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Managed Services

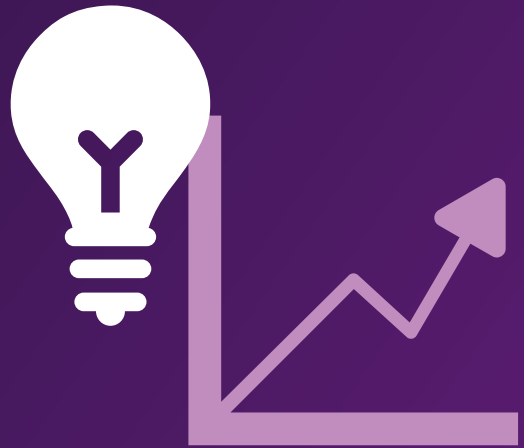
Circular lighting

Business models



New business models in the circular economy

Along with design, collaboration and reverse logistics, business models are an important pillar of the circular economy. This white paper explains the role of new business models, outlines which circular models are available, and specifically examines the circular lighting business model for Philips Lighting.



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1 New business models in a circular economy

Any company that wants to continue to thrive needs to reassess its business model regularly. If a company wants to become circular, it has to start adopting new, circular business models. This first chapter explains what a circular economy is and what role business models play in that context.

What is circular?

The phrase circular economy is being used more and more often. But what does it mean? A definition that is often used around the world is the one from the Ellen MacArthur Foundation, which was established in 2010 to promote the transition to a global circular economy:

“**A circular economy is one that is restorative and regenerative by design, and which aims to keep products, components and materials at their highest utility and value at all times, distinguishing between technical and biological cycles.**”

(www.ellenmacarthurfoundation.org)

According to the above definition, a circular economy has a great capacity for regeneration, and its main objective is to make optimal use of products, components and materials, letting them keep their value. In other words, a circular economy is a closed feedback loop in which there is no waste (www.biobasedeconomy.nl). Finding the best way to set up such a closed loop is the foundation of reverse logistics.

A distinction is made between circular systems with a biological and a technical cycle of materials. In a biological cycle, residue materials are safely returned to nature after they have been used. In a technical cycle, products and parts are designed to be suitable for reuse (www.mvonderland.nl). To be able to sustain this last process, reverse logistics are essential.

Why circular?

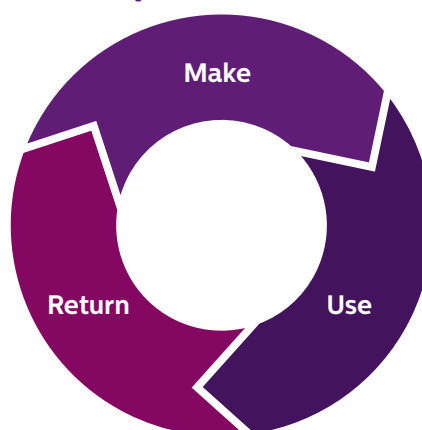
The current, linear method of production is using up raw materials and produces ever more waste. This is exhausting the planet's resources. As a result, more and more people are realizing that we need a non-linear economy.

The world's growing population is raising demand for raw materials and energy, while the availability of natural resources and fossil fuels is diminishing. We are seeing a worldwide growth of the middle class, which is estimated to include another three billion people in the next two decades (Ernst & Young, 2014, Driving growth - Middle class growth in emerging markets). Simply using up less raw materials is not enough. In addition, resource scarcity is driving up prices, which slows down the economy.

Linear economy



Circular economy



What is a business model?

According to Osterwalder and Pigneur (2010), a business model is a motivation of how an organization creates, delivers and sustains value. In his thesis *Circular business model innovation*, Bas Mentink (2014) describes a number of criteria for business models:

BUSINESS MODEL VALUES

Individual

A business model always applies to an individual company, not to an entire sector. Companies in the same sector will, however, often have similar elements in their business models.

Abstract

Business models describe the company processes on an abstract level; they do not focus on details.

Interconnects

All parts of a business model are interconnected. If one part changes, this will usually affect the entire model.

Explanatory

A business model can be used as an explanatory tool or as clarification for other parties and financiers.

Tool

A business model is not a company strategy. A business model is used as a tool for executing a company's strategy.

Dynamic

Business models are dynamic and will change continuously, as they are influenced by environmental factors.

