

Challenges and opportunities in the transformation of Lighting

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The current lighting market

- LED technology has resulted in some anarchy and disruption
 - Many „new kids on the block“
 - Increasing number of promised product features
 - Regulation far behind on issues like safety or product classification
- High expectations from private and professional consumers
- Growing need for guidance to the market and unified representation of the lighting industry

What is LightingEurope?



Σ > 1000 companies with > 100000 employees > 20 billion turnover

LightingEurope members

AFLE

agid
KONINKRIJK DER NEDERLANDEN

.AGORIA



AURA LIGHT



DOW CORNING



FEILO
SYLVANIA



HALLA



infineon

LEDVANCE



LightTech

LUMILEDS

LUTRON

Minebea
Passion to Exceed Precision



BLA - SWEDISH LIGHTING
INDUSTRY ASSOCIATION

OSRAM

Panasonic
ideas for life

PHILIPS



SYNDICAT DE
L'ÉCLAIRAGE



ZVEI:
Die Elektroindustrie

Our Mission?

- Promote the **interests of our Members**
- **Stimulate optimum market conditions and a level playing field**
- Ensure **that Europe remains leading in lighting**

LightingEurope is the **one-stop-shop** for industry input on lighting issues for the EU Institutions



Communication and Education

Features

Connecting policy-makers and industry

- Know the right MEPs and Commission officials
- Gain visibility among EU officials

Expertise on EU policy, legislation and organization

- Find your way within the EU machinery
- Learn in time about policy impacts for your business
- Benefit from EU funding programs

Facilitating expert working groups

- Work together with industry peers and experts on market-relevant issues
- Shape EU legislation with a common position paper
- Understand EU regulations from technical guides

Contributing to media, events and conferences

- Communicate the industry position

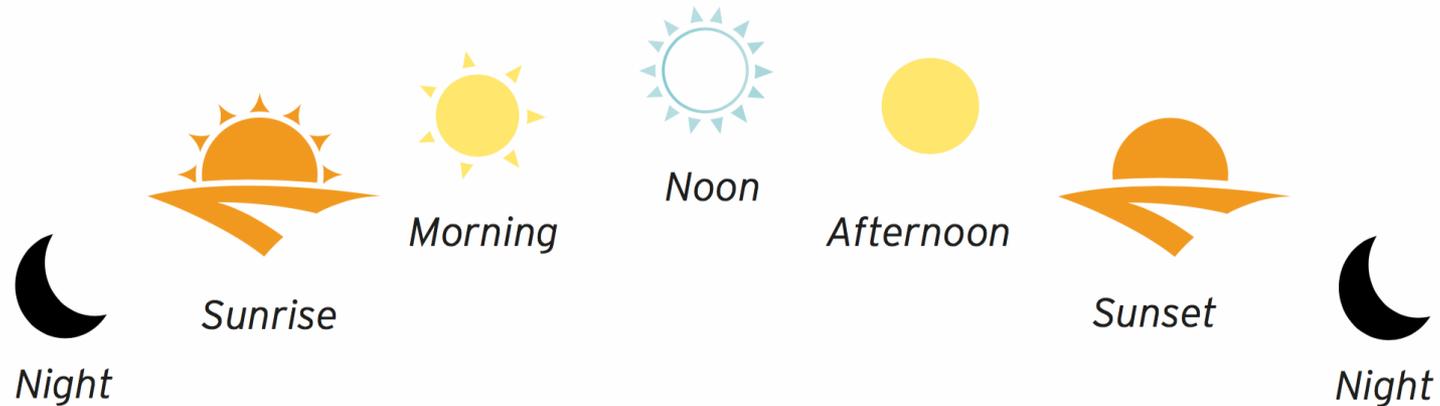
Educating for higher standards

- Example: improve lighting with highly qualified lighting designers

Benefits

Agenda

- Lighting beyond illumination
- Policy Trends & Activities
- LightingEurope Strategic Roadmap 2025



Natural light is dynamic from sunrise to sunset

Mankind has evolved under this light - dark cycle.

