CIRCULAR REVENUE MODELS

PRACTICAL IMPLICATIONS FOR BUSINESSES

White paper

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INHOUD

INTRODUCTION

The Circular Economy is buzzing!
It is likely that you have recently come across terms such as 'the circular economy', 'circularity', 'reverse logistics' or 'closing the loop'. The circular economy is buzzing. One of the main reasons for this is the growing realization that we are using and consuming the world's resources at a faster rate than the earth can regenerate or supply us with. As world population grows, and efforts are focused on increasing the average level of global prosperity, we are faced with a situation where the demand for (raw) materials will grow exponentially. Issues such as price volatility and pressure from climate change appear simultaneously. We are starting to understand that our current linear economy is simply no longer sustainable. The circular economy offers a solution to these challenges and creates opportunities for businesses.

Circular Economy creates opportunities for Businesses
How will your business profit from these developments in the long run, but possibly also in the near future? Which circular opportunities are available for your business? Which products or services can help leverage these opportunities? In order to create a sustainable business, it is important to discuss how revenues will be generated. Indeed, it is even possible that you are already working with circular business models and creating circular impact, without being aware of it!

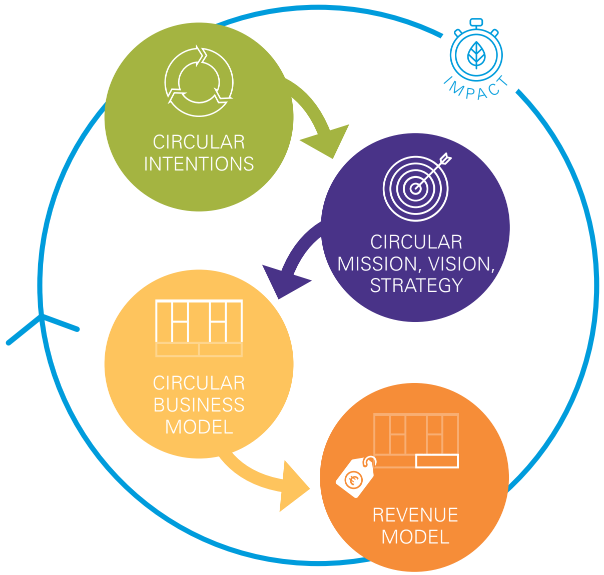
We (KPMG Sustainability, Copper8 and Kennedy van der Laan) conducted practical research into Circular Revenue Models. Our goal is to inspire you about the importance of the circular economy and to offer you useful tools and insights that will enable you to start your journey towards a circular business tomorrow. We will answer questions such as: What circular revenue models are there?, What can we learn from frontrunners? and How does this revenue model support the circularity of my product or service?. If you are looking for opportunities for policymakers, we refer to the white paper 'Circular Revenue Models: required policy changes for a circular economy'.

Business Models versus Revenue Models
In our experience, we often come across the terms 'business model' and 'revenue model', used interchangeably. However, we believe that these two concepts have different meanings. A *business model* describes how you, as a business, create, deliver and maintain value. A *revenue model* is a part of this: it clarifies the way in which a business generates (financial) value by creating revenues. The applicability of various revenue models has not yet been sufficiently researched, which consequently led to our research and the writing of this white paper.

A revenue model, as such, is not circular
Our view on the circular economy is based on the notion that the business that supplies products or services (the 'Producer') is responsible for the product or service throughout the entire lifecycle. This is also known as *Extended Producer Responsibility* (EPR). The question for Producers is how to fulfil this responsibility. A shift from 'ownership' to 'use' is essential. The Producer becomes responsible for the reuse of the product, its components and/or materials. Revenue models can play an important role in achieving EPR. Please note that these ideas are not new. Ever since the 1980s, experts have mentioned the option of 'leasing' as a means to encourage producers to take a greater responsibility over the entire lifecycle and lifetime extension of their products (Stahel, 1982). Recently, EPR has also been mentioned as an important measure to promote the circular economy in policy documents of the European Union (*EU Circular Economy Package*) and of the Dutch government (Cabinet's response to the Transition Agendas).

Let us be clear from the start: there is no such thing as a 'circular revenue model'. This may sound strange, but what we mean to say is that a revenue model is not circular *as such*. For example, renting is a revenue model that has ample circular incentives, without necessarily being circular. Imagine a property owner who rents out apartments to students and carries out hardly or no maintenance to the building. This usage of the 'rent' revenue model can by no means classified as circular. Several steps have to be taken before a revenue model leads to the circular impact that is required.

FIGURE 1
Four steps to create circular impact



A circular economy is based on the principles of designing out waste and pollution, keeping products and materials in use, and regenerating natural systems (Ellen MacArthur Foundation, 2013). Circular businesses aim to retain a product's added value for as long as possible, if not forever[1].

