

PHILIPS

sense **and** simplicity

Sustainable LED Lighting in Local Communities

Erwin Dolmans

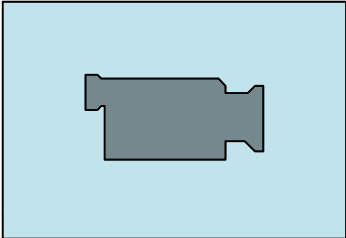
Sr. Director Marketing – Philips Lighting

CEPS Climate Change Conference – Brussels, March 02, 2011

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Introduction

Philips Outdoor Lighting



LED in Architectural Illumination

Since 1999



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LED in Architectural Illumination

Since 1999



Buckingham Palace, UK

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LED in Architectural Illumination

Since 1999



London, UK



Sky Tower
Auckland, New Zealand
ColorReach and ColorBlast
Installed 2009



Singapore Flyer
ColorBlast and iColor Accent
Installed 2008



Adelaide Entertainment Centre
Adelaide, Australia
ColorGraze
Installed 2010



LED in Street & Road Lighting

Since 2009



motorway A44, NL

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LED in Local Communities

Since 2009

Port d'Ensuès la Redonne, France



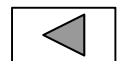
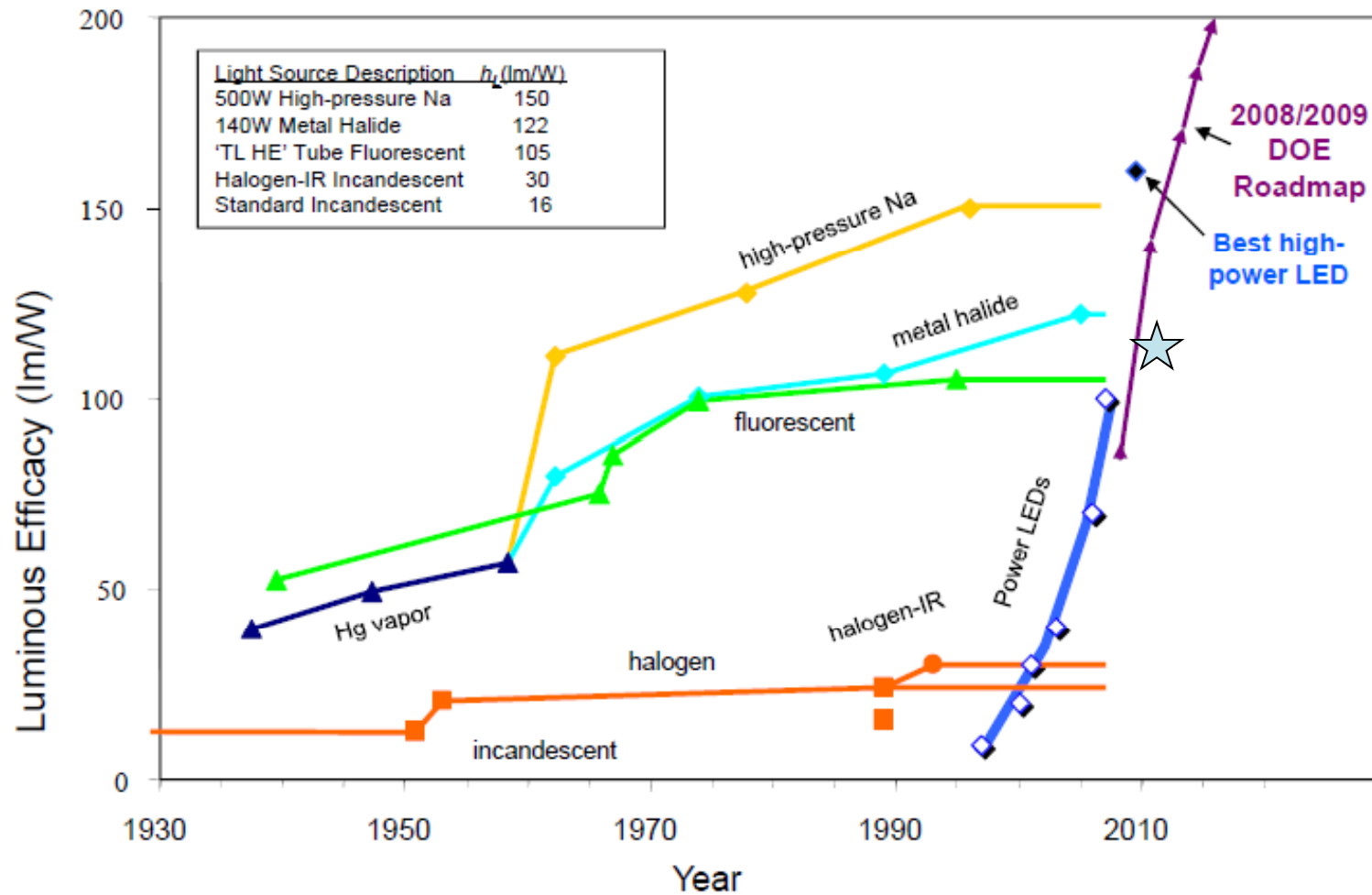
LED in Local Community Lighting Statements



- LED development "just" started ;
will be further developing over the next 10+ years
- Controls / Intelligence inroad is the next revolution in Lighting
every light point will have software inside
- China + USA lead the way : >750.000 systems installed
Central government support through "21-cities" program in China
- Breakthrough in Europe in 2010 in spite of / due to crisis
>150.000 systems installed so far



LED Evolution Compared to Conventional Lighting Technology



LED-based public outdoor lighting in Europe

Well over 150 cities

**Some of the cities
that have installed
LED-based Public
Lighting:**

London
Berlin
Frankfurt
Brussels
Lyon
Lille
Marseille
Grenoble
Rome
Firenze

Copenhagen
Madrid
Valladolid
Granada
Murcia
Bilbao
Zaragoza
Amsterdam
Tilburg
Rotterdam
Eindhoven

....
>150

LED in Local Community Lighting

Some Statements

- "LED lighting is a Hype and Expensive"
 - a) No, a hype fades out ; LEDs will not
 - b) Yes, true - for the initial investment

- Energy Saving vs. Conventional Lighting : yes, since 2009 meaning CO₂ emission reduction

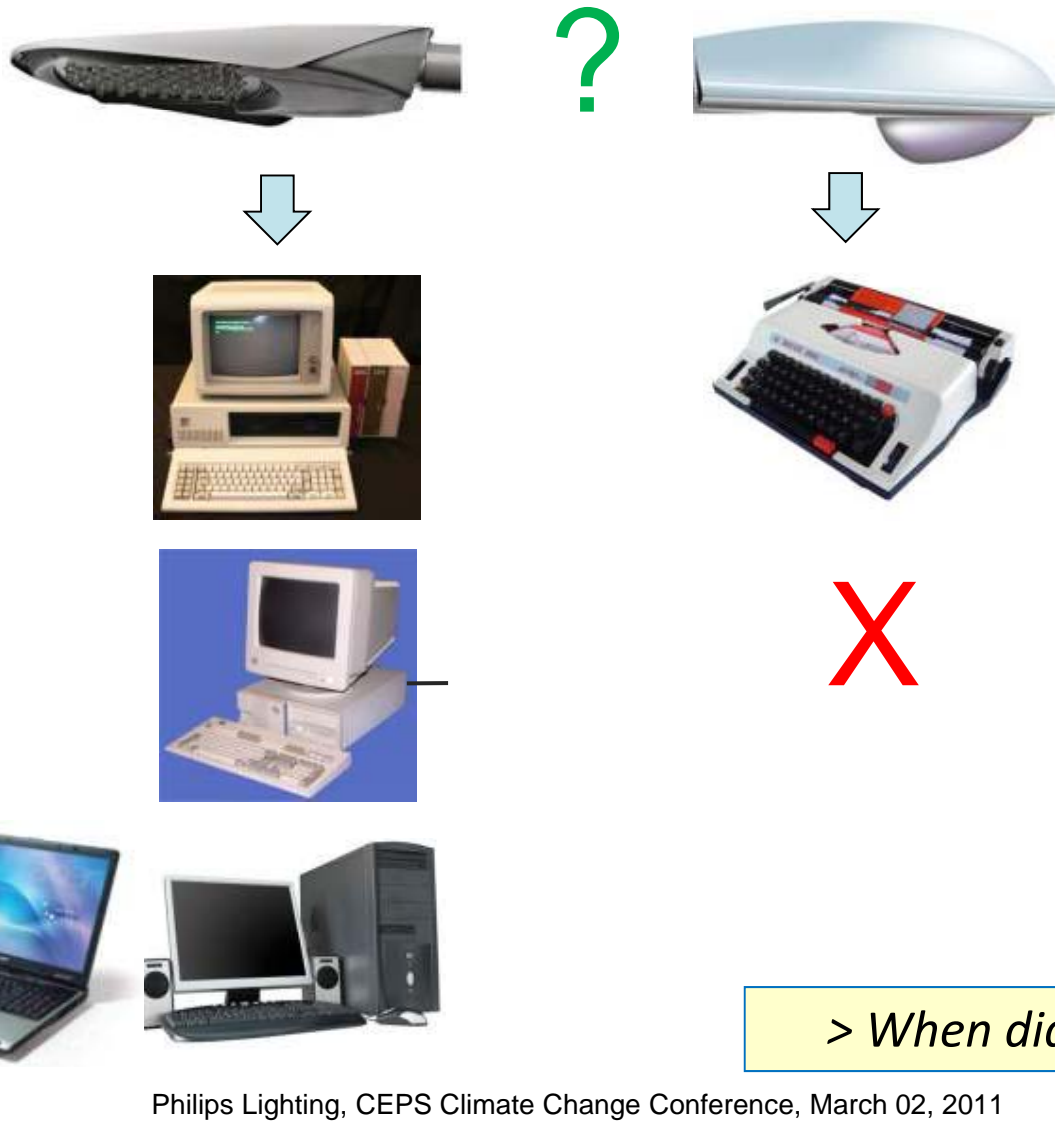
- Acceptable pay-back time : 2012

