Ultimately, it helps secure investment and financing. Targeted users of this research include businesses and their shareholders and stakeholders — whether start-ups, scale-ups, or established corporations — that face challenges in integrating circularity into their business models and aligning it with their strategies and revenue streams.

The Dutch government's sustainability objective is to use fewer raw materials and produce less $CO_2$. The objective is to use 50% less virgin material by 2030. This quest for circularity and sustainability raises a wide range of organisational and value-chain issues. It is no longer a matter of doing less harm while continuing business as usual, but rather of incorporating new organisational principles into everyday practices and demonstrating and measuring factual change.

While the words might change, circularity is more important than ever amid dramatic geopolitical shifts, supply chain disruptions, resource scarcity, and, as a consequence, the quest for resilience. Resilient use of commodities means the strategic and sustainable management of raw materials (such as metals, minerals, energy, and agricultural products) to ensure their availability and reliability, even in the face of disruptions like supply chain crises, geopolitical tensions, or environmental challenges. Creating change and transition to address these issues are crucial endeavours in turbulent times.

Circularity, defined as the collective organisation of value preservation, is nowadays often linked to the concept of earning capacity. Here, earning capacity is defined as the inherent ability of (a) a continent and, by extension, (b) a national economy, (c) a sector, or (d) a company to generate turnover (and revenue) both now and over the long term, which underpins prosperity and well-being. Individual earning capacity is not addressed here. It depends on the careful utilisation and maintenance of social, individual, technological, ecological, and physical capital. This capacity develops over time. Therefore, society, organisations, and institutions should respond swiftly to change, transformation, and

*The world around us is becoming increasingly unpredictable. Long-standing international certainties are disappearing, and the threats to our way of life and the rule of law are growing. Our security, freedom and prosperity therefore demand swift and decisive action.*

ROB JETTEN, PRIME MINISTER OF THE NETHERLANDS (30 JANUARY 2026)

transition. Transitions are large-scale, complex, multi-actor processes that involve trans-institutional change, taking place between organisations, institutions, and parties (whether individual or group). Various fundamental changes are happening simultaneously at multiple levels and locations. Transitioning to a circular economy implies not just a technical or economic shift but also a large societal and institutional shift. Transition involves making a structural commitment to and investing in the renewal of social, technological, and economic activities. It also requires scaling back and phasing out certain activities. Much current activity is focused on maintaining existing structures — whether institutional, technological, or social.

While the terms sustainability and circularity are often used interchangeably, they actually represent two fundamentally different concepts. Working on circularity does not automatically mean achieving sustainability; one can focus on circularity without achieving sustainability. Sustainability is about producing or organising the same output while using fewer resources — such as requiring fewer materials to make a product or enabling a car to travel more kilometres with the same amount of petrol — and causing less negative impact, like reduced pollution and degradation. Circularity involves organising processes and using materials to preserve their value. It aims to extend the use of resources by reusing the same items more than once or in different ways for as long as possible. This includes (re)design, refurbishment, and refabrication. The core idea is to (re)use commodities without degrading them, while simultaneously reducing or eliminating potential negative emissions. A common organisational perspective to *view* these concepts is to aim for closed loops or closed value chains, which require fundamental changes to reshape and redesign organisational activities with sustainability and circularity in mind. Currently, our economy is based on a linear, one-way value chain, prompting discussions and practices on organisational and societal transition. Although highly relevant, this is not the primary focus here.

Integrating the concepts of sustainability and circularity into the daily operations of organisations is certainly not easy. Overall, it is quite a challenge, as circularity and sustainability share a common feature: they are directly and inherently connected to how we organise products and services in society. This task is complex because these concepts are often unfamiliar within the way businesses have been permitted to operate over the past century. Here, we suggest tackling these transformative and transitional challenges by exploring revenue models that promote sustainability and circularity, as they will only expand when pricing models and valuation systems incorporate environmental and social costs, thereby addressing the current market imbalance driven by linear production models that externalise those costs.

Much has been published in the last decade about sustainable and circular business models[2]. The same cannot be said about revenue models that focus on their capacity to contribute to sustainability and circularity. The challenge is to align business models with revenue models, recognising that they should foster circularity. To address this 'gap', we have set out to conduct a qualitative research project leading to an inventory of revenue models that might foster sustainability and circularity. This project is part of a larger, more comprehensive research program structured into several steps. Besides this explanatory beginning, the plan is to carry out case-study research (empirical) into business models, revenue models and earning capacity, developing financial instruments and two international conferences. The explanatory research described in this white paper only concerns the

2 See the Open Access publication Jonker, J. and Faber N.R. (2020), Organising for Circularity, https://link.springer.com/book/10.1007/978-3-030-78157-6

first step. It is based on an international, competitive document analysis of existing overviews of revenue models. This led to a preliminary overview of 100+ existing revenue models, each with very brief descriptions.

This overview served as input for three workshops: one in Gent (Belgium), one in Prague (Czech Republic), and one in Lisbon (Portugal). During these workshops, participants checked and complemented the overview of revenue models. Furthermore, they were asked to provide at least three concise cases to illustrate the revenue models at hand. This collective effort by over 50 people has led to an international overview of 120 revenue models, illustrated by 500+ concise cases. This white paper provides a concise overview of the key concepts, research design, and outcomes. While the results of this research are promising, feedback from engaged stakeholders raised during a final presentation raises many intriguing questions, some of which are found at the end of this white paper. Not surprisingly, the epilogue contains a strong plea for more research.

*We are living in a society undergoing fundamental change. The challenge is to find a new balance between technological (digital) progress, ecological priorities, and economic activity. The current period, leading up to 2030–2050, is characterised by a transition in which we must seek a new balance to build a resilient, digital, and circular society. In essence, we are preparing for a new world order.*

# Key-concepts

**Our society is shaped by a continuous flow of transactions – both large and small, happening daily. Transactions can be viewed as the moment of 'settlement' within a process of value creation. The assumption is that this is normal; you pay for what you buy. When transactions occur, rules apply at the macro-, meso-, and micro-levels. For example, some activities are prohibited by law (e.g., human trafficking, drugs), heavily regulated (e.g., arms trading), or culturally inappropriate (e.g., a Protestant buying bread from a Catholic baker). Transactions can take various forms: tangible (products) or intangible (services), and can be one-off or recurring. This does not necessarily specify the types of transactions that best suit a particular form of value creation. Revenue models are central to these transactions. They are the actions through which two or more parties reach an exchange of material and/or immaterial value. If both parties are satisfied with this exchange and experience the transaction as creating mutual added value, this constitutes an appreciation of value creation.**

Transactions are shaped through a series of deliberate actions. These are the critical building blocks of business models. Conducting research in sustainability and circularity poses the challenge that the boundaries between different concepts are rarely clear, if not blurred. Some clarification and definition could be helpful. Therefore, we provide some concise descriptions. A business model[3] describes a possible *logic* for creating value and the choices available to organise it. It is composed of three building blocks: (1) the value proposition (or promise), (2) the business strategy[4], (3) the revenue model. The value proposition, also called the value promise, is the proposal or offer from an organisation or several cooperating parties to solve a problem, satisfy a desire, or respond to an ambition. It is often expressed in terms of the (future) "value" that the proposition provides to the (potential) customer, user, buyer, etc. It ideally specifies concrete, testable results. The business strategy is a conscious choice of the direction in which an organisation or a configuration of involved parties *intends* to realise its objectives. It should provide insight into the value it creates and outline the route it has chosen to achieve it. A strategy is never 'finished' or 'ready,' but rather shifts and adjusts as stakeholders' views, circumstances, and the environment change.

> *Circularity is not only an environmental imperative but also a vital competitiveness strategy for Europe. It helps reduce strategic dependencies, secure critical materials, and keep industrial leadership within the Union.*
>
> URSULA VON DER LEYEN, STATE OF THE UNION (2025)

The revenue model is the concrete translation of how an organisation, a group of people, or an individual values revenue (and for whom it does so). It outlines the revenues, often a mix of financial and non-financial, that can be realised within a business model. It shows the nature of

3 A *model* is a simplified, structured representation of an object, system, or concept designed to help understand, predict, or analyse a part of reality. Models depict key components and their relationships while excluding unnecessary details.

4 A *strategy* helps in making decisions about what to do and what *not* to do, based on a specific goal or aim. It clarifies how to progress from the current situation to a desired (successful) outcome, considering societal, institutional, and organisational realities.

the 'cash register' and the transactions chosen to express valuation. There can be one or more aligned revenue models at play simultaneously. Circular business models often struggle to succeed because they fail to generate sufficient revenue while creating value. This shows a lack of understanding of how revenue models can support circularity and ignores the fact that value can be expressed not only in monetary terms but also in other forms. A cost saving from reducing energy use or emissions is also a 'value'.

Worth noting, the transactional perspective adopted in this white paper comes with some limitations in how we perceive revenue models. While it captures the financial-economic side of these models well, the inclusion of environmental and social values is not as straightforward. These values are either converted to a monetary equivalent (e.g., $CO_2$ emission certificates), included only partially (e.g., labour as a proxy for human capital), or kept out of the equation entirely. Our choice for the transactional perspective, hence, forces us to focus primarily on the financial-economic consequences of the revenue model, thereby considering the generation of other values as bycatch or monetisation, and explicitly embedding these in the financial-economic perspective.

Unsurprisingly, practitioners frequently make limited, poorly considered choices due to their lack of awareness of available options, leaving the potential to integrate circularity unexplored. The revenue model is the concrete translation of how an organisation, a group of people, or an individual creates value (and for whom). It outlines the revenues, often a mix of financial and non-financial, that can be realised in a business model. It shows the nature of the 'cash register' and the transactions chosen to express valuation. Furthermore, there can be one or multiple aligned earning models in use. Choosing or designing the right revenue model

*Valuing is the process of determining what something is worth, using a mix of data, methods, and (personal) judgment. We tend to value everything in money because it's practical, embedded in our economic systems, and culturally reinforced. It is important to recognise that not everything that matters can-or should-be measured in monetary terms.*

is a significant challenge, as what we consider valuable varies across different contexts, consumers, and over time.

A revenue model has a broader scope than a *pricing model*. The latter is a concept organisations use to determine how to charge for products or services, directly impacting revenue and customer perception. Pricing models are always part of the marketing strategy of a company.

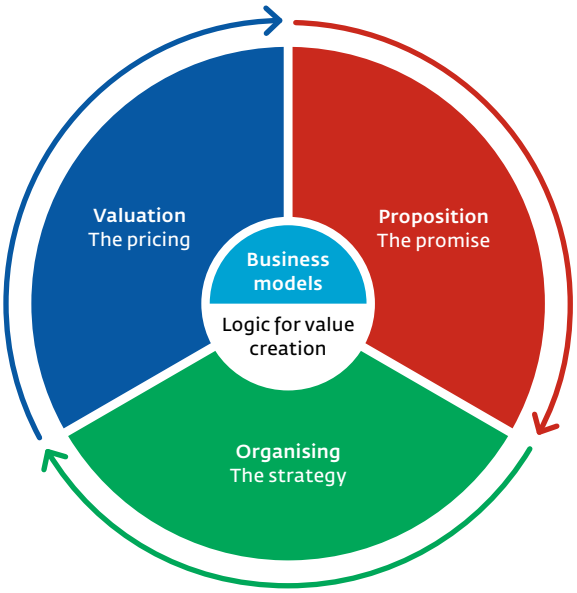


FIGURE 1 *Building blocks of a business model*

Yet, not all costs are expressed in money. Determining the fair pricing of a product or service, including all societal costs, has sparked societal and economic discussions in recent years.

In sum, a business model illustrates how an organisation, or a combination of organisational entities, intends to organise its promise in a tangible, practical manner, based on the promise, strategic choices, and revenue models it has chosen. By nature, it is a blend of rational and emotional decisions. It should create a structured framework that outlines how the parties involved define their roles, responsibilities, reporting lines, processes, workflows, and revenue streams to achieve their objectives, and provides guidance for decision-making and collaboration for all. The explanation above shows that the distinction between a business model, a business strategy and a revenue model is not always clear. To enhance clarification, a small thesaurus is provided at the end of this document.

*The winners will be those who recognise that sustainability is no longer about compliance or optics. It is about resilience, innovation and long-term value creation. The circular economy has long been piloted and championed by early adopters, but it looks set to enter the mainstream. Global manufacturers and brands are embedding repairability, recyclability and waste reduction into product design, not just to meet sustainability goals but to protect margins and future-proof supply chains.*

ENVIRONMENT JOURNAL ONLINE (2026)

### *Business models and the quest for circularity*

It is common practice to associate revenue models with individual organisations; the organisation in question 'owns' the model, so to speak. The 'structure' of arrangement rules is based on this principle of 'the organisation in charge'. After all, our organisational, legal and fiscal regulations (the institutional framework) focus on the individual organisation. It is held accountable and must be accountable. This can be described as organisation-centric thinking. As a consequence, we obviously focus on the efforts of individual organisations rather than collective efforts. In today's practice, the greatest financial advantages usually go to shareholders (the providers of capital) rather than to employees (the providers of labour) or, directly or indirectly, to the social and ecological environment.

At the same time, organisational reality shows that value creation mainly depends on collaboration involving chains, cycles, and networks. By its nature, value creation always involves multiple 'parties': social (people and knowledge), physical (infrastructure, technology, etc.), ecosystem services (such as pollination by bees), and abiotic and biotic inputs (finite and renewable raw materials). Hence, it is doubtful whether benefits should be attributed solely to one organisation (even though the institutional context seems to leave little choice). Therefore, value creation is almost always a matter of collaboration, a collective effort by various parties across the value cycle. The circular economy's challenge is to develop new organisational forms that facilitate the creation of collective value, enabling citizens, organisations, and government to work together on solutions that extend beyond pilots, both in the short and long term.

*Our economy must be in balance with the limits of the planet... towards a clean, sustainable, circular economy, an economy that is internationally competitive, sets the sustainable standard, and where companies like to establish themselves.*

ROB JETTEN, PRIME MINISTER OF THE NETHERLANDS

### *Lifecycle and development stage*

The concept of life-cycle thinking in development stages is based on a linear perspective. It progresses from initiation through growth to decline and ultimately 'death'. This approach is rooted in natural processes and is very useful because linear thinking and structuring simplify complex processes into clear, manageable stages. Products must be designed, prototyped, tested, and produced. Similarly, organisations are shaped and managed accordingly, as this helps allocate resources — such as time, money, and personnel — more effectively. Stages provide clear milestones for tracking progress, and risks can be identified in advance. A hidden assumption here is that a business model is a static concept; once established, it remains unchanged. It should be clear that this is not the case. From its initial idea through its entire life cycle, the initial idea changes, matures, and is replaced by new ideas, concepts, business models and revenue models. The organisation goes through a series of stages commonly typified by labels such as initiation, scale-up, maturity, and decline. Bear in mind that many organisational initiatives never reach maturity. There is extensive literature on life-cycle thinking, mainly originating from American management literature of the 1970s (e.g., Porter, Kotler, Greiner). When it comes to technology development, technology-development concepts such as the Technology Readiness Level (TRL) follow the same line of thought. This approach is thoroughly rooted in linear-stage thinking and is dominantly reflected in our general understanding of the economy.

The goal of a circular economy is to reduce negative impacts, minimise the use of virgin materials, and improve efficiency throughout the entire product lifecycle. Its core is value preservation, organised in closed loops across the lifespan of raw materials and products. This fosters circular-lifecycle thinking and management rather than linear thinking. The lifecycle of circular products, parts, and commodities is fundamentally different from the traditional linear "take-make-waste" model. Instead of ending with disposal, a circular economy lifecycle is designed to eliminate waste, circulate products and materials, and regenerate nature. Products are designed from the start to be durable, repairable, reusable, and recyclable, which implies modularity and reparability. These core concepts and principles should be reflected in how a business model is designed through its promise, strategy, and revenue model. It goes without saying that organising around circular lifecycles in an economy shaped by linear principles is doomed to fail. Although many brave start-ups and even scale-ups exist, they often do not survive the so-called 'Valley of Death'. An important reason is that they operate within an institutional environment not shaped or driven by circular life-cycle principles, despite promoting policy strategies for resource management, refurbishment, repair, and recycling. This means, in essence, that we lack a circular life-cycle growth model.

# Research design

**To compile and elaborate on an overview of revenue models that might foster sustainability and circularity, the following steps were taken: an international comparative desk research of existing revenue models, three workshops in different countries in Europe to check the overview and add concise (business) cases and finally a detailed editorial review to complete information on each revenue model, enhancing readability and provide when possible a link to the concepts of sustainability and circularity. All data were curated manually at various times. Each of these research steps is elaborated below. Before doing so, we begin with the central research question and the potential users of the research outcomes.**

## *Aim of the research*

The aim of this research is to provide companies with insights into potential circular revenue models with the aim of helping them select the most appropriate model for different (organisational) development stages. This enhances a company's earning capacity and improves its valuation. Ultimately, the appropriate choice of revenue models helps secure financing.

## *Central research question*

What are the existing revenue models that can foster sustainability and circularity?

This research question can be divided into the three following sub-questions:

- What revenue models are there, based on a comprehensive inventory and an analysis of available overviews (desk research)?
- Which models are used by companies in a 'pure' or adapted form based on open-source information (publicly available through internet search)?
- Can an indication be given for those models that foster sustainability and circularity?

Potential users of this research include businesses (whether start-ups, scale-ups, or established corporations) that would like to incorporate circularity into their existing business models and align it with their strategies and revenue models.

*Circularity has emerged as a geo-economic strategy that enhances resilience, strategic autonomy, and resource security. Circular business models are unlocking new revenue streams, strengthening margins through material efficiency, and building deeper customer engagement models.*

WORLD ECONOMIC FORUM (2026)

## *Desk research*

To support the research, a well-structured, near-comprehensive overview of existing revenue models was compiled. This overview was inspired by diverse sources, including CIRCIT Nord, the Business Model Navigator, the Business Model Reinvention Cards, Loop 2.0, the BMI Circular Economy Patterns, Bedrijfsmodelkaarten, and Innovalor, as well as material already in the possession of the leading author. Most of these materials were publicly accessible but some required a purchase to access the

sources they provided. This was done in a limited number of cases.

After analysis, whether paid for or not, careful examination revealed that these overviews presented highly similar content, despite some renaming and reframing. After comparing and consolidating these resources various times, a certain level of 'saturation' was reached, meaning no new insights were found. This resulted in an overview of just over 100 briefly described revenue models. This overview offers a fair summary of what is available on the market in Europe. In addition, no similar overviews were found in either the Far East or the Southern Hemisphere. However, new and unexpected entries can always be discovered since the desk research was primarily in English and partly in Dutch.

*Circular business models represent a significant opportunity for new and better growth... because they decouple revenue streams from production and resource use. For circular business models to reach their full potential, businesses, supported by policymakers, need to redesign performance indicators, products, and supply networks to fit them – and scale a wider range of these models.*

ELLEN MACARTHUR FOUNDATION

### *The workshops*

Three full-day workshops were held in Gent (Belgium), Prague (the Czech Republic), and Lisbon (Portugal). In Gent, mainly people from start-ups and scale-ups participated; in Prague, people from large companies joined, while in Lisbon, there was a mixed international crowd with people from business, start-ups, and government. These workshop where held one after the other. To build on the work of the previous workshop and enable comparability, all were structured along the same lines. After a general introduction to business models, with revenue models in particular, participants were asked to find real-life cases from existing companies and institutions that illustrate the revenue models they were randomly assigned. Each case was assigned an economic sector designation (e.g., construction, mobility, energy) and at least three keywords to improve searchability. This is the outline as used for each workshop:

- Words of welcome and who is in the room
- Aim of the day and timetable
- An introductory lecture on business and revenue models and business strategies linked to circularity and circularity
- Making the teams and assigning the strategies
- Collective exercise and some clarifying feedback
- Working on the strategies (the aim of this workshop)
- Feedback, wrap-up and social event

Participants were given online access to the overview of revenue models listed alphabetically. They all worked in the same document. Participants were asked to select both national and international cases. They were also instructed not to repeatedly use the same cases, such as Patagonia, IKEA, Tesla, McDonald's, Amazon, and KLM. The guidance was to focus on a variety of cases, including large and small, established and innovative, ideally from different countries. All information used to compile the overview came mainly from publicly accessible company websites. In addition to conventional search, AI-driven prompts were used to

generate findings and information. Participants were asked to 'neutralise', meaning they had to remove adjectives, to present information as factually as possible. This was considered necessary since companies often describe their activities with somewhat exaggerated terms like 'the biggest', 'a global operation', 'worldwide leading', or 'cutting-edge'. The project's working language, including during the workshops, was English. Consequently, cases that could not be found online or were not in English were identified less frequently. A total of 50 people participated in the three workshops, which served as examples of research in action. The work during the three workshops resulted in 500+ briefly described cases, each with a website link, a sector indication and three or more keywords. At the end of each workshop, a feedback session was held. This led to vivid discussions in which, time and again, it became clear that designing business models that foster sustainability and circularity and choosing the appropriate revenue models is quite a challenge. The workshops consistently highlighted the vital need to explore the development of business models with aligned strategies and revenue models that incorporate circularity across business operations, value chains, and loops.

### *Disclaimer*

The case studies accompanying the revenue models were randomly selected. There is no business, personal, or legal connection or interest of any kind in their selection by the authors or editors of this overview. The texts accompanying the examples are mainly sourced from the websites of the companies, parties, and institutions mentioned. In many instances, AI prompts were utilised to generate these texts. Where applicable, these texts have been translated and/or edited with extreme care solely to enhance readability. To maintain neutrality, superlatives have been removed. No rights can be derived from the resulting outcome. It is not intended to discriminate in any way. If there are any objections to inclusion, please contact the authors or editors of this overview.

### *Curation*

Next, the collection of revenue models resulting from the three workshops, including their cases, was thoroughly checked for grammar and style. Additionally, AI queries were used to review all models and to refine existing descriptions into concise yet more informative versions. Common characteristics of each revenue model were elaborated and added. Furthermore, for each model, some dedicated research was conducted, allowing the inclusion of circularity or sustainability features where possible. Although this process was detailed and time-consuming, it was essential to streamline the collected text to improve the readability and accessibility of the overview. These activities were carried out using publicly available information and data obtained from the websites of the mentioned cases. No alternative-source research was conducted. The result remains generic and is not tailored to specific types of companies (e.g. SME's or multinationals) or industry sectors.

*Circularity is not only an environmental imperative but also a vital competitiveness strategy for Europe. It helps reduce strategic dependencies, secure critical materials, and keep industrial leadership within the Union.*

URSULA VON DER LEYEN, STATE OF THE UNION (2025)

# Overview of results

*Circular economy policy is becoming a defining factor for European businesses-especially in resource-intensive sectors, consumer goods, and global supply chains. With new measures taking effect from 2026, companies should adopt integrated, life-cycle-based circular strategies that address multiple policies simultaneously. The Circular Economy Act, expected at the end of 2026, will provide for the revision of several European instruments to make circular models more competitive on the international scene.*

LEGACY.CIRCLE-ECONOMY

The final result of this research is a comprehensive study that provides an overview of 120 revenue models, illustrated with over 500 concise cases coming from around the globe. It is rich, international, and inspiring. Currently, no such overview exists. Its aim is to connect the concepts of sustainability and circularity with business models, especially revenue models. Choosing the right revenue model can enhance the revenue potential of individual organisations and those involved in value loops. This is particularly important, as many organisational initiatives based on circular-economy principles and aiming for sustainability do not progress beyond the pilot stage. There are various reasons for this: high risks and investments, markets that are either non-existent or hesitant, low perceived revenues, and regulatory and political barriers. While addressing a number of these reasons is beyond the scope of the white paper, the research not only uncovers interesting findings through an overview of the models but also extends beyond them by providing clear characteristics of those models. This establishes the foundation for a comprehensive product-service system approach that integrates business and revenue models into a comprehensive overview.

## *Limited overview of revenue models*

This exploratory research began with the identification of approximately 100 revenue models, informed by a comprehensive overview derived from comparative desk research. The participants in the three workshops were repeatedly asked to suggest additional models. Many suggestions were made, but on closer inspection and comparison with the overview, the suggested 'new' model was already in place, albeit under a slightly different label. To avoid losing this label variety, these labels were added to the overview. Finally, all suggestions led to the identification of 20 new models, although some overlap is inevitable and undeniable. Still, it is fair to conclude that the present overview of revenue models provides a comprehensive inventory of what is on the market. As such, it fulfils the first stage of the overall project as described at the start of this whitepaper.

In *Table 1* is an overview of the various revenue models, listed alphabetically by label only. Although it shows 200+ labels, there are actually only 120 revenue models. The reason is that many models are the same but may appear

under slightly different wording (e.g., recycle contribution, recupel contribution, or circularity contribution) or present variations of the same revenue model (e.g., donation, donation of food, donation with deposit money, etc.).

It is impossible to provide a full description of each and every revenue model, including concise illustrative cases, here, since this would make this whitepaper 'explode'. If you would like more information about this overview, please contact the authors. What is provided here are five at-random examples of revenue models.

### *Example 1*

Selling carbon credits is a revenue model in which an entity (government, organisation, community, etc.) produces, certifies, and sells offsets representing one metric tonne of reduced or removed emissions to buyers seeking to meet sustainability targets and/or regulatory requirements. Credits can originate from projects such as reforestation, methane capture, or renewable energy. Projects must adhere to strict standards to be viable, be verified by independent third parties, and be registered. Once verified, credits are issued to a registry and can

- Access
- Access-based consumption
- Access-based services
- Ad-based pricing
- Affiliate marketing
- Affiliation
- Alternative credit systems
- Analysis as a Service
- Annual subscription discount
- Asset recovery
- Auction
- Bait model
- Bait-and-hook
- Bait-and-switch
- Banking-and-borrowing
- Barter
- Bonus-malus scheme
- Book and Claim
- Break fee
- Broker services
- Bundling
- Buy-back vouchers
- Buy-back warranty
- Cap-and-Trade
- Carbon credits
- Cashback
- Certified storage of $CO_2$
- Circular feedstock
- Circularity contribution
- Co-creation
- Collaborative consumption
- Community currencies
- Concession model
- Consumer take-back vouchers
- Corrective maintenance
- Cost-plus pricing
- Cross-selling
- Crowdfunding
- Crowdsourcing
- Crowdthinking
- Curated networking
- Customer-centric design
- Data as a Service
- Demand-based pricing
- Demonstrable emission reductions
- Demurrage
- Deposit money
- Detention
- Differentiated fee compensation
- Digital Product Passport
- Disposal contribution
- Dissemination
- Donate
- Donate perishable food products
- Donating money
- Donating non-perishable
- Dynamic pricing
- Eco-fee modulation
- Eco-modulated charges
- Emission Trading System
- Employee Stock Ownership Plans
- Environmental costs
- Environmental impact bonds
- Environmental Impact Fees
- Ethical sourcing
- Exchange trade
- Experience facilitation
- Experience selling
- Extended Producer Responsibility
- Family revenue model
- Festival cups deposit
- Flexible pricing
- Franchise
- Free clothing repairs
- Freemium
- Friends-and-family funding model
- Gift
- Giving away
- Green Bond Program
- Green insurance
- Guarantee for reuse
- Hidden Impact
- In-kind donation
- Increasing (market) value
- Industrial symbiosis
- Influencer
- Inspection
- Integrated pricing
- Introductions
- Joint revenue model
- Knowledge base
- Knowledge management
- Knowledge selling
- Knowledge sharing
- Leasing
- Licence revenue model
- Local Exchange Trading Systems
- Locked-in model
- Locked-in selling
- Long-tail revenue model
- Lower insurance premiums
- Loyalty points
- Maintenance
- Markup pricing
- Material recovery
- Meaningful premium product
- Marketplace model
- Micro-donation
- Monetising thermal value
- Non-financial compensation
- Open Access
- Option schemes
- Organisational ecology
- Organise webinars
- Participatory guarantee system
- Pay-as-you-go
- Pay-for-benefit bond
- Pay-for-success bond
- Pay-for-success financing
- Pay-per-use
- Pay-what-you-want
- Payment in kind
- Peer-to-peer economy
- Performance contract
- Performance-based fee
- Performance-based warranty
- Personalisation
- Philanthropic model
- Plastic credits
- Pooling
- Preventive
- Preventive maintenance
- Product as a Service
- Product philanthropy
- Product sales
- Professional matchmaking
- Profit sharing
- Prosumption
- Razor-and-blades
- Real Prices
- Recommerce
- Recupel contribution
- Recycling contribution
- Reducing interest rates
- Refurbished products
- Refurbishment
- Rental
- Renting
- Repair services
- Repair warranty
- Resale
- Residual value
- Resource (re)marketing
- Responsible donation
- Sales of $CO_2$ certificates
- Self-service revenue model
- Selling contacts
- Selling expertise consulting
- Selling knowledge
- Service Level Agreement
- Services that extend a product's lifecycle
- Servitisation
- Shared savings models
- Shared-asset model
- Sharing (consumer) products
- Sharing economy
- Shop-in-shop model
- Shortening the value chain
- Social benefit bond
- Social bond
- Social Impact Bonds
- Social impact contractor
- Social impact partnership
- Social outcomes contract
- Social return on investment
- Spare-change donation
- Sponsoring with deposit money
- Start-up budget
- Start-up subsidy
- Store-within-a-store
- Subscription
- Subscription-based model
- Sustainability discount
- Sustainability-linked premiums
- Swapping
- Tariff differentiation
- Termination penalty
- Tiered pricing
- Time allowance
- Timebank
- Trading Systems
- Trock
- True Price
- Upcycling waste
- User-generated content
- Value stacking
- Value-based pricing
- Vintage clothing
- Vintage design
- Waiting-time allowance
- Warranty
- Warranty for careful use
- Warranty revenues
- Waste-to-value
- Wisdom of the crowd