FROM CIRCULAR INTENTIONS TO A CIRCULAR REVENUE MODEL

Step 1: **Everything starts with circular intentions …**

Everything starts with your circular intentions as a business. What is your motive and your intended result? Naturally, you will have commercial targets. But no less important is your motivation to contribute to the circular economy, with the eventual goal of operating within the natural limits of our planet, while preserving social foundations. Intentions should set be to create value in a circular way that contributes to this goal. This may result in financial value, a smaller environmental footprint, or a contribution to social value, such as providing people with poor employment prospects with new job opportunities such as repairing electronic products.

Step 2: **… turned into a circular mission/vision/ strategy …**

The next step is to embed your intention into the mission, vision and strategy of your business. You will formulate your 'why' (your circular intention), the 'big hairy audacious goal' you are working towards (e.g. a 100% closed material cycle), and how your business can play a role in achieving this. Depending on the strategic choice of where to start – by reducing waste in your production process, or by phasing out toxic materials in the design and production process – this circular intention will also find its place in the strategy of your business.

As a business, it is possible to contribute to the circular economy not only in various ways (for instance with a focus on a specific environmental or social impact); the starting point may also be at various elements of your business. For instance, you may choose to start with a focus on one specific circular product, by adapting procurement decisions, by collaborating with supply chain partners, or by changing (parts of) your production process.

Step 3: … **which you transform into a circular business model …**

The circular mission/vision/strategy becomes tangible when you start considering which circular value proposition you will use to attract (potential) customers, and which partners – suppliers, support organisations like Chambers of Commerce – you will choose to collaborate with. The Sustainable Finance Lab has identified various circular business models in its Value Hill model (2016; see figure 2). In the *Value Hill*, distinctions are made between pre-use models (such as circular design or working with reused materials), in-use models (including 'Product as a Service' and Sharing) and post-use models (such as repair & maintenance).

The *Value Hill* specifies ways in which the product can be offered and used (the business model). This is not the same as the revenue model, which are specifically concerned with how financial value is generated for your business.

Step 4: … **and is supported by a circular revenue model**

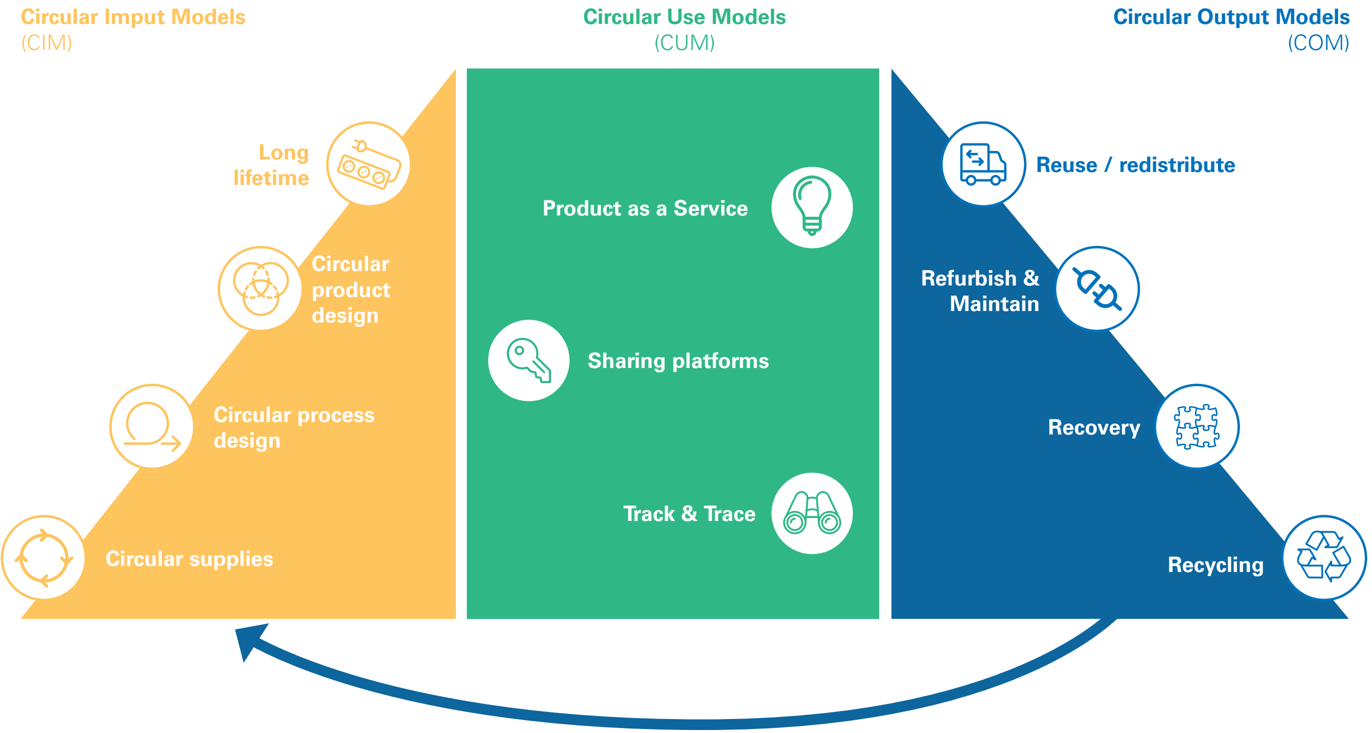
You will not generate revenues out of a circular business model, unless it is connected to a revenue model. To illustrate this: the business model *Product-as-a-Service* can be made profitable by making customers pay for each vertical movement of an elevator (the *Pay-per-Use* revenue model), or for the availability of the elevator, including maintenance (a variation of the *Lease* revenue model). The question is how you can make your value proposition so interesting that customers will be willing to pay for it. While the economic incentive to pursue circularity may be financial value, different kinds of other values are possible as well: e.g. social value (creating communities that will share products), economic value (creating circular jobs such as disassembling used products), or environmental value (including a reduction of the carbon footprint). To guarantee that no value will be lost, an integral approach is needed in which attention is given to both the circular business model as well as an appropriate circular revenue model. Launching a circular product via a linear business model (in which the product is not returned to the Producer), the potential loss of value contradicts the idea of the circular economy. The revenue model can be a tool to secure the circularity of the business model. It is worthwhile to look at long-term value creation here: although your circular revenue model may still have a negative business case during the first cycle of use, you may generate both financial and non-financial profits after multiple use cycles.