24 hour rhythms dominate much of what we are:

- Nearly all organisms respond to 24 hour rhythms and with changing seasons
- The eye links light and darkness with the body
- **Intensity, color, timing and direction** are very important in circadian lighting

Our daily world



Wake-up



Morning



Office



In town



Evening



Go-to-sleep

Artificial light is static from when we wake until we sleep



On a sunny day people outside get
100 000 lux



On a cloudy day
10 000 lux



Indoor in offices people get
500 lux



And in school only
300 lux



People spend

90%

Of their time indoor

Light has an effect on



Vision

Sight



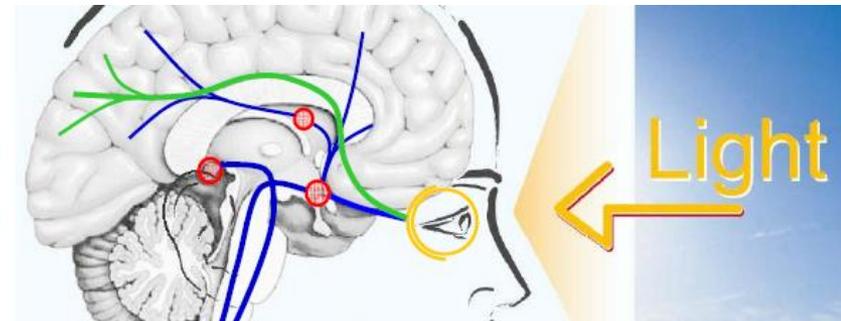
Body

*Alertness,
cognitive
performance
and sleep/wake
cycle*



Emotion

*Mood, energize
and relaxation*



Light in applications

Light requirements and settings vary by application



We need the right light at the right place at the right time to support our activities

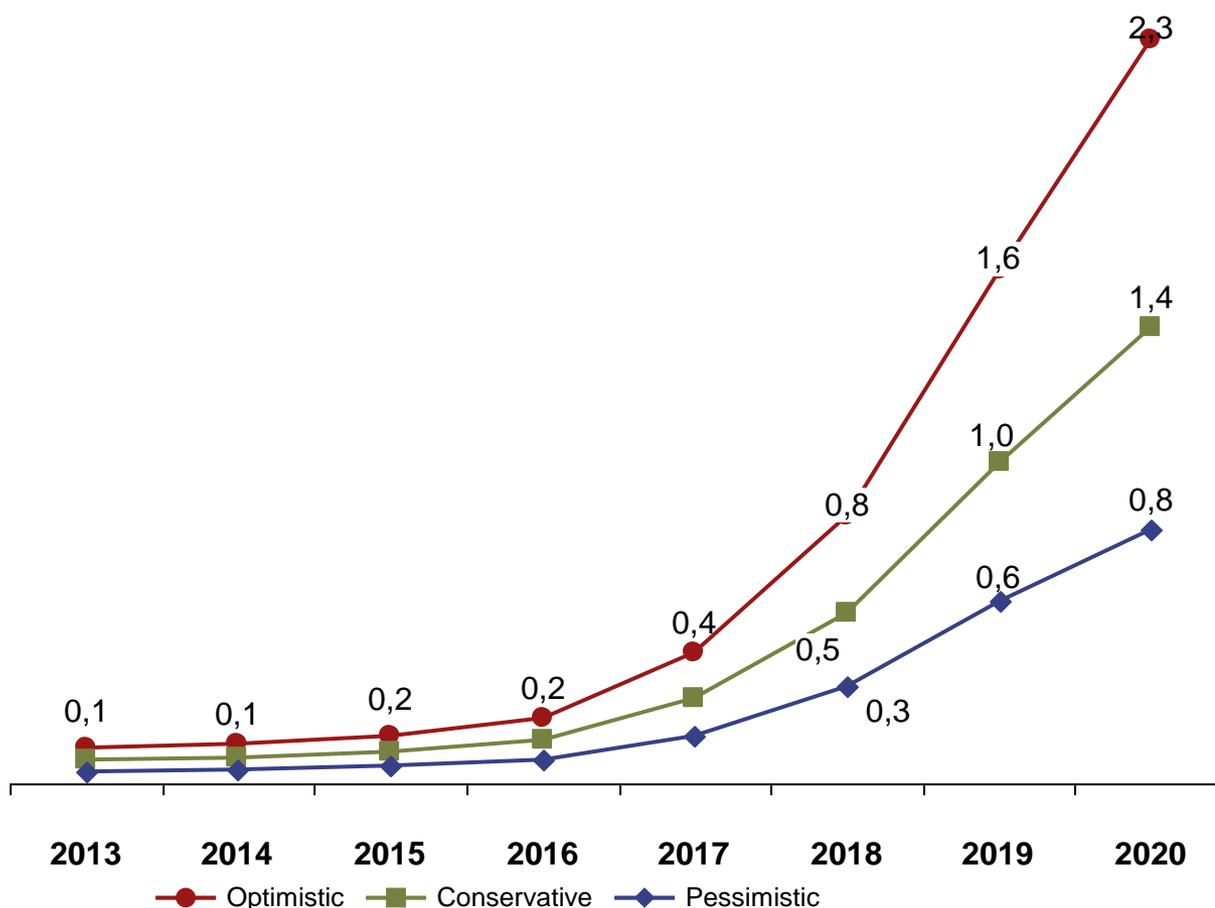
Look beyond energy efficiency

Human Centric Lighting increases the vision, well-being and performance of people



If cost of energy is only 1% of the typical business operation costs, why do we concentrate on energy savings and not on having healthier, happier and more effective people?