A critical look at one's own business

The world is changing, which is why it is important for companies to regularly critically review their own business models. One way to do this is to use the *Business Model Canvas* (Osterwalder and Pigneur, 2010). This model identifies nine major elements of a business model:

BUSINESS MODEL ELEMENTS

1

Costs

2

Revenue

3

Value proposition

4

Partners

5

Resources

6

Activities

7

Client segments

8

Distribution

9

Customer relations

The need for new business models

The transition to a circular economy requires new, innovative business models. Due to the growing scarcity of raw materials, the current linear economic model cannot be sustained for much longer. This can lead to the following problems for companies (Accenture, 2014):

Less income

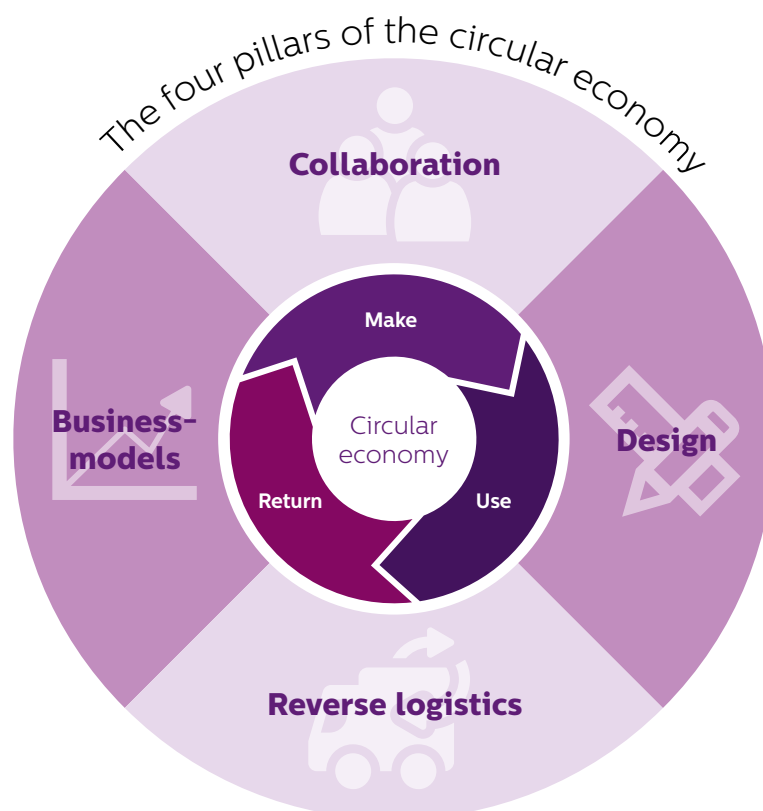
Due to uncertainty about the available raw materials. In the future, companies that depend on rare materials may have to temporarily shut down production, making it impossible to meet market demand.

Less growth

Companies whose growth is deeply linked to the availability of rare raw materials will find it harder to make predictions and to compete with companies that are less dependent on rare materials.

Image damage

A company that doesn't have a good ecological footprint and depends greatly on scarce raw materials runs the risk of having its brand value diluted, which puts customer loyalty under pressure. Similarly, policy-makers and government organizations will be less willing to do business with such companies.



The concept of business models is one of the four pillars of the circular economy. The other three pillars are design, collaboration and reverse logistics.

2 Five kinds of circular business models

In the report *Circular Advantage: Innovative Business Models and Technologies to Create Value in a World without Limits to Growth* by Accenture (2014), five kinds of circular business models are described:

1 Circular supplies

This model is relevant for companies that work with scarce raw materials. These scarce materials need to be replaced by fully renewable, recyclable or biologically degradable raw materials. One example of this is Royal DSM, which developed a biofuel made from ingredients that include corn waste.

2 Resource recovery

This model uses technological possibilities and innovations to recover and reuse products, so that as few raw materials as possible go to waste and the economic value is maximized. An example of this is the cradle-to-cradle approach, in which waste is processed into new raw materials. For example, the Walt Disney World resort has all food that is thrown away converted into biogas, which is then used to generate electricity. Whatever remains after that is processed into fertilizer.

3 Product life extension

This model helps companies to extend the life cycle of their products, so that the economic value is maintained. Products and materials that would otherwise have been thrown away are now kept or even improved, for example through repairs, upgrades or remarketing. By extending products' life cycle as much as possible, they do not have to go to a landfill, which also creates a new revenue stream.

4 Sharing platforms

In this model, a product's usage value is increased by sharing it with others. A product's users – this can be both individuals and companies – connect on a platform where they share products and/or services. This makes it possible to make the best possible use of a product or service. Examples of this approach are BlaBlaCar for sharing car rides, and Airbnb which shares addresses for overnight stays.

5 Product as a service

In this model, a product becomes a service. To use a product, customers take out a rental or pay-per-use contract. This means they never own the product they are using. This is an attractive model for companies with high operational costs. In addition, these companies must have the capabilities to organize the maintenance and reuse of the products, and to reclaim the products' residual value. Philips Lighting uses this model and retains ownership of all lighting equipment. The company also takes back the lighting equipment at the right moment, when it is suitable for recycling or upgrading.

3 Light as a Service: Philips Circular lighting

Philips Lighting uses the aforementioned “product as a service” model. This gives users a number of benefits:

From ownership to usage

Philips Lighting retains ownership of all lighting equipment. That means that it is important to Philips Lighting that a product’s value is maintained. As a result, the luminaires used are not the least expensive – instead, the focus is on the use of smart circular luminaires. As a result, only minimal maintenance and repairs are needed, and parts can be easily replaced whenever necessary.

Optimal product

In the new model from Philips Lighting, clients don’t have to explain which luminaires they want. Instead, Philips Lighting makes a selection of the luminaires that best suit a client’s wishes and develops a lighting plan based on those products. This also takes into account matters like health and safety regulations and energy-efficiency.

Minimal risk

Philips Lighting acts as the supply-chain manager. A lighting plan is drawn up together with partners like technical consultant Royal Haskoning and energy supplier Engie, who also vouch for the lighting plan. As a result, all responsibility lies with Philips Lighting, from design and installation to maintenance.

No maintenance or repairs

Philips Lighting is responsible for the luminaires’ maintenance and whatever repairs are needed. Faulty luminaires are collected and replaced. The client can call Philips Lighting if anything is broken, and Philips Lighting handles the rest. Agreements are made about these services for each individual client, depending on how fast a repair or replacement needs to be executed.

No investment barrier

The client does not pay for the luminaires, but for the light and the light quality that is being used every month. Philips Lighting pre-calculates these costs and translates this into a monthly fee. The client can check all the data and ask Philips Lighting for clarification if necessary. Because Philips Lighting provides very energy-efficient luminaires, a client will see immediate savings on their energy bill. These savings are often so high that they exceed the entire cost of the new lighting. In this way, the contract fee for the new lighting is already covered, as the energy bill is usually a very significant cost item.

Image

It is important to many clients to work on a green, sustainable image. Using circular lighting contributes to this, in a (literally!) very visible and demonstrable way.

Philips Lighting remains responsible

At the end of the contract, Philips Lighting takes back the used products and makes sure that they (or their parts) can be used again. This gives an extra dimension to the business model and the choice for the lighting solution. A luminaire will be designed and serviced in a different way if the manufacturer knows that they will be receiving that product back again. The products returned to the manufacturer still have economic value; Philips Lighting incorporates this into the entire business model.

Conclusion

A good, circular business model is the foundation for a circular company.

A product's design and the organization of reverse logistics are also essential parts of becoming a circular company. You can find the white papers on circular design and reverse logistics at: philips.nl/circularlighting.



Sources

Circular advantage:
Innovative business models and technologies that create value.
Alexander Osterwalder and Yves Pigneur, 2010

Driving growth:
Middle class growth in emerging markets.
Ernst & Young, 2014

Circular business model innovation:
A process framework and a tool for business model innovation in a circular economy.
Bas Mentink, 2014

Circular Advantage:
Innovative Business Models and Technologies to Create Value in a World without Limits to Growth.
Accenture, 2014

www.ellenmacarthurfoundation.org

www.biobasedeconomy.nl

www.mvonderland.nl

www.greenbiz.com

Philips Circular lighting

Philips Lighting takes sustainability very seriously. This is why we developed Philips Circular lighting. Philips Circular lighting is an approach that applies the “make, use, return” circular economy principles to the lighting industry. Lighting is designed to use resources in a smarter and more efficient way, building in traceability, serviceability, refurbishment and upgrade options, parts harvesting and recycling of used materials.

Philips Circular lighting contributes to your corporate sustainability ambitions. We provide guaranteed lighting performance with regard to energy, light level and uptime, while owning the reuse, refurbishing or recycling loop to ensure you get maximum value from the lighting system.

With a cradle-to-cradle mentality, we offer a sustainable service option allowing you to pay for the light you use, rather than an upfront investment in the materials. By minimizing materials waste and reducing the environmental impact, we create an ecosystem that extends the life of our lighting products and provides a better future for the next generation.

Questions? Suggestions?

Feel free to contact us at anytime – we look forward to hearing from you.