The result: circular impact

If you follow the steps described above, you will create circular impact, both for yourself as well as for society as a whole. For example by making use of reused product(elements) or materials for your product, thereby contributing to carbon reduction (and possibly reducing production costs), by extending a product's lifecycle by retaining control of its second or third lifecycle as a Producer (possibly with the help of partners), or by making customers pay for use, which makes it necessary to keep track of how often a product is used and when it needs preventive maintenance.

To maximize this circular impact, a good analysis of your product or service and the corresponding processes is essential. Such an analysis should not only cover your own business, but also your suppliers and customers. This will enable you to determine how you can achieve the biggest impact, to evaluate your processes, and to make fact-based choices together with your value chain partners that will optimize this impact.

FIGURE 2
‘The Value Hill’ (Source: The Sustainable Finance Lab, 2016)



FOUR CIRCULAR REVENUE MODELS

A list of our basic terms:

Economic Ownership & Financial Risk: the economic owner is entitled to the use value of a product, as well as to its positive or negative changes in value. In other words, the economic owner bears the financial risk. We will classify the revenue models in this white paper according to who bears the financial risk.

Producer: with the term “Producer”, we refer to the party that is in control of making adjustments to the product or its design. This is in line with the Extended Producer Responsibility of the European Commission. In practice, we see that this depends on who has the power to decide on the (circular) specifications of the product’s design. In this white paper, the Producer could therefore also be the operator, supplier or exporter, provided that this party is in control of the design of the product.

User: with the term “User”, we refer to the party that uses the functionality of the product. In practice, the User is not always a direct customer; it will be the end customer. It is important to include this final party – the (end) user – in a circular revenue model to close the loop.

Leasing Company: by the term “Leasing Company” we refer to an external financier. In practice, there are various forms of Lease. Depending on the form of lease, the Leasing company will play different roles (see the elaboration below of the Lease revenue model).

Seen from a Producer and User perspective …

In the course of our practical research, we found that several circular revenue models can be distinguished. In this white paper we will look at the circular revenue models through the lens of both the Producer and the User. Where relevant, we will also discuss the perspective of a third party: the Leasing company.

We are aware that this is a greatly simplified representation of a more complicated reality, with more links in the supply chain and many legal, financial and accounting challenges. However, the key to building a circular economy lies first and foremost in the hands of Producers (supply) and Users (demand). The government can help by introducing laws and regulations, whereas financiers (such as Leasing Companies) can help facilitate the transition. The white paper ‘Circular Revenue Models: required policy changes for a circular economy’ contains an overview of the various opportunities for policymakers to help accelerate the transition.

Four Circular Revenue Models

We distinguish the revenue models from each other on the basis of economic ownership. The economic owner is entitled to the use value of an object, as well as to its positive or negative changes in value. Therefore, the economic owner bears the financial risk. The focus is on how you create value via the revenue model, not on how your product or service is financed.

We make a distinction between the following four circular revenue models: 1) Pay-per-Use, 2) Rent, 3) Sell-and-Buy-Back and 4) Lease (see Figure 3). Within the Pay-per-Use and Rent revenue models, the Producer remains the economic and legal owner. Within the Sell-and-Buy-Back revenue model, the User becomes a (temporary) economic owner, and the User will or may resell the product to the Producer. In the Lease revenue model, the form of lease determines who the owner is. We realize that the reality is far more complicated than this and that there are many combinations of revenue models (also known as ‘hybrid models’).

To give an example: customers may pay for each use (Pay-per-Use), but also for a minimum fixed amount of the product’s availability, a so-called ‘floor’ in a contract (Rent).

Our research has also shown that Producers are offering products or services using several revenue models, in order to accommodate the wishes of customers, e.g. via both Rent and Sell-and-Buy-Back. Any hybrid model can be agreed upon in a contract. To bring order to the chaos, we have classified the four circular revenue models according to the circular incentives.

'CIRCULAR REVENUE MODELS-LADDER' AS A PRACTICAL TOOL FOR ENTREPRENEURS

The 'circular revenue models-ladder'

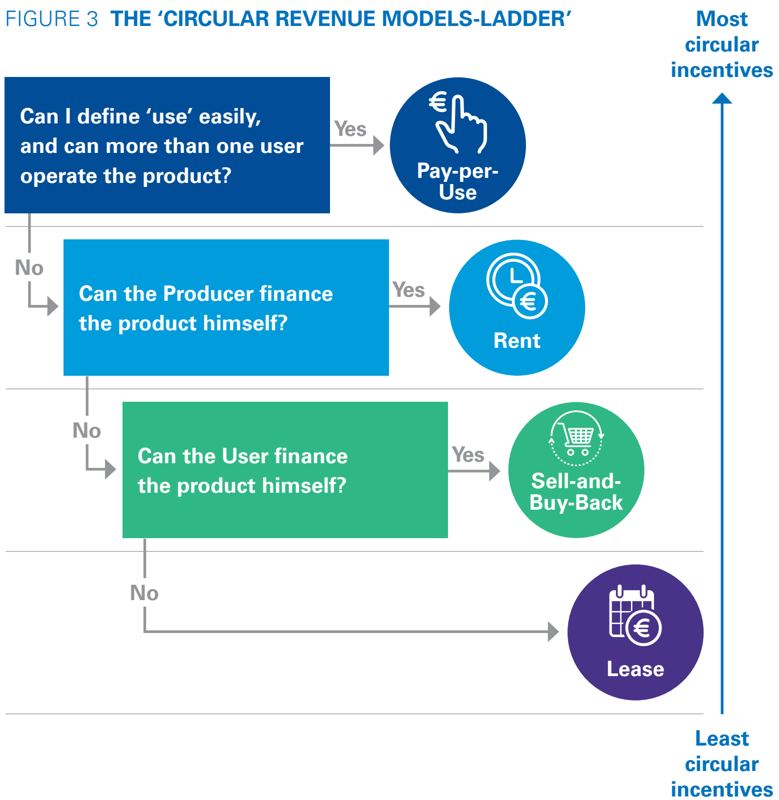
Our research among circular frontrunners has revealed that it is possible to make a distinction in the extent of circular incentives between the various revenue models. The case studies paint a clear picture of current circular reality and the (dis)advantages of the various revenue models. Using this information, we have ranked the models, placing the revenue model with the greatest number of circular incentives at the top of the 'circular revenue models-ladder'.

As a business, it is up to you how high you wish to climb this ladder. Do you prefer to assume all risks as a Producer, or would you rather share those risks with another party (such as the Leasing company)? Do you sell your products but offer the User the option of reselling the products to you (Sell-and-Buy-Back)? Or do you remain the owner of the products and do you make the User pay for their availability (Rent), or use (Pay-per-Use)? The choice is yours...

LEGENDA

- Economic owner
- Return from User to Producer guaranteed?
- How is use optimized?
- Incentive for the User to handle the product with care
- Financial risk
- Option of financing for the Producer

FIGURE 3 **THE 'CIRCULAR REVENUE MODELS-LADDER'**



DEFINITION OF THE REVENUE MODEL	CIRCULAR IMPACT	FINANCIAL IMPLICATIONS
1 The User pays the Producer a variable fee for the use of the product (the price is linked to actual use). The Producer runs the financial risk.	Producer Return Sharing of products[1] Incentive for user[2]	Producer Internal
2 The User pays a fixed fee to the Producer for the availability of the product. The Producer runs the financial risk. Operational Lease is a form of rent (for more information, see page 12).	Producer Return Sharing of time[3] Incentive for user[2]	Producer Internal
3 The Producer sells the product to the User and guarantees that the User can sell back this product. The User runs the financial risk. After the buy-back, the financial risk is transferred to the Producer.	User Return[4] Incentive for user	User External
4 The Leasing company offers financing if the Producer and the User are unable or unwilling to finance the product. If the Lease is a loan ("Financial Lease"), the circular incentive will be low.	Leasing company or User Return[5] Leasing company or User[6]	Leasing company or User External

[1] Shared use
[2] Relating to economic use of the product (but not careful use of the product)
[3] Shared availability
[4] If User returns the product
[5] If return from Leasing company to Producer is guaranteed
[6] If the User buys the product at the end

1. Pay-per-Use

The Producer provides a service (use of a product plus maintenance and repairs) to the User, who will only pay when he uses the service. The Producer is the owner and runs the financial risk. Since the Producer has no influence on the extent of use made by the User, the financial risk is high. This will usually be a long-term agreement, which guarantees the Producer an income over a longer period of time.