**TABLE 1** *Overview of the various revenue models, listed alphabetically*

be sold via dedicated platforms or direct off-take agreements with corporations.

### *Example 2*

Analysis as a Service (AaaS) is a pricing and delivery model where clients pay for actionable insights derived from data instead of owning the underlying analytics software or infrastructure. It shifts the focus from "tools" to "outcomes," allowing organisations to access advanced data processing on a subscription or usage basis. It also facilitates remote monitoring, diagnostics, upgrades, and, where possible, repairs of systems or installations. Often, one of the following sub-models is used: usage-based (pay-per-analysis), subscription (e.g., monthly), or value-based (pay-for-performance).

### *Example 3*

A franchise is a revenue model (and strategy) in which a franchisee operates a specific brand, its related products, and processes at their own risk to generate profit, subject to certain conditions such as collective marketing and purchasing. It creates a recurring income stream, with the brand owner (franchisor) earning money through upfront fees, ongoing royalties, and sometimes mandatory marketing contributions or product supply markups. This model fosters a mutually beneficial, long-term partnership where the franchisor receives steady income and the franchisee benefits from an established business system.

### *Example 4*

The long-tail revenue model involves offering a wide range of products within a specific category, often targeting a niche audience. This model thrives on digital platforms that eliminate physical constraints on inventory and distribution. Products are sold in small quantities. As long as the range and selection are sufficiently broad, good sales can still be achieved. By selling "less of more" (fewer units of a greater variety), overall demand for raw materials can be reduced. This model promotes sustainability and circularity by encouraging a shift from mass-market overproduction towards personalised, durable, and repairable goods, effectively "elongating" the product lifecycle.

### *Example 5*

Pay-per-use (also known as pay-as-you-go) means paying for each unit of use (e.g., kilometres, prints, kWh). Ownership and responsibility for the product or service remain with the company that provides the equipment or installation, and the customer pays a usage fee. Customers favour this model because they want to pay only for the services they utilise. They become more aware of their usage, which reduces waste. Since companies retain ownership of the asset, they are motivated to produce durable, high-quality products that require less maintenance and last longer. Overall, this approach promotes sustainability by incentivising manufacturers to design durable, repairable products and encouraging consumers to minimise wasteful consumption, thereby supporting a circular economy.

## *Characteristics of revenue models*

Throughout the work on this overview of revenue models, many discussions took place with the workshop participants and among the authors. This has resulted in various classifications of revenue models. The first is a concise overview of the characteristics of a revenue model. A distinction in six characteristics has emerged.

- What are you paying for?: ownership, use, capacity, access, capability, updates, etc.
- How are you paying?: With money, a voucher, credit, a product, time, a service, energy, data, a right, a sink, or a promise, etc.
- What is the delivery form?: a product, a service, an event, an experience, a contact, a relationship, etc?
- When do you need to pay?: before, during, or after the transaction
- How often do you need to pay ?: no payment (freemium), all at once or repeatedly

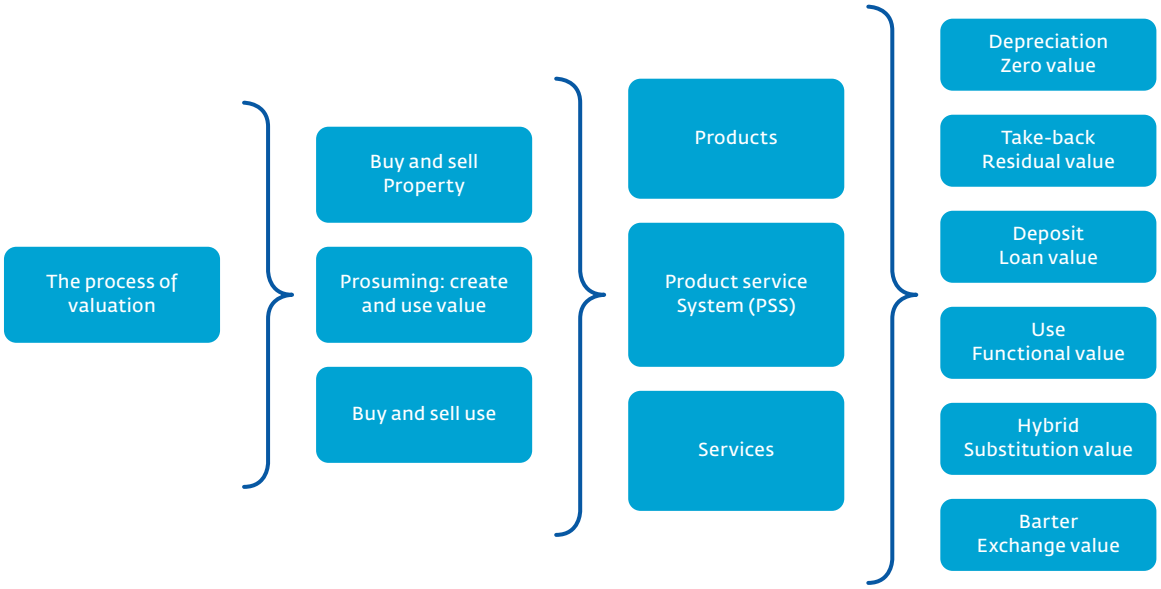


FIGURE 2 *The valuation process of revenue models*

This concise overview, although very generic, comes in handy when people are crafting their own revenue model. If, in addition, they consult the list of all possible revenue models and their cases, they can identify dedicated applications with these characteristics. The research also provides the basis for another overview, namely the valuation process of revenue models. The graph below shows how choices can be made regarding the nature of value. All these are already used in business practice and demonstrated in the full overview of revenue models.

A third and final classification concerns whether a product is a sole business-oriented activity or a collective activity. Given the earlier remarks in this whitepaper, by definition, no product or service is the result of a single company's efforts. To make things and provide services, collaboration is key. Whether a product is suitable for a circular business model depends on its design, construction quality, and the reusability of its components. Basically, this means that the entire value chain or value cycle should be involved and organised around common principles to enhance circularity. This line of thinking gives rise to collective or *multi-stakeholder* business and revenue models. In these models, efforts, investments, and risks are shared. It is highly interesting to discuss the size and scope of such models in order to better understand their viability. Implementing them might require a significant transition to adapt financial instruments to this line of thinking. There remains a considerable journey ahead, although some experiments are already in progress.

## *Transition in revenue models*

The transition from linear to circular business and revenue models, the thinking behind it, and the development of a concept will, almost without exception, result from a process of trial and error. A process that must also align with the lifecycle of the product or product-service combination.

Below is a schematic illustration of how the transition of a revenue model from conventional to circular might look. Four stages are distinguished: the conventional revenue model, the conventional revenue model+, the sustainable model, and finally the circular revenue model. It demonstrates how a revenue model can evolve from a conventional approach to one that is fully committed to circularity. This example identifies which revenue models can be added to the combined product-and-service lifecycle.

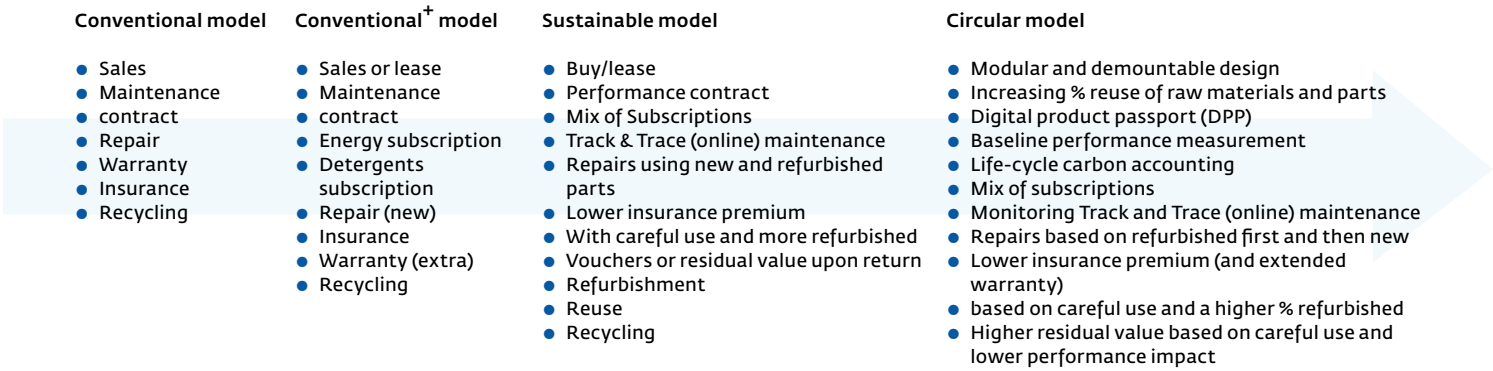


FIGURE 3 *The transformation of a revenue model towards circularity*

## *Developing a revenue model portfolio*

The last column also illustrates that bringing a circular product to market that aligns with a supporting business and revenue model is becoming increasingly complex, if not difficult. This is evident from the jargon alone, yet it goes a step further. The overview strikingly shows that as circular practices become more commonplace, the number of possible revenue models increases.

Since the quest for circularity starts with design, this overview shows that the same applies to the organisational model. This means that the parties involved in a circular process gain an understanding of where, when and what value is created. Particularly when these parties consciously organise this cycle together and have reached agreements on efforts, costs and benefits, this creates the basis for a collective business and revenue model. After all, the idea isn't to swap one revenue model for another, but to add and combine models.

This white paper highlights, above all, several ways to generate revenue. It shows that revenues are not limited to monetary gain but can also be realised in various forms. The challenge is to put together a resilient portfolio of revenue models, not one based on a single proposition, a single strategy and a single revenue stream. This means selecting a configuration of revenue models that fits a specific (institutional) context and business sector and can adapt to unpredictable developments. This implies a portfolio that generates turnover through multiple revenue streams of various kinds. For sure, making choices involves weighing facts and emotions, striking a balance between skill and "art". So in the end, it's all about the art of combining and configuring. Furthermore, this is particularly relevant for the parties that make up the institutional framework, such as financiers, public authorities and legislators. Sorry, but it doesn't get any simpler than that.

*The tragedy of our time is not that we lack the knowledge to build a circular economy, but that we lack the courage to abandon the linear models that have long defined our revenue streams-even as the evidence of their unsustainability mounts before our eyes.*

INSPIRED BY SPIRIT OF MODERN SUSTAINABILITY DISCOURSE

## *Context and accessibility*

During the compilation of this overview of revenue models, various questions emerged and became increasingly prominent. The actual collection of revenue models becomes inaccessible due to its sheer size. One hundred models,

some inevitably overlapping, illustrated with over 500 cases from all walks of economic life, result in an overview that is no longer accessible and therefore unusable. The people for whom this overview is intended, namely those who run a business, do not take the time to delve into concepts and how they fit together. They face a wide and complex range of questions and want answers immediately. As a result, they will spend little time searching for answers and will address their worries in an intuitive, keyword-based manner. Moreover, many of these questions relate to prices or costs. Moreover, people tend to think in terms of (key) words rather than concepts. This complements the qualitative, language-based material in the overview but does not accommodate factual figures or answers based on, say, price developments, market opportunities, or interest rates. Finally, the output should be attractive, practical and easy to understand output

Lastly, the models are presented without considering the national or regional institutional and regulatory context. This context, which varies across products, regions, and countries, poses significant challenges and often makes it difficult to move beyond the pilot phase. Therefore, what would be most useful in selecting an appropriate revenue model as part of a business plan is an overview of the institutional, national, or regional context and how it might evolve over time. In particular, the so-called legislative 'train' of the European Union is highly significant. This train illustrates how legislation in specific sectors (e.g., textiles, mobility, or batteries) is expected to develop broadly. Providing access to a comprehensive, curated set of documents — both generic and sector-specific — and linking them to a specific revenue model will be especially beneficial for final users. Although beyond the scope of this research, the rapid and ongoing development of AI should also be investigated in this respect.

