



**Product
Stewardship
Centre of
Excellence**

**CASE
STUDY**



Phillips Ecoloop Program

The shift towards sustainable lighting has resulted in significant environmental benefits, with lighting's share of worldwide electricity consumption dropping in recent years. Philips is innovating beyond lightbulbs and expanding its portfolio of Light-as-a-Service (LaaS) initiatives, which have the potential to transform the lighting industry by providing a more sustainable and cost-effective solution compared to traditional lighting models. In this case study, we provide an overview of the LaaS market and the product stewardship benefits of engaging with LaaS.

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Product Stewardship in Action with



INTRODUCTION

Whereas the shift towards sustainable lighting may seem like a small step in reducing global energy consumption, but the resulting environmental benefits are significant. Due to the adoption of eco-friendly lighting, lighting's share of worldwide electricity consumption dropped from 19% in 2006 to 13% in 2018 and is predicted to decrease to less than 8% by the year 2030.¹ The growing popularity of LED is driven by legislation, longevity, and demands for energy efficiency. Compared to traditional incandescent bulbs, LED lamps last 10 times longer and consume 80% less energy.²

Philips, a leading global health technology company, is renowned for its wide range of consumer products, in 2016 the lighting division was split from Philips (now called Signify) to allow for the business to develop new business models and continue to innovate beyond lightbulbs and expanding the business portfolio of light-as-a-service (LaaS) initiatives. LaaS has the potential to transform the lighting industry by providing a more sustainable and cost-effective solution to traditional lighting models.

This case study focuses on the Philips EcoLoop program, with a particular emphasis on its LaaS initiatives. As Signify's primary brand for lighting products aimed at both businesses and consumers, Philips offers lighting solutions for various applications such as homes, offices, sports stadiums and public streetlights.

WHAT IS LIGHT-AS-A-SERVICE (Laas)?

LaaS is a lighting system model where lighting solutions are offered as a service, rather than being purchased and owned by the end-user. In other words, instead of buying and installing

a lighting system, the customer pays a provider for the use of the lighting system, including maintenance and energy costs.

The provider installs, maintains and systematically upgrades the lighting system, while the customer only pays for the amount of light used, rather than the hardware itself. LaaS aims to provide a more efficient and sustainable solution to traditional lighting models, as it allows for more flexibility and scalability, reduces energy consumption by driving the swap to LEDs and can incorporate smart technologies such as sensors and controls to optimise energy usage.

LaaS is often used in commercial and industrial settings where lighting needs are high and where the cost of lighting systems and maintenance can be significant. However, LaaS is also becoming more common in residential settings as well, especially for more energy-efficient and environmentally friendly homes.

LaaS STATE OF PLAY

A recent report by Zion Market Research provided a forecast of the global LaaS market between 2020 and 2028.³ In particular, it found:

- The global lighting as a service market size was valued at \$93.5 million USD in 2020 and is projected to reach about \$166 million USD by 2028.
- The indoor installation segment accounted for the largest share of the market in 2020 due to high demand in commercial and industrial settings.
- The commercial end-user segment held the largest share of the market in 2020, owing to the increasing adoption of

¹Circular X. (2020). Signify - Light-as-a-Service. Retrieved from <https://www.circularx.eu/en/cases/40/signify-light-as-a-service>

² Ibid.

³ Zion Market Research. (2023). Global Lighting-as-a-Service Market. GlobeNewswire. Retrieved from <https://www.globenewswire.com/en/news-release/2023/02/17/2610400/0/en/Global-Lighting-as-a-Service-Market-Size-to-Surpass-value-at-165-85-Million-by-2028-Grow-at-a-CAGR-Of-7-6-Analysis-By-Zion-Market-Research.html>

energy-efficient lighting solutions in commercial buildings.

- North America accounted for the largest share of the market in 2020, followed by Europe and Asia Pacific.
- The market is highly competitive, with major players including Signify Holding, Zumtobel Group, Cree Inc., Eaton Corporation, and Future Energy Solutions.

The growing adoption of lighting as a service solution in commercial and industrial settings is driven by the need for energy-efficient lighting systems and the increasing focus on sustainability.

LIGHTING THE WAY

Signify is engaging in initiatives where lighting is sold as a service, rather than as a product. Currently, 16 percent of Signify's revenue comes from circular products and services and is targeting to double this by 2025.⁴ In the United States, Signify has a goal to help consumers and businesses swap as many incandescent lights as possible for LEDs by offering lifecycle services that will reduce costs, energy consumption, and greenhouse gas emissions.⁵

Signify's LaaS model aims to enable a circular economy through three main strategies:

1. **Slowing the loop** by encouraging product longevity through service and maintenance contracts as part of the light-as-a-service model;
2. **Narrowing the loop** by reducing energy for lighting through LEDs rather than incandescent lightbulbs.

⁴ Signify. (n.d.). Circular economy. Retrieved from <https://www.signify.com/global/sustainability/circular-economy>

⁵ Ibid.

⁶ Signify. (2023). Lifecycle Services. Retrieved from

3. **Closing the loop** by allowing for recycling of the LED lights at the end of the product lifetime as Signify remains the owner of the lights;

Some key features of the LaaS packages offered by Signify include performance reporting on indicators including energy usage, uptime, and occupancy to help a business track and optimise the efficiency of their lighting system, remote and on-site maintenance to address any issues that may arise, and regular system optimisation to maximize energy savings and minimise operational costs.⁶

Customers also benefit from the elimination of the need for an upfront capital investment to switch to energy-efficient LED lighting, leading to significant savings in both energy costs and carbon emissions

NEXT STEPS

In a recent interview with Bloomberg, Signify CEO Eric Rondolat, reflected on the performance of the business in 2022 and where things might go from here.⁷ Despite supply chain challenges, Signify had strong sales growth due to increased demand for energy-efficient lighting solutions and sustainability focus. Rondolat emphasised Signify's sustainability goals and plans for investing in R&D, particularly in smart lighting.

Closer to home, in a related sustainability development, the Philip 3D printed luminaires will be manufactured in Sydney at their Pastrow factory later this year, using Signify's 3D printing technology. 3D printing aligns with circular economy principles including reducing emissions and waste. The luminaires are made of 100% recyclable polycarbonate without screws or paint, reducing components

<https://www.signify.com/en-us/lighting-services/lifecycle-services>

⁷ Roach, A. (2023). Signify CEO Sees Better Year Ahead After Supply Chain Woes. Bloomberg. Retrieved from <https://www.bloomberg.com/news/articles/2023-01-27/signify-ceo-sees-better-year-ahead-after-supply-chain-woes>

by up to 10%. By eliminating long supply chains, transportation, and having a print-on-demand model, 3D printing significantly reduces carbon emissions (up to 76%) and waste. Signify will then recycle failed prints in-house and reuse them as base materials for new products.⁸

NOTE:

The content of this case study is information of a general nature sourced from public sources and investigations conducted by the Product Stewardship Centre of Excellence. It does not represent advice, direction or endorsement from the Product Stewardship Centre of Excellence, nor does it represent the only method or practice to address the topics laid out in this document. Individuals or organisations are encouraged to conduct their own analysis and consideration of strategic options relevant to their situation before taking action in regards to the matters covered.

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⁸ Signify. (2023). The sustainable choice in lighting is 3D printed. Retrieved from <https://www.signify.com/global/innovation/3d->



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