What makes Pay-per-Use circular?

- Through this revenue model, the product is offered as-a-service, with the User paying only for the use of the product. Since the User does not become the owner of the product, there is no direct user incentive to use the product with care. However, there may be an incentive to use the product as economically as possible (the first step in the circular economy is to prevent or reduce use).
- The Producer retains ownership of the product, which guarantees the product's return. This model guarantees the largest producer responsibility, since the User pays only for the use. Thus, the focus is on the functionality of the product (i.e. the result the User gets out of using the product). The Producer will prefer to offer a product that functions as long as possible, with the lowest possible maintenance.
- If this revenue model is cast into a business model with the option of several users sharing the service, the use is optimized even further and the model guarantees even more circularity.

Financial implications:

- The financial risk is for the Producer; the assets remain on the Producer's balance sheet. It gets easier to determine (variable) income, if the use can be predicted with more certainty.
- The Producer can pre-finance the use internally (possibly with the help of other parties).
- The User may not be able to pay the initial purchasing price, but will instead pay for the use of the product. For the business, it is important that use can be predicted. In this situation, a hybrid model is often used, in which a fixed price is agreed, in combination with a price for use.

Case studies

The Green House is a circular catering pavilion with a restaurant, meeting rooms and an in-house urban farm in Utrecht

- ⊕ Long-term vision: The Green House has concluded long-term contracts with its partners for lighting and seat comfort. As a result, the two Producers retain ownership over their products and have an incentive to supply high quality products, and to maintain or even increase the value thereof as long as possible.
- ⊕ Promotes innovation: According to The Green House, a good collaboration with the partners is essential when concluding a long-term contract for 15 years. This collaboration offers room for innovation in the services provided, while the parties have a mutual interest in making the products last as long as possible.
- (!) Scaling: This concept requires higher investments by the Producer, which makes it hard to scale the concept. Besides, there is a risk that the 'unique' character will be lost if the concept is reproduced.

Bundles offers washes, tumble-dries, and cups of coffee 'as a service', with the customer paying per use

- ⊕ Guarantees circularity: Because Bundles uses smart plugs to view the condition of its machines and maintenance needs, the lifetime of products can be extended by means of preventive maintenance. Besides, this information helps to deploy the machines in several high-end use cycles.
- ⊕ Incentive to Users: The User is encouraged to use the product in an environmentally friendly way, because Bundles can see how much energy the machine consumes, and the User pays for this. Bundles gives the User advice to limit the total use costs and the impact on the environment.
- (!) No producer: The revenue model follows the Pay-per-Use principles, but Bundles has no control over the design of the machines and is therefore not a Producer according to our definition.

Signify offers light-as-a-service

- ⊕ Digitization and modularity: Digitization gives insight into the condition of the products when they are in use, and making the light fittings modular allows for easy replacement and reuse of spare parts during several cycles of use.
- ⊕ Optimize residual value: The residual value upon sale after expiry of the contract is limited, but by reusing the product in new use cycles (service contracts), Signify is able to generate multiple value out of the products.
- (!) Market demand is lacking: The demand for service models is still lacking. This concept would be particularly interesting to the public sector, given its explicit circular ambitions. Signify has responded to this by activating the Sell-and-Buy-Back concept as well.

2. Rent

The User rents a product from the Producer and pays for the availability of the product. The Producer is the owner and runs the financial risk. Compared to Pay-per-Use, there is a lower financial risk, since the Producer has guaranteed regular revenues. A possible disadvantage is that the business rents out the product for a short period of time, which generates short-term revenues and a possibly larger environmental impact of the several returns post-rent (e.g. a larger carbon footprint caused by logistical movements).

What makes Rent circular?

- Many products are only used by Users for a short time (drilling devices are a good example). Through this revenue model, the User pays for the availability of a product. The User does not have to buy the product him- or herself, but will rent it for the time needed. This way fewer products need to be manufactured, which reduces the use of materials and the consumption of energy.
- The Producer guarantees the reverse logistics and will get the product back from the User after the rent period. In addition, the Producer is (often) responsible for the functionality of the product; if something is not working, the Producer will repair or replace the spare part. This revenue model prolongs the lifetime of the products.
- Optimization of use occurs when the product is rented for short periods (only when in use) and the product is not 'standing still'. A business model that offers the option for several Users to share the product (for example via platforms) can optimize use and guarantees circularity. An example of such a platform is FLOOW2, a business-to-business sharing platform. This ensures that optimal use is made of existing products, so that use (and production) of new products can be prevented.

Financial implications:

- The financial risk is for the business; the assets remain on the businesses' balance sheet.
- The Producer is able to pre-finance internally (possibly with the help of other parties).
- The User may not be able to pay the purchase price, but will instead pay a fixed amount per time unit (usually per month).