Human centric lighting can be a multi-billion-euro business in Europe



- **Optimistic scenario** assuming
 - Healthy economic climate
 - Significant infrastructure investments
- **Conservative scenario** most probable, assuming
 - Selective government support
 - Joint industry initiatives
 - Considerable marketing investments
- **Pessimistic scenario** assuming
 - Poor economic climate
 - Little infrastructure investments

1. Human centric Lighting
 2. Indicated chart values until 2017 are for scenario with high growth
 Source: A.T. Kearney "Light and Health" market model

Agenda

- Lighting beyond illumination
- **Policy Trends & Activities**
- LightingEurope Strategic Roadmap 2025

Who do we talk to?

EU
Commission/
Directorate
General's

National and
Brussels level
legislators



Partner
organizations

General
Public

Our Members

Trends and Policies

Technology

Integration of products

Digitalization

Integration of sensors

Controlling via Internet

Market

IOT

Policies

Energy Saving

Stronger consumer voice

Ledification

New players

Customs Union

Climate Action

Market Surveillance

Energy Union

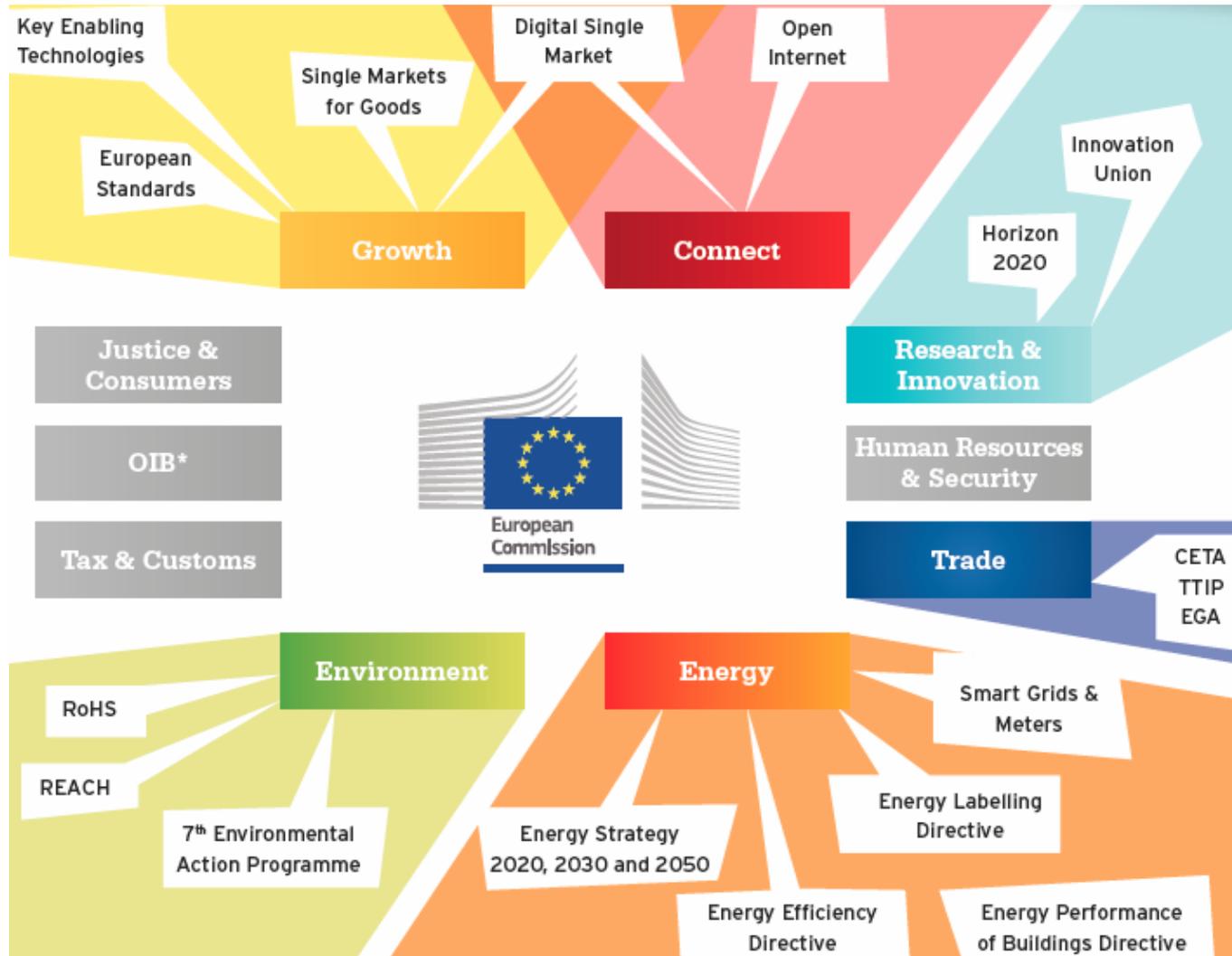
Re-industrialization of

Europe

Digital Single Market

Trade

EU Policy Framework



Agenda

- Lighting beyond illumination
- Policy Trends & Activities
- **LightingEurope Strategic Roadmap 2025**



Value of lighting to society

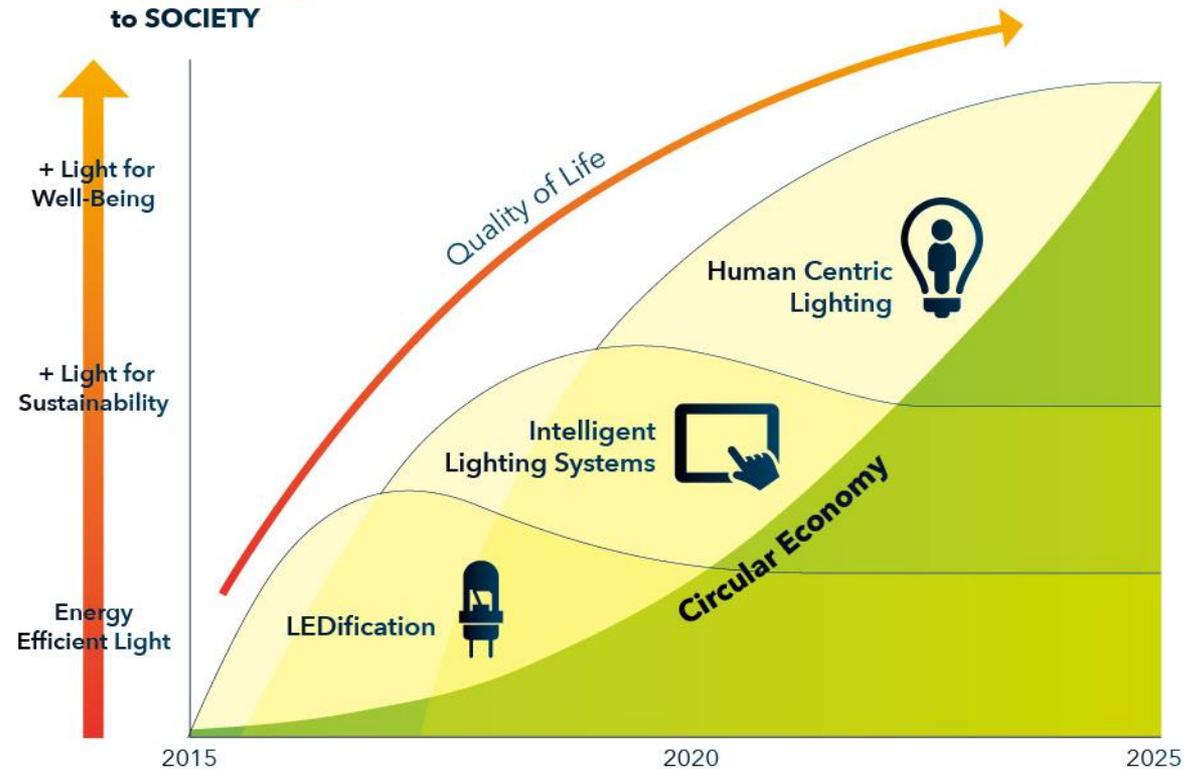
The Strategic Roadmap of LightingEurope demonstrates the increasing growth in the value of light to society.

In this process, **energy efficiency** is supplemented **with light for sustainability** and with **light for well-being**.