# New research questions

**As is often the case in exploratory research, it leaves us with more questions than initially expected. At the end of a presenation showing the results held in Amsterdam, the audience was asked to provide face-to-face feedback and suggest possible next steps. What needs to be done to build on the current results, which are already perceived as highly valuable? Below is an overview of the many rich and relevant questions raised.**

*Q1*

The present set-up of the material is very broad and, as such, not very sector-specific. It is, of course, possible to select certain sectors when you search and do want to see others. To be more specific, the suggestion is made to include datasets (documents, policies, business and revenue models) for specific sectors (construction, energy, mobility, etc.). If shareable case studies for a sector were available, they would definitely add value.

*Q2*

The current inventory of revenue models offers significant inspiration for the questions entrepreneurs might have. Still, the answers are hidden in the inventory and are not easy to access. Structured access to the right information is crucial for retrieving and valuing the information. It is therefore suggested that a dedicated access tool needs to be designed and built. What then should be the format of this access tool? This raises questions about who the helper is and what process is followed to provide assistance. All of this could inform the development of an access tool. Once developed, it may also be relevant in other areas.

## Q3

The present material could be more valuable if it addressed specific sectors, supply chains, or specific niches (for example, electronics companies). The advantage of focusing on a single sector is that you can go into great depth in a short space of time and properly test whether this approach works. You can then scale it up to other sectors without having to do all the work yourself. This observation is certainly feasible, but it requires detailed information about those sectors. For this to be relevant, the sectors themselves need to provide rich and abundant input. Additionally, confidential and reliable (internal) sectoral information is ultimately necessary, preferably in a secure environment. This can be realised, but doing so effectively requires confidence among various actors.

## Q4

Many companies want to – or need to – shift from an established profitable business and revenue model to a new one. This transition presents the necessary challenges. In many (existing) cases, this involves developing an additional (circular) business that is financed by the linear model. Is it possible to introduce a financial model within this system as a precursor to a (future) financing model? How does that work? What do financiers do? When does a tipping point occur? And how do you fund it in practice? Would it be possible to demonstrate on the basis of this material how a company undergoes a transition, from one business and revenue model to the next? What must an entrepreneur comply with – what must they pay attention to – in the transition from one model to another? In other words, can the present material be used to shape a dynamic system instead of a 'static picture'? While this question is highly relevant, the current information has not been gathered to demonstrate transitional processes and their possible stages. All documentation is static, so it does not show developments over time. A so-called 'rich' case-based longitudinal case study would be appropriate here.

## Q5

The current results would significantly benefit from including potential financing options and accounting for desired or future business and revenue models. It is worth exploring a practical approach to present this clearly with minimal effort, given that it could easily become a substantial research project on its own. What are the consequences for financiers and for taxation when working with circular business and revenue models? While it is a broad question that might be best answered in a step-wise approach, moving from generic to specific and preferably informed by case studies. Some research is available to lay the groundwork, but much work remains to be done. Moreover, these are questions that can easily 'explode' given their scope and reach.

## Q6

We don't yet understand how revenue models might influence the circularity of companies' business models. If such a relation becomes clear, it could enhance the success of circular business models. A successful revenue model is one that generates income over an extended period, but this is by no means the only criterion for success. To progress, we need to investigate the relation between the revenue model and circularity.

## Q7

When it comes to start-up or scale-up companies, it is important to consider the company's development stages, potential financing needs, and options. While this may not seem particularly difficult at first glance, it becomes more complicated as more detailed financing options are explored. This, in turn, could lead to further research resulting in an inventory of

those options. The question of financing circular business models for existing companies is distinct and should be addressed separately. The key question is which is the most practical approach: working this out in full first for a specific sector, or developing it generically for all sectors simultaneously.

### *Q8*

There is often an unspoken need to model the entire business development process over time, including its stages and the financial requirements of each. Although attempts have been made previously, they have seldom been truly successful. Too many unknown variables can unexpectedly influence the process. Now, with AI, it is certainly possible to identify additional unknown factors and determine how and at what stage they impact the process. This would involve developing and testing specific queries. A key question is what the information base is for constructing such a model.

### *Q9*

Can documents from governments (national, EU) be added as the basis for pathways through which (strategic) policy can be mapped out? It is certainly possible to include sectoral documentation sets (Open Access) (e.g., general circular legislation, and textiles, plastics, and construction sectors). There are already extensive collections of these documents available. Additionally, they can simply be requested from the relevant ministries. Upcoming European legislation is also relevant here (see, for example, the Circulaw Foundation for more information). If this documentation is comprehensive ('rich') enough, it is entirely feasible to construct a pathway over time.

### *Q10*

Industrial companies have significant concerns about these pathways and their costs to current business operations. The financial impacts of these legislative pathways depend on numerous strategic choices, making them difficult to model. Nonetheless, such pathways could still provide insights into selecting specific revenue models.

### *Q11*

To make appropriate and focused choices, it would also be reasonable to examine which interventions and regulations have successfully promoted sustainability and circularity in the past. While again a very valuable suggestion, it raised the question of whether ex-post policy evaluations are available that are sufficiently detailed to address this question properly.

### *Q12*

An additional issue is at stake here. The concept of the circular economy is developing over time. While initially focused on recycling, it has now shifted towards resource autonomy and preserving value. This means that even with appropriate evaluations available, they cannot be used straightforwardly.

### *Q13*

The position of a company in a (circular) value chain as variable in the choice of a revenue model. Can the position within the (circular) chain be added as a variable? The main assumption here is that a company in a circular loop (circular value chain) maintains relationships throughout the loop and understands how its decisions affect other companies, including their revenue models. Operating in a truly circular manner involves adding value not only to customers (downstream) but also to suppliers (upstream) and other parties involved in the value loop. Although this question remains highly relevant, the current model does not account for a company's position within the loop.

### *Q14*

Repeatedly, the question arises whether transitional stages of development can be incorporated. This, in turn, prompts an inquiry into the

purpose of these phases and the conceptual foundations — whether technological, financial, organisational, or transitional — upon which they are based. This investigation is grounded in the idea that different revenue models are appropriate at different stages, especially when grants and investments are included in cash inflows. With the current data collected, this question remains unanswered despite its high relevance.

### *Q15*

There is a difference between start-ups that can develop a new model and existing companies that need to transition from an existing model to a new (more circular) one. This is a model transformation question, assuming that an organisation has a clear understanding of its current model (its life cycle) and an idea of what its future business and revenue model should be. It is to be expected that a well-informed existing company will be able to reasonably determine its end goal and the various stages of transformation towards that goal. There is little academic research on this topic, but quite some consultancy work has been done, though it is not yet clear what quality it has or at what level (start-ups, SMEs, or corporate).

### *Q16*

What could be the value of using the present results to develop (transitional) interventions through AI in a game-based format?

### *Q17*

The question is whether it is possible to add the success or failure of each case, along with the conditions under which it succeeded or failed. Theoretically, this would be ideal, but it would require access to various databases that should provide dedicated information. Currently, all material in the databases is compiled from publicly available information obtained via the internet, i.e., from public sources. That doesn't include information on successes or failures or any company-specific details. Adding this information would require additional research and, to some extent, confidential information.

FIGUUR 4 *The Janus face[5] of money*

5 Janus was the Roman god of doors and city gates and responsible for passage, which implied that he had to be able to see both in front of and behind the gate at the same time. But there is also another explanation. His two faces originally represented the sun and the moon. As the god of fertility and life, he was called Janus Consivius. As the god who started the day, he was called Janus Matutinus.