Case studies

Gerrard Street rents out modular headphones

⊕ Facilitates modularity: The modular design of the headphones offers Gerrard Street the opportunity to optimize and reuse (parts of) the headphones. The User can simply receive new or repaired parts in his mailbox.

⊕ Ever renewing: By using modularity, Gerrard Street creates value for the User, who has a great need for innovation of products ('the latest fashion'). Old spare parts can be reused in new products.

(!) Reverse logistics: The reverse logistics of headphones will only get going when Users send back the phones. Furthermore, consumers must be willing to be only a user of the product, rather than becoming the owner.

KPN hires out set-top boxes

⊕ Retains ownership: KPN retains ownership of its set-top box for TV, which gives KPN an incentive to make the products last as long as possible.

⊕ Collaborates: By collaborating with partners like Drake & Farrell (refurbishment of product), the lifecycle of the set-top boxes is maximized. More than half of the set-top boxes that are returned can be made ready to enter a new cycle of use through a small adjustment (a visual or technical check, or replacement of a spare part).

(!) Tracks & traces: It is of crucial importance to know where the product is. In practice, this appears to be difficult, due to the many consumer movements (moving house, switching providers, etc.).

MUD Jeans rents out jeans

⊕ Offers comfort: At a fixed price per month, the consumer can wear a pair of MUD Jeans made partly out of recycled materials, including a repair service, which continues if the jeans are rented for consecutive periods.

⊕ Offers choice: After one year, the customer is free to keep the jeans or to swap it for a new pair (at a trade-in discount). If the pair of jeans is returned, it will be reused or recycled.

(!) Lease or Rent? Like many other providers, MUD Jeans advertises its renting of jeans as 'Lease', which illustrates that the term 'Lease' is used to described various revenue models. This is in fact confusing, because the term lease is used, although, in our definition, it is rather a Rent revenue model.

3. Sell-and-Buy-Back

The Producer sells a product to the User. We assume that this happens according to the most common Sell-and-Buy-Back model, with the Producer guaranteeing the buy-back of this product (on certain conditions, such as the lifetime and value of the product). The User has the option of selling back the product to the Producer. Although it is not yet certain whether the real physical return of the product will take place, the (financial) incentive to realize this is evident. The User is the economic owner and runs the financial risk, until the Producer buys back the product.

In practice, there are other alternatives, such as a buy-back option for the Producer. This is a less circular option, since the User has no guarantee that the product can return to the Producer. This option leads to a lower financial risk for the Producer, since the Producer is not obliged to buy back the product after a certain period. In view of the cases we are describing here, we will base our analysis on the more circular, obligatory buy-back alternative.

What makes Sell-and-Buy-Back circular?

- The Sell-and-Buy-Back revenue model has a strong incentive for Users, because the User becomes the owner of the product and receives a fee for returning the product, which depends on the value of the product at that time and the arrangements and conditions agreed (e.g. lifetime). Economic use will help retain the value of the product.
- Since the Producer is eager to get the product back in order to reuse (parts of) the product, the Producer will want to pay attention to ‘design for longevity’.
- An additional advantage is that the information about the performance of the product will reach the Producer after the first phase of use. The Producer can consequently incorporate this information into the design of new products.
- One disadvantage is that, unlike in the revenue models mentioned earlier, the product can be returned, but there is no certainty of this return, as the User is not obliged to do so. The effectiveness of this measure will depend on the financial incentive offered to the User to return the product.

Financial implications:

- This Sell-and-Buy-Back agreement can be seen as a sale, provided that the financial risk for the Producer is low in this agreement (see figure 3). When the risk is higher, it cannot be seen as a sale (but as Lease), and the Producer will have to keep the products on his own balance sheet. In spite of the rules represented in figure 3, it is advisable to discuss the considerations for this revenue model with your financial expert or accountant, in order to determine where you are taking the financial risk.
- The Producer is (possibly) incapable of pre-financing, and will therefore sell the product, with the Buyer paying the full purchase price at once. Other revenue models that are higher up on the ladder do not have the option of pre-financing.
- The User is able to pay the purchase price.

Case studies Sell-and-Buy-Back

Auping sells mattresses with guaranteed buy-back

- Direct cash flow: Because the full purchasing price is paid upon purchase, there is no balance sheet expansion, since the revenues return directly to Auping after sales.
- Value for the User: Auping agrees with the User that it guarantees to buy back used mattresses after 5 years: the 'Take-Back' system is an offer to take old mattresses back (against payment), in order to have them carefully processed rather than burned.
- Return of old mattresses: According to Auping, the technical lifetime of mattresses is 8 to 10 years. The buy-back system of Auping has a term of 8 years. The actual return of mattresses to Auping is necessary to be able to reuse/refurbish the mattresses and extend their lifetime.

