Signify

Circular Economy
in Lighting

Flavio Santos
Country Manager
Signify / Philips Lighting

Philips Lighting has changed name and is now :

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Global product brand

PHILIPS

Including sub-brands like:

PHILIPS
hue personal wireless lighting

PHILIPS
dynalite

PHILIPS
COLOR KINETICS

Global IoT brand

interact

Interact City
Interact Retail
Interact Office
Interact Sports
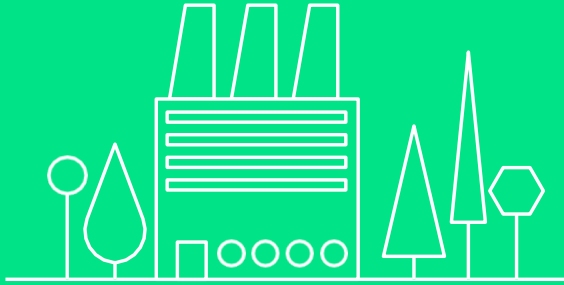Interact Industry
Interact Landmark

Specialty brands

MODULAR LIGHTING INSTRUMENTS

LUCE PLAN

ILTI LUCE HANDCRAFTED IN ITALY

Specialty brands

ATTRALUX

MAZDA

PILA

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Passion for Sustainability
Committed to be 100% carbon neutral in 2020

2017

#1 Industry leader, 'Electrical Components and Equipment' category, Dow Jones Sustainability Index - RobecoSAM

"A" Rating by Carbon Disclosure Project for 'Climate' and 'Supply Chain'

77% sustainable revenues
(2020 target 80%)
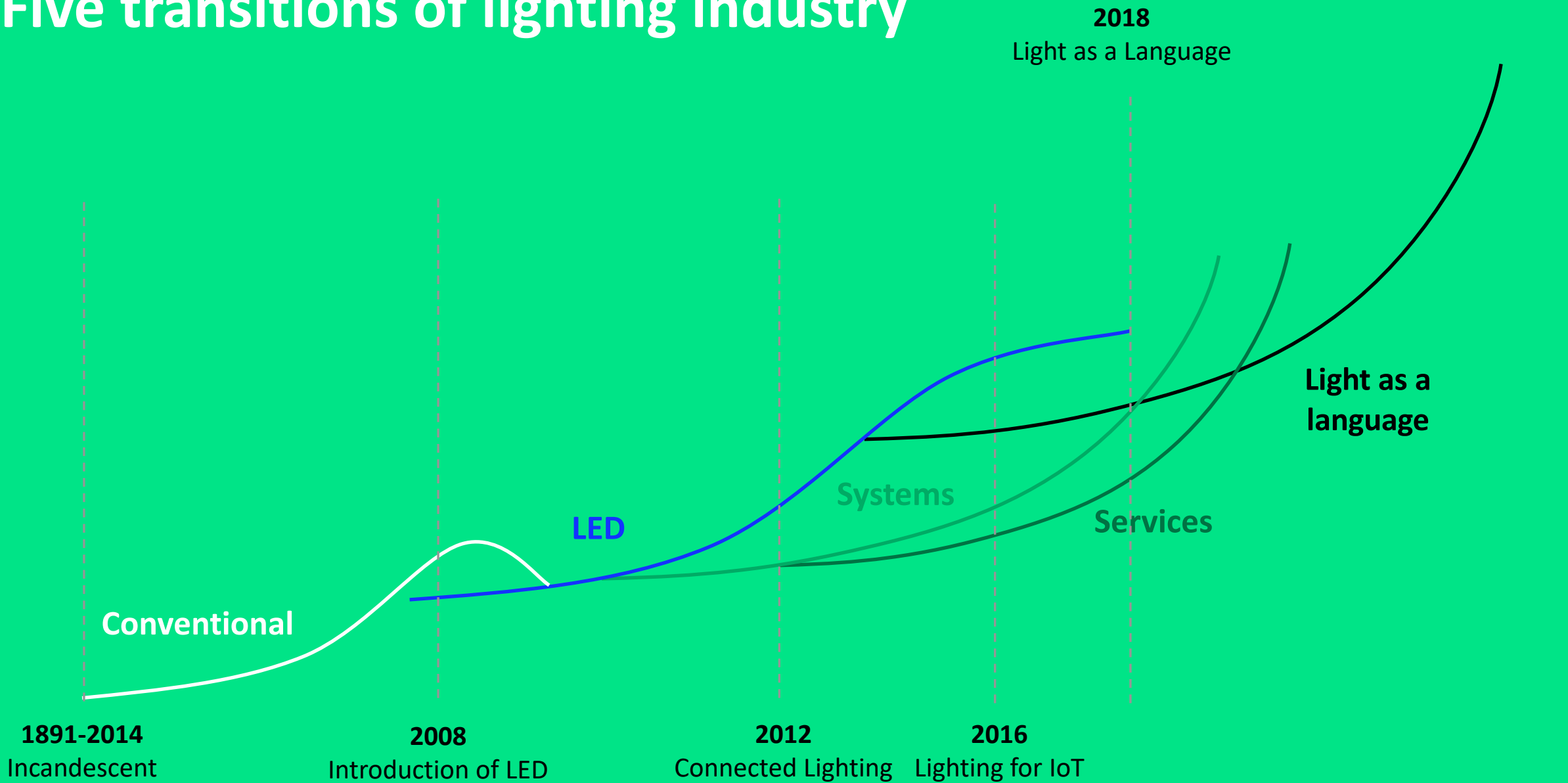
80% electricity from renewables; carbon neutral in 7 markets