# Conclusions

The overview of research on circular revenue models and business strategies highlights significant untapped potential for developing sustainable, circular-economy revenue models. As such, this overview has fulfilled its promise to summarise what is already available across Europe regarding these models. The results show untapped potential for valuing circular businesses. Our goal was and remains to support entrepreneurs with this inventory to help them develop a successful revenue model more quickly. To achieve this, this overview assists in evaluating the value of their (future) circular proposition and how it can be embedded in a business model. The more ambitious underlying aim is to develop effective financing structures at every stage of their journey. At the end of this exploratory research, we can draw the following conclusions:

- The aim of this research was to create an inventory of revenue models that might foster sustainability and circularity. With 120 revenue models, each demonstrated through at least three international cases, we have fulfilled this promise.
- This inventory shows a wide range of potential revenue models that enable the integration of sustainability and circularity into business models.
- It also shows that the central ideas of sustainability and circularity, especially when linked to business and revenue models, are poorly defined, fuzzy in scope, and (not surprisingly) employed in a confusing 'interchangeable' manner.
- The inventory also highlights the complexity of transforming from a product-focused approach to a more service-oriented perspective (PaaS) to enhance the longevity of products, parts, and commodities.
- The vivid and engaged discussions in the three workshops demonstrated a lack of understanding of potential revenue model options and of how to select and align them with business models.
- As a result, people make limited, poorly informed choices and are disappointed with the outcomes because these choices do not generate sufficient revenue and value.
- On a more conceptual and fundamental level, the research also indicates that we lack a circular life-cycle model.
- Given the geopolitical and resource-constrained situation outlined earlier, this exploratory research advocates investing in developing practical methods to implement revenue models that promote sustainability and circularity.

If this research also uncovers another aspect at a more conceptual level, it is that we lack dedicated circular life-cycle models. Common organisational development concepts (including those of Porter, Kotler, Greiner, etc.) mainly originate from the American management literature of the 1970s and are deeply rooted in linear-growth thinking. Unsurprisingly, they are based on a linear economy, at a time when sustainability and circularity were not yet on the agenda. More than fifty years later, this has changed fundamentally. Resources are scarce if not depleted. Pollution poses a society-wide threat. The societal and institutional frameworks that have structured society for over fifty years are under scrutiny, to say the least. What is needed is the development of circular business models focused on value loops rather than linear value chains. Doing so will certainly lead to a transition in our current economic model.

If we want to make progress in a transition that fosters a sustainable society and economy, a more fundamental debate on the meaning of value, of what is valued and what value creation may cost is inevitable. The driving force behind

transition is the collective search for forms of value creation. This encourages the organisation of new forms of collective value creation. Without this, a transition will not come to life. This requires a different approach to designing, structuring, and distributing the organisational agreements and responsibilities among the parties involved. This is grounded in the observation that we live in an organised society. Societal functions, income, employment, health care, security, and status are all the results of our collective ways of organising society.

### *Finally: how to find the unknowns?*

The overview of questions above and in the appendix shows strong audience engagement in progressing the current results. However, in hindsight, one question persists. The current overview of revenue models is based on existing practices. All described models and cases are already known. The real question is: Is that all there is? Isn't it necessary to explore unknown revenue models to truly enhance the circular economy? If so, how do we discover what we have not yet identified?

This is a classic yet still relevant question. How do we find out what we do not yet know, precisely because we do not yet know what we need to know? Whatever comes next, there is still plenty of work ahead in order to shape the circular economy.



## Thesaurus key terms business models

This concise thesaurus provides an overview of the key terms involved in business and revenue modelling. The purpose of the overview is to provide a better understanding of these terms and their interrelationships. The list below is arranged in alphabetical order for practical reasons.

A *business model* describes a possible *logic* for creating value and the choices made to organise it. It is composed of a number of building blocks, which are (1) the value proposition, (2) the chosen strategy, (3) the organisational model, and (4) the revenue model. The choices for a particular form of value creation are driven by one or more strategic decisions (see Business strategy) in an institutional environment.

A *business strategy* is a conscious choice of the direction in which an organisation or a configuration of involved parties *intends* to realise its objectives. It should provide insight into the value it creates and outline the route it has chosen to achieve it. A strategy is never 'finished' or 'ready,' but rather shifts and adjusts as stakeholders' views, circumstances, and the environment change. Still, one could say that the final objective — in most cases, profit maximisation — is stable.

The promise of a business model often begins with a grand and idealistic dream, a brilliant ambition also called a *Big, Hairy, Audacious Goal (BHAG)*. This BHAG illustrates what could happen when everything truly works out, everyone

cooperates, and no one throws a spanner in the works or obstructs progress. For example, in 30 years, the world might be plastic-free, no one will be hungry, there will be clean water and sanitation for all, and... you name it. Therefore, the BHAG is a positive long-term goal that must be made concrete.

The *promise* in a business model is the realistic goal or solution an organisation, or a group of parties, commits to delivering to create value, such as solving a problem, fulfilling a desire, or meeting a need. It influences expectations, so that the consumer or client is confident that the organisation and other parties involved will honour their promise.

*Multiple value creation* (see also: *Value creation*) is the core process of generating multiple values through a single business model. This is evident, among other things, in a strategy in which an organisation or the parties involved in a value chain, cycle, or network deliberately and simultaneously focus on creating value across several areas. Specifically, it means guiding not only by financial and economic value but also by social and ecological value.

The *revenue model* is the concrete translation of how an organisation, a group of people, or an individual values (and for whom it does so). It outlines the revenues, often a mix of financial and non-financial, that can be realised within a business model. It shows the nature of the 'cash register' and the transactions chosen to express valuation. There can be one or more aligned revenue models at play simultaneously. Circular business models often struggle to succeed because they fail to generate sufficient revenue.

A *pricing model* is a concept organisations use to determine how to charge for products or services, directly impacting revenue and customer perception. Pricing models are often linked to marketing and their related strategies.

*Stakeholders*, also called parties, customers, or clients, are defined here as any person or group for whom the value created is valuable. Different stakeholders may have shared or opposing interests. One way to address this is to work explicitly on multiple value creation.

*Transactions* are the actual (inter)actions that express value creation. They are reciprocal actions (physical, symbolic, digital, etc.) by which two or more parties engage in a (mix of) tangible and/or intangible exchanges that express value. Thus, with and through the exchange, there is (in principle) the mutual appreciation of the created value expressed in one or more values.

*Value creation* is the deliberate organisation of value, based on a strategic choice, usually involving multiple parties, for an individual, a company, or a community, among others. What is of value is (primarily) determined by the end customer. What is of value is partly determined by the context, the time and the values that play a role in it. It is, by definition, subjective and interpretive.

A *value proposition* is the proposal, offer, or solution of an organisation or several cooperating parties to a problem, a desire, or an ambition. It is often formulated in terms of the (future) "value" the proposal provides to the (potential) customer, user, buyer, etc. The value proposition preferably names concrete, testable results.

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This text draws on insights from over twenty years of academic research and the lead authors' practical experience. The same applies to the co-authors. During that time, they have

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*Reference*

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