Interface sells carpet tiles with guaranteed buy-back

- Determine return value: The return value is determined on the basis of the quality of the carpet tile. This is possible because data about materials is available by performing a scan of the used tiles at the User's premises, before supplying the new carpet tiles. Guaranteeing deals with the User about the return and use of carpet tiles is an essential condition here.
- Circular design: The take-back guarantee ensures that Interface will constantly improve its processing, and will keep looking for alternative materials to design the circular carpet tile and to make its processing even more high-end at the end of its lifecycle, preferably by recycling it into a new carpet tile.
- Reverse logistics: Both volume and timing of the reverse logistics of products are difficult to establish for Interface.

Gispen sells office furniture with guaranteed buy-back

- Refurbished product line: The return loop of products allows Gispen to offer products, after a relatively small upgrade, which are perceived as "almost new".
- Incentive to Users: Together with the User, a minimum guaranteed value is determined, on the basis of intended residual value, which gives the User a (limited) incentive to treat the products economically. The User also receives a part of the actual proceeds realized. If these exceed the minimum guaranteed residual value, the surplus proceeds are shared with the User. This gives the User an additional incentive not only to take good care of the furniture, but also to indicate on time that a product is not needed anymore, in order to maximize the residual value and to have the highest possibility that the product will get a second life.
- Low residual value: We can use the rule of thumb that Gispen can only resell products if it pays a maximum of 10 percent of the price when new for products that are returned. When the products have a higher residual value, Gispen must enter the products on its balance sheet (known as 'balance sheet expansion'), which has a negative impact on financial ratios, such as solvency.

4. Lease

'Lease' is a notion that is frequently associated with the financing of circular revenue models. In our experience, 'Lease' is a generic term used to describe several ways of financing a product. Lease is a common form of financing that a Producer or a User receives from a Leasing company. Depending on the type of lease, either the Leasing company or the User is the economic and/or legal owner. In addition, it is relevant from whose perspective Lease is looked at: accountants will look at economic ownership, whereas legal advisors will look at legal ownership. We also see that Producers use the term 'Lease' if they rent out their products. To us this is not Lease, but Rent. In short: when referring to 'Lease', you should make sure to be explicit what kind of Lease you are referring to. Below, we present an overview of the various types of 'Lease' that we have identified.

1. **Operational Lease (OL):** the Leasing company buys the product from the Producer, is the economic and legal owner, and runs the financial risk. The Leasing company leases the product to the User. The User has an OPTION to buy at the end of the lease term. If the lease includes maintenance and service, it is a 'full-service OL' (e.g. lease of a car). In that case, the Leasing company is much more than just a financier.
2. **Financial Lease (FL) Pledge:** the User buys the product from the Producer, the Leasing company finances the User and holds a pledge on the product in case the User stops paying or can no longer pay. At the time of purchase, the product is the (economic and legal) ownership of the User.
3. **Financial Lease (FL) Hire-Purchase:** the User buys the product from the Producer. The Leasing company finances the User to make the payment. Upon payment of the last instalment, the User automatically becomes the owner of the product (OBLIGATION). In this case, the economic ownership rests with the User; the legal ownership passes from the Leasing company to the User after the last payment. As opposed to the option to buy with OL, under FL the purchase is obligatory.

Another frequently used term is **'Vendor Lease'**. In this construction, the Producer and Leasing company act together in order to offer the User an overall proposition (sale/use + financing). Together, the Producer and the Leasing company may agree on topics like the distribution of the risks, reverse logistics, serving the second-hand market, and the residual value of the product. They will jointly present the User with a proposition. In essence, Vendor Lease is always an Operational or a Financial Lease.

What makes Lease circular?

- Lease can be a solution to parties that want to supply the User with long-lifetime products, but do not have the means to finance or pre-finance such products. Putting a Leasing company in between makes this concept economically feasible. Marketing products with a long service life and lifetime is part of the circular economy, since if products last longer there will be less need for the extraction of new raw materials and energy consumption for the production of new products.
- With OL, the User has the option of returning the product to the Producer after the lease term. The reverse logistics ensures that the Producer can bring back the products and materials into the economy according to the highest possible standard.
- With FL, the User is (FL Pledge) or becomes (FL Hire-Purchase) the owner of the product after the end of the lease term. In this case, the User has an incentive to handle the product with care, since it is the User himself who will benefit from this (by the product lasting longer). On the other hand, the Producer will lose sight of the product and cannot take it back anymore for high-end reuse after the end of its service life.

Financial implications:

- The IFRS 16 Accounting Standard no longer makes a distinction between Operational and Financial Lease. However, local accounting guidelines (such as Dutch GAAP) do still make this distinction.
- Depending on the type of lease, the products appear either on the balance sheet of the User (the lessee) and/or of the Leasing company (the lessor). According to the new IFRS rules, the product will appear on both balance sheets, if the product belongs to the core activities of the User.
- If a Producer has circular intentions but lacks the means to finance them, Lease may be a solution. Lease will enable the Producer to realize scaling up its activities.