The European lighting industry is aiming together with European Regulators for the **growth of the European lighting market** by more intelligent lighting, increased renovation rates, Human Centric Lighting and by circular economy thinking.

A result will be an increased number of jobs in Europe.

Growth of VALUE of LIGHT to SOCIETY



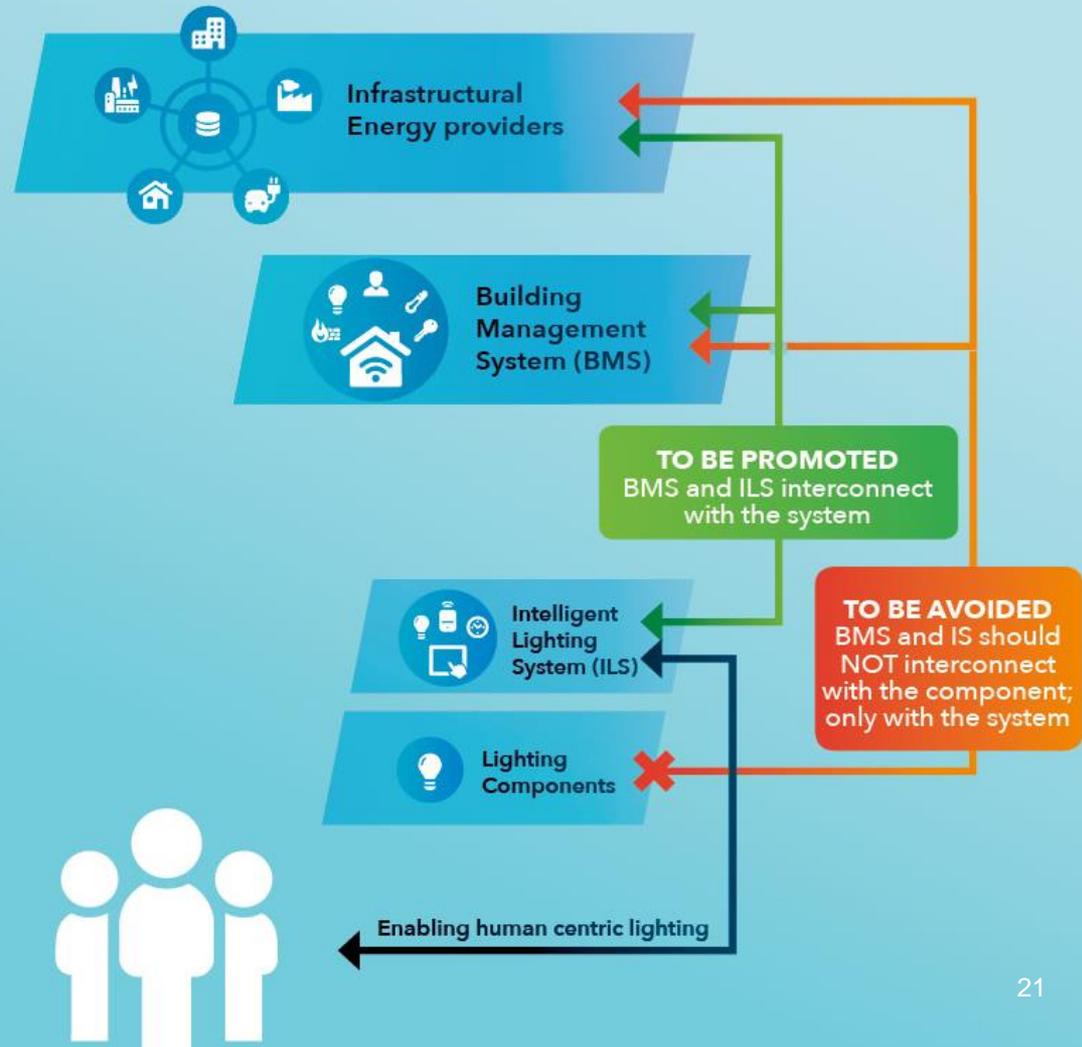
Strategic Focus Areas

- LEDification (LED)
- Intelligent Lighting Systems (ILS)
- Human Centric Lighting (HCL)
- Circular Economy (CE)

Aims

- The uptake of Intelligent Lighting Systems will be increased by simpler legislation that enables differentiation and which is easy to enforce
- Stimulate more intelligence, more controls, more sensors, more dimming etc
- The lighting system should be seen as a black box with interfaces to adjacent industries allowing an integrated (holistic) approach to controlling the quality of light and systems within the industry
- Stimulate the development of interface standards
- Consider developing a LiFi strategy
- Step up the rate of renovation of the built environment

Intelligent lighting systems



Circular Economy- a key objective



Mining / materials
manufacturing

Parts manufacturer

Product
manufacturer

Service provider



User



Technical
nutrients



Recycle



Refurbish /
remanufacture



Reuse /
redistribute



Maintenance

Collection

Inspired by Ellen MacArthur Foundation

LEDification – Outlook 2017 (1/2)

Single Lighting Regulation

- Draft Regulation to be presented by DG ENER later this year
- Continued outreach activities towards Commission, Parliament, and Member States

Energy Performance of Buildings Directive (EPBD)

- Organising outreach towards Parliament and Member States, to ensure that the Directive will be properly transposed into national law

Ener LOT 37 Study on Lighting Systems

- To provide our feedback in response to concrete proposals by COM at the end of the year

LEDification – Outlook 2017 (2/2)

Energy Labelling Regulation

- Promoting the proposal of 18 months lead time for implementation of rescaled label

LED Lifetime Metrics

- Finalise task to provide guidance to end-users that enables ‘apples-with-apples’ comparison between LED-based luminaires
- TF to be dissolved mid-2017

LED Custom Codes

- Continuation the existing TF on LED Custom Codes, which will also finish its tasks mid-2017

Intelligent Lighting Systems – Outlook 2017

Digital Transformation

- Monitor legislative developments concerning data protection, smart cities and smart grids, and IoT
- ‘Making Li-Fi tangible’

Lighting Gateway

- Steering the WGs towards a harmonised view (White Paper) on the place of the lighting industry in today’s digital world

Monitoring and stakeholders

- Assessing and monitoring standards in the fields related to the tasks of the WG Intelligent Lighting Systems
- Reaching out to potential stakeholders and partners

Emergency Lighting

- Coordinating of the emergency lighting discussion on subjects that are relevant for emergency lighting

Human Centric Lighting – Outlook 2017 (1/2)

TF Advocacy (EU)

Aim: create awareness for HCL in the Brussels arena (DG and MEP) and find political sponsors.

Deliverable: organize specific HCL events for DG and MEP.

Actions:

- Reach out to and meet the DGs Sante, Energy, GROW, OIB.
- Look at EU organigrams to find contact persons and link HCL to their work.
- Update HCL promotional presentations for the target groups

Human Centric Lighting – Outlook 2017 (2/2)

TF Healthy Buildings

Aim: create alliance / cooperation on Healthy Buildings resulting in market pull for HCL

Deliverable: agreement with at least two other bodies on promotion of Healthy Buildings as theme

Actions:

- Reach out to and meet e.g. IALD, IWBI, EU network GBC
- Reach out to associations on other indoor environmental quality aspects (air, temperature, ...)
- Create Healthy Buildings promotional presentation including HCL
- Find a way for cooperation together in Europe
- Include both new and existing buildings (renovation)

Circular Economy – Outlook 2017 (1/2)

TF RoHS

- Renewal of exemptions
- Lobbying with relevant EU and national Stakeholders

TF REACH

- Participate in consultations on the refit evaluation, monitor/apply for exemptions, registrations

TF WEEE

- Monitor Waste legislation under (WEEE) - producers

Circular Economy – Outlook 2017 (2/2)

TF Horizon 2020 Research

- Research availability of projects at EU level which will help fund research and development for Circular Economy. Secretariat to make proposals

TF Circular Norms

- Research/monitor whether standards are being developed on reparability and serviceability - Digital Europe and CECED have asked LE to join

TF Serviceability and Reparability

- Research the opportunities we have as an industry to work towards serviceability and reparability – to then put forward in a White Paper

Growth - plans 2017

- **Market Surveillance** for luminaires
- **Trade agreements**
- **Standardization:** LE guidance document on revised Directives LVD & EMCDD
- **Luminaires statistics**



Conclusion

- LightingEurope to prepare European stakeholders for a **digital lighting world**
- New strategic topics like **human centric lighting** and **circular economy** will be our main focus areas
- **Energy saving** is today a key target in the dialogue with EU institutions
- Regulation must ensure **level playing fields** for all lighting players and therefore needs **market surveillance**
- The European lighting industry will keep their leadership role by defining and implementing their **Strategic Roadmap 2025** to guide all stakeholders

Thank you for your attention



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THE VOICE OF THE LIGHTING INDUSTRY

www.lightingeurope.org