Plus
Public Lighting Strategies for Sustainable Urban Spaces

PLUS (Public Lighting Strategies for Sustainable Urban Spaces), financed by the EU's INTERREG IVC programme, capitalises on existing urban lighting best practices on energy efficiency in European cities. It aims to offer a set of recommendations leading to the improvement of cities' lighting strategies

PLUS partners:

- Lead Partner: Eindhoven (The Netherlands)
- Bassano del Grappa (Italy)
- Birmingham (UK)
- Burgos (Spain)
- Iasi (Romania)
- Leipzig (Germany)
- Lyon (France)
- Nice Côte d'Azur (France)
- Patras (Greece)
- Sofia (Bulgaria)
- Tallinn (Estonia)
- LUCI (Lighting Urban Community International)

Programme: INTERREG IV C
Total budget: 1 689 508,00 Euros
Duration: October 2010 to December 2012

INTERREG IVC
European Union
European Regional Development Fund

LUCI ASSOCIATION

PLUS experