



Livable Cities

The Contribution of Energy-Efficient Lighting Solutions to Low Carbon Societies

Cities – at the center of a changing environment



Urbanization

New challenges are arising as our cities grow at an unprecedented speed.

Surging demand for energy and resources

There are rising concerns over price, availability and environmental impact.

Cities want to establish identity

Inter-city competition for people and business is on the rise.

Growing connectivity

There are huge new opportunities to improve urban life through intelligent, highly efficient solutions enabled by ICT.

The key characteristics of a Livable City



Resource efficient

Keeps pace with a city's progress, achieves energy and cost savings and minimize resource usage and environmental impacts.



Safe and Secure

Makes people feel safer, improves driving conditions, discourages crime and reinvigorates urban spaces – from neighborhoods and communal spaces to parklands and highways.



Attractive and vibrant

Expresses the city's unique, distinctive identity and attracts businesses and tourism. A well lit city radiates excitement, energy and limitless opportunities.

A growing number of municipal authorities are embracing the benefits that innovative lighting has to offer in **increasing comfort, safety and security**, thus making **districts more attractive**, and **enhancing the public's sense of well-being**. Not to mention its **positive impact on environmental protection and city branding**.

The Lighting Opportunity

More light. More savings. Less emissions.

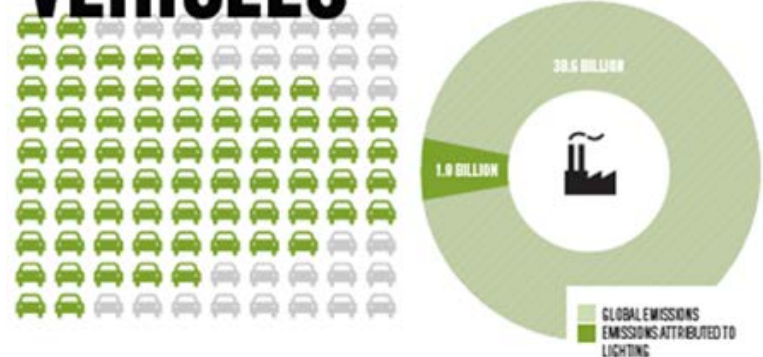
Cities consume 70% of the world's energy supply.

Lighting represents 19% of the world's total energy consumption, of which outdoor lighting accounts for over 40%.

Energy-efficient lighting can deliver realistic savings of over 40% globally. The use of intelligent controls can generate energy savings of up to 60 or 70%.

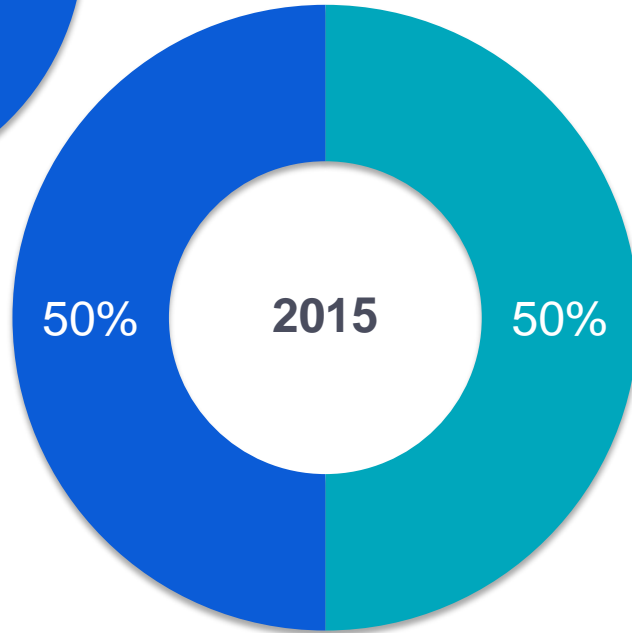
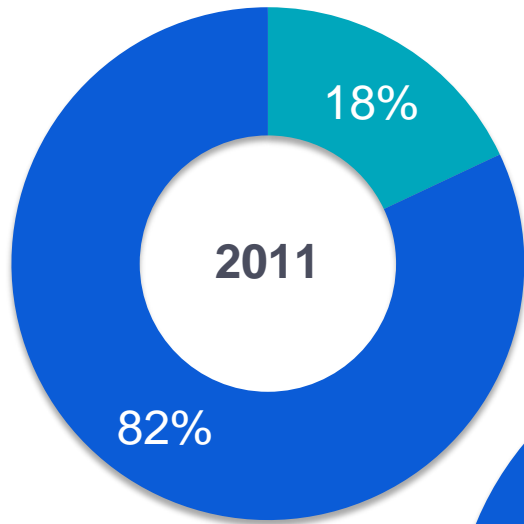
On a global level these savings amount to €128 billion in reduced electricity cost, 670 million tons of CO₂, or the equivalent of 642 power plants.

GREENHOUSE GAS EMISSIONS ATTRIBUTED TO LIGHTING ARE EQUIVALENT TO 70% OF THE EMISSIONS FROM THE WORLD'S PASSENGER VEHICLES



The LED revolution has started

Digital lighting is transforming the entire landscape*



- Traditional lighting
- LED lighting



*Source: Philips Lighting global market study 2009, updated for 2010

We believe light is potential.
Light is possibility. And we are
bringing those possibilities to life.

LED Road lighting: An Example



More than 50% energy saving!
Reduced maintenance!
Positive social impacts!

465w HPS
12K hrs

180w LED
50K hrs



World's first highway lit entirely by LEDs

A meaningful solution: Sustainability



Philips has installed state-of-the-art LED lighting along a 7 km stretch of the **A44 highway** near Amsterdam.

SpeedStar is a highly energy-efficient lighting solution emitting a bright, white focused light that can be dimmed dynamically. The level of light is adjusted to the appropriate, safe level depending on the volume of traffic.

The LED solution generates energy savings of up to 40% a year, while ensuring a high level of road safety and cutting maintenance costs.

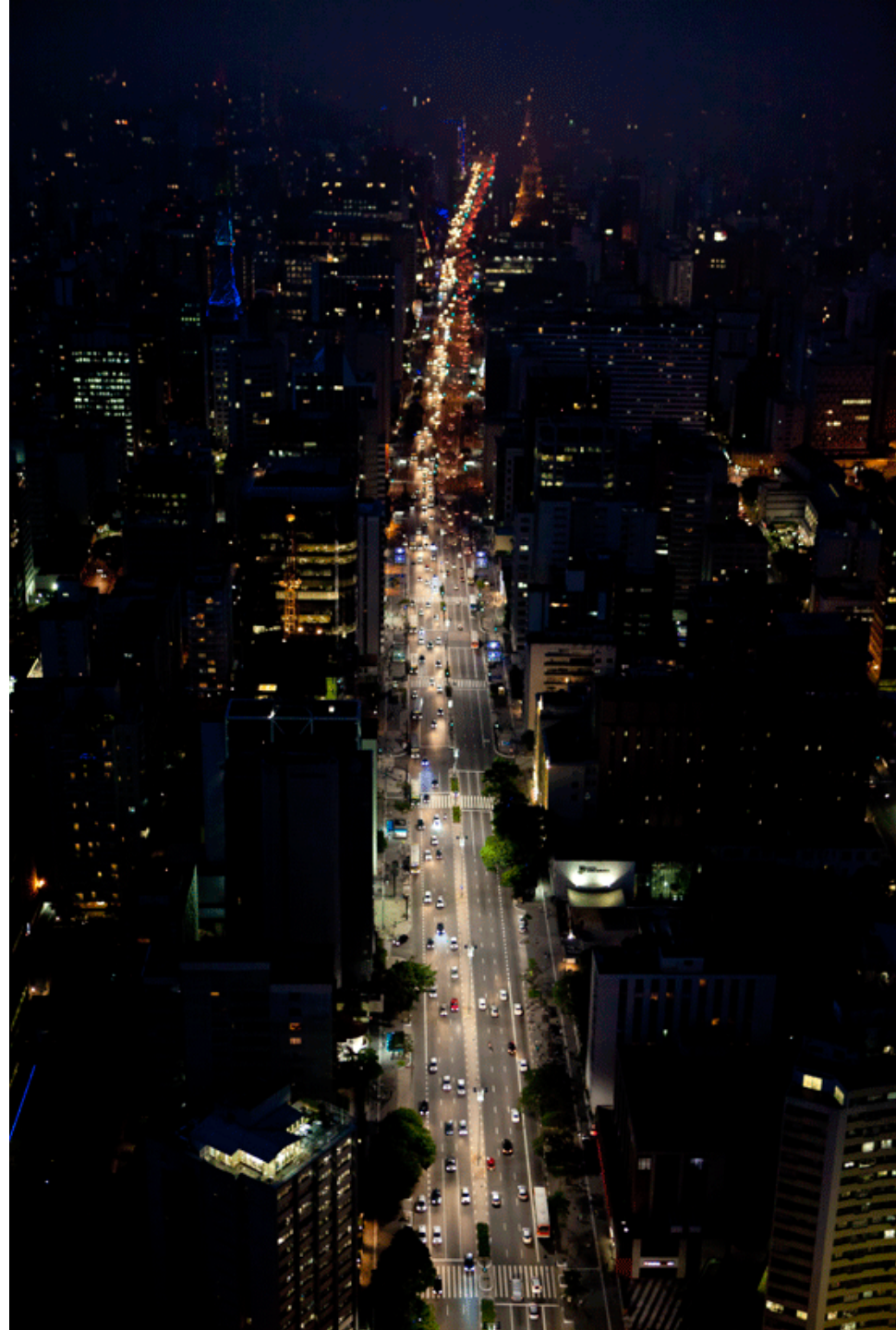
Connected city

Intelligent lighting.

Cleverly designed city infrastructure.

With the boom in the urban population worldwide, there is a growing need for cleverly designed city infrastructures, such as remotely monitored and managed light poles that communicate with each other. Or lighting that is “intelligent” and “connected”.

We are committed to driving the development of solutions that can be managed and controlled remotely from a computer.



Increasing the feeling of safety and security

A meaningful solution: Light on Demand



The **City of Tilburg** is the first city in Europe to use ‘**Light on Demand**’ in an entire neighborhood. The result: pedestrians feel safe and energy consumption and light pollution are reduced substantially.

Communication- and sensor-enabled **LED luminaires** fully light up the surroundings as pedestrians approach and then dim as they walk away.

Power from the sun in remote areas

A meaningful solution: Sustainability



Guiyang, China

Around 1.5 billion people around the world do not have access to a conventional electricity grid.

Philips participated in the **1000-Village Solar LED program** – an initiative launched by The Climate Group and the One Foundation – and provided rural communities in China with **solar-powered LED street lighting**.

These highly sustainable, off-grid solutions really make a difference to people in remote areas by extending the hours of daylight after dusk, at an affordable cost.

PHILIPS