Case studies Lease

Mitsubishi M-use provides vertical mobility via elevators (including maintenance)

- Encourage circular use: By making Users pay (partly) for 'vertical movement', it is encouraged that payments are only made when the elevator is used, not for its availability. This makes the elevator more accessible and allows the sharing of the elevator by several individuals or buildings (instead of having two or more own elevators), which leads to savings of materials.
- Reuse of spare parts: The lifetime of spare parts of lifts is extended, because during maintenance works it is tested whether spare parts of used lifts can still be given a second lifecycle in another elevator.
- External financing: Mitsubishi recently announced that it will receive funding from a Leasing company, inspired by the success of the M-use concept and the financial resources involved in the scaling of this concept. This funding allows Mitsubishi to remain the owner of the elevators. Closer collaboration and more arrangements with the Leasing company are necessary to keep the circular advantages. Besides, the principle of unity requires that a separation of legal ownership is made between the elevators and the rest of the building. Especially in existing buildings, this makes it harder for the Producer (or the Leasing company) to retain ownership.

Bosch Blue Movement provides washing machines, including maintenance

- Unburdens: Leasing the washing machines helps Bosch to create value for their customers, by unburdening them and by providing washing machines that the users would perhaps not have bought otherwise.
- Supplies data: Data on the lifetime of spare parts and consumer behaviour regarding the use of the washing machines allows Bosch to adjust the design of its machines, and consequently prolong their lifetime.
- Establish lifetime: Before you can set a lease term, you should know what the lifetime of your machine is. For Bosch it is difficult to establish a lifetime, since this depends on how the machine is used (e.g. number of washes per day/ week, what kind of washes, level of cleaning needed).

UniCarriers provides forklift trucks, including maintenance

- Optimizes use: UniCarriers offers forklift trucks for use rather than possession (expressed in horizontal and vertical movements). With this concept, the company has created a win-win situation for the User – who only needs a forklift truck for part of the year – and for itself (optimized use and higher proceeds).
- Circular use: The user pays for the use per movement of the forklift truck, so that it will not be deployed unnecessarily.
- Multiple users: In order for this case to be successful, there had to be at least two (groups of) users that complement each other's use.

SIX USEFUL INSIGHTS TO HELP YOU MAKE WISE CHOICES

Our research has not only helped to develop the 'circular revenue models-ladder', but also provided several interesting insights that may help you as a business to decide which revenue model matches your products and services.

1. **Look for partners who are willing to share risks**
   The only way we can realize a circular economy is by collaboration with partners. In practice, we see that this is difficult to achieve, since parties are not willing to accept a (large) part of the risks and believe that these risks "should actually be born by other parties in the chain". The Green House is a good example of how it can be done: this company has agreed with its suppliers on a distribution of the risks, and has thus created a joint incentive in making products last as long as possible. You should try it too!

2. **Buy-Back is only interesting if the residual value outweighs the costs of reverse logistics**
   In the Sell-and-Buy-Back model, the reverse logistics of products is arranged financially and legally, but the physical returns require time and money. The question is whether this is balanced by the value that the product still holds.

3. **Combine revenue models ('hybrid revenue models')**
   As a business, you may enhance the attractiveness or applicability of your proposition by agreeing on a hybrid form of revenue models in contracts with your customer. For example, Mitsubishi Elevators uses such a hybrid construction: a combination of Pay-per-Use, Rent and Lease.

4. **Sell-and-Buy-Back may be a model that accommodates the wish of the customer (the User) to pay a one-off amount**
   Some Users (for example in the public sector) wish to pay in one go, for instance in order to spend their remaining budget just before the end of the calendar year. Matching revenue models with customer preferences may prove profitable.

5. **Choose Lease primarily for financial reasons (lack of liquidity, scaling or lack of access to markets), rather than circular impact**
   Lease has no circular advantages compared to Rent. To the Producer, the financial advantage is that the products are sold to the Leasing company and therefore bring in cash immediately.

6. **Pay attention: is it Rent or Lease?**
   Lease is popular, but it comes in two forms: a loan or rent. Lease in the form of rent (OL) has more circular incentives than lease in the form of a loan (FL). Besides, the word Lease is sometimes used where Rent is actually the right word. You should therefore consider carefully whether the marketing term you use matches your actual revenue model.

The next step

With this white paper, we hope to have provided understanding and guidance on the different revenue models a business can choose to offer. In addition, we have provided you with tools and insights to start working with them.

We would like to conclude with a bit of heartfelt advice: setting up a circular business may look like a chaotic and immense task. It is good to bear in mind that few businesses, or maybe none at all, are 'fully circular'. All companies have a different starting point and expand its circularity onwards. So, please feel free to get started and to try! We wish you a fruitful (further) exploration of your circular opportunities.

For more information about opportunities for policymakers to realize a circular economy, we are pleased to refer to the white paper 'Circular Revenue Models: required policy changes for a circular economy', which was written for policymakers by Copper8, KPMG and Kennedy van der Laan.

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