87% of industrial waste recycled

95% sustainable supply chain (2020 target 90%)

Five transitions of lighting industry

2018
Light as a Language

Light as a language

Systems

LED

Services

Conventional

1891-2014
Incandescent

2008
Introduction of LED

2012
Connected Lighting

2016
Lighting for IoT

Four enablers for a circular economy, leading to rethinking the way we offer lighting solutions.

New business model
Unique innovative and fundamentally a new service model with circular thinking

Reverse Logistics
Philips Lighting applies the circular economy principles for end-of-life lighting systems and products

Design
Smart and sustainable products caring about the future and after end-of-life

Collaboration
Effective cross-chain and cross-sector collaboration are imperative for the large scale establishment of a circular system
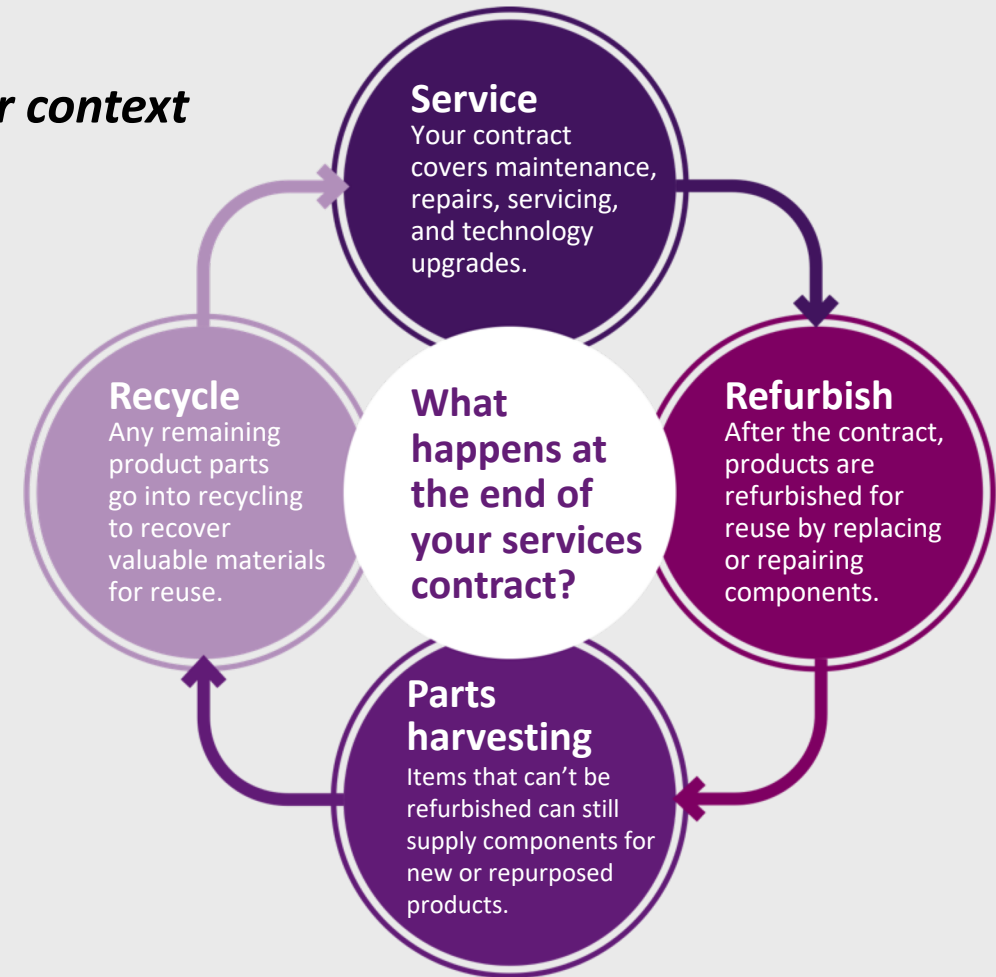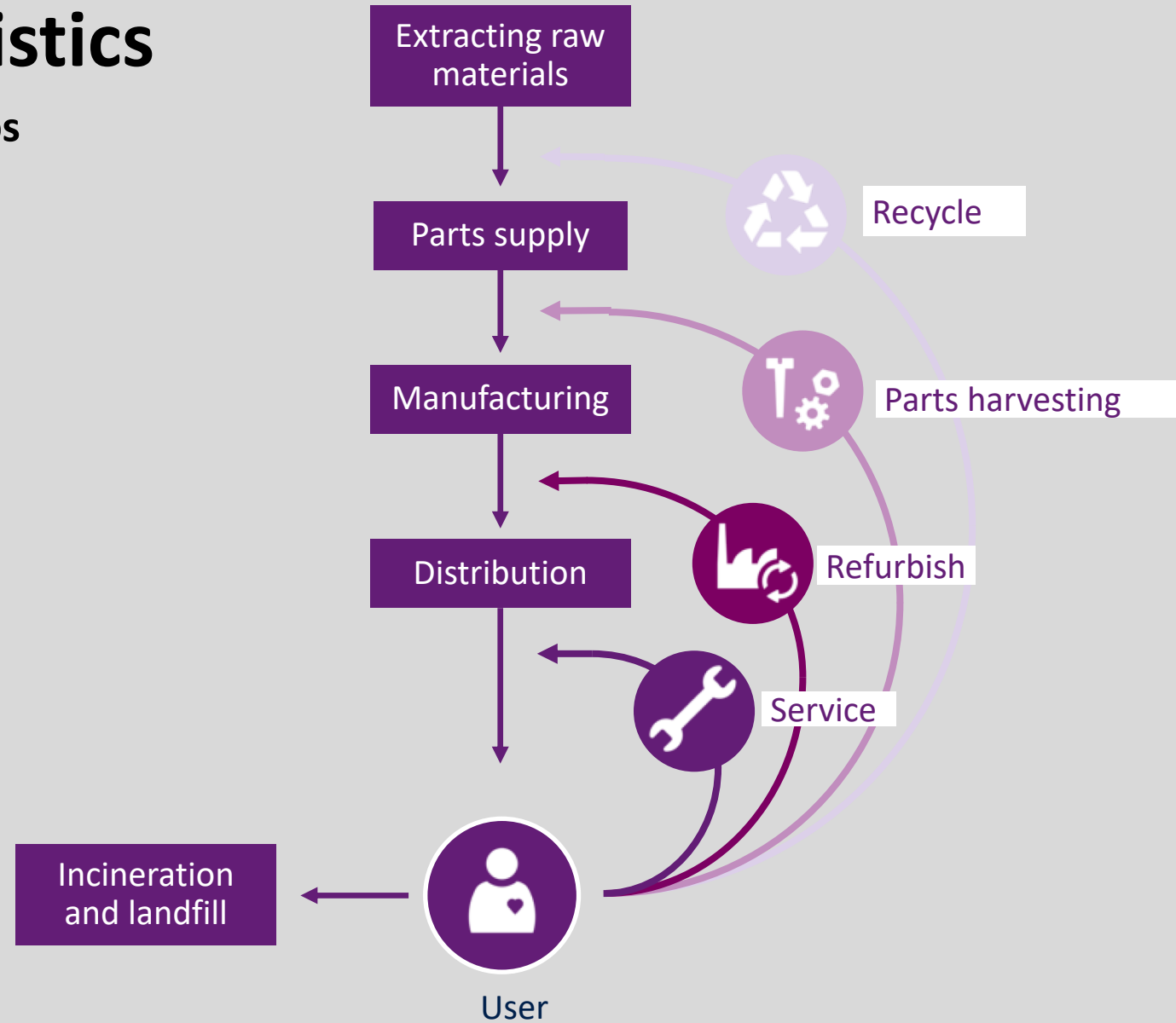
Business Model
A managed service