- Why apply anyway :
 - show your innovative character
 - benefit from social value creation (white light, perceived safety)
 - get on the learning curve!

- Cities suffer from the "**PC-Dilemma**"

LED in Local Community Lighting

The PC Dilemma

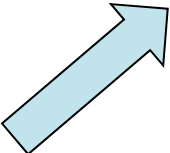


> *When did you step in?*

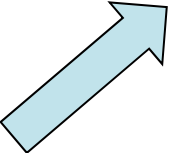
Cost or Value?

Towards Sustainable Investments

The Value of Lighting



The Cost of Light



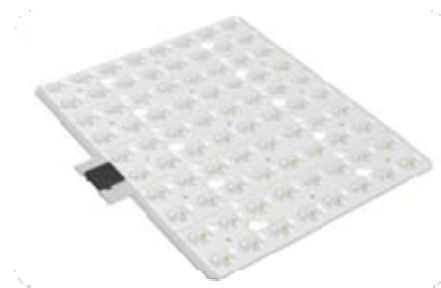
The Price of a Lamp



Upgradable LED Engines

Ensure to make a Sustainable Investment

- LEDs last for 50,000 hrs = 12 years
- Poles, wires & luminaires are used for 35+ years
- Choose for a solution with **upgradable Light Engines** :
 - easy & cheap replacement of failing lights (like a lamp)
 - benefit from technology improvement over time



Upgradable LED Engines

To overcome a short lifecycle

- Industry Standards Consortium : www.zhagastandard.org
- Focus on standardization of interfaces
- On initiative of Philips:
47 Regular members
64 Associate members
- Consumer & Public stakeholder protection



Thank You