The linear business model of yesteryear will change into circular context

- **From Transactional → Relational**
  - (Light as a Service)
- **From Consumables → Durables**
  - (Product life extension by design)
- **From Possession → Performance**
  - (Performance outcome over asset ownership)
- **From Take-Make-Use → Reduce-Reuse-Recycle**
  - (Managing multiple life cycles)

What happens at the end of your services contract?

Service
Your contract covers maintenance, repairs, servicing, and technology upgrades.

Refurbish
After the contract, products are refurbished for reuse by replacing or repairing components.

Parts harvesting
Items that can't be refurbished can still supply components for new or repurposed products.

Recycle
Any remaining product parts go into recycling to recover valuable materials for reuse.

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Reverse Logistics

Closes 4 material loops

Extracting raw materials → Parts supply → Manufacturing → Distribution → User → Incineration and landfill

Recycle
Parts harvesting
Refurbish
Service

Reverse logistics

Closes 4 material loops

The value increases going from the outer to the inner circles

- **Recycle:**
  Regaining materials (and recycled materials)
- **Parts harvesting:**
  Ability to disassemble in modularity
- **Refurbish:**
  Ability to re-assemble following repair (upgrade)
- **Upgradability and service:**
  Maintaining functionality and performance through ser

Design

Specifically for a circular economy model

① **Modular**
Includes standardized components

② **Upgradable**
Upgradable to connected lighting system

③ **Disassembly**
Non-destructive, less than five steps

④ **Easy to maintain**
Lower failure rates due to efficient spare parts and asset management

⑤ **Recycling**
Product breakdown into separated materials' waste streams

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Collaboration
Cross-chain and cross-sector collaboration

Creating sustainable solutions for a circular economy requires bold steps and **close collaboration between many different parties:**

- At Signify, we are embarking upon a new **service-based relationship with our customers.** We fulfill the role of a trusted long-term partner in sustainability.

- In deploying and managing the lighting installations on site, we **work with many technical partners like designers, architects and installers**.

- To enable ongoing innovations in production and performance, we **collaborate with the top suppliers and manufacturers in the supply chain.**

- Our good relationships with **leading sustainability consultants and researchers** let us stay at the cutting edge of lighting innovation creating brighter lives and a better world.

Circular Lighting enables Schiphol
to become one of the most
sustainable airports in the world

Case study:
Bruynzeel

Bruynzeel Storage Systems is a manufacturer, advisor, and installer that develops space-saving and archiving systems for government, libraries, hospitals, and museums. The company is also determined to save resources. Their circular approach to business turns waste, by-products and emissions into materials that can be used in their production cycles. A successful model that gives real ambition to their aim of creating a truly sustainable future.

Customer needs

- New level of control over lighting energy usage
- Bruynzeel wanted to focus on their core business rather than the ownership and management of their lighting infrastructure.
- The company wanted a new level of control over energy use for lighting, as well as an end-to-end solution that would also give them the ability to maximize recycling in line with their circular economy business agenda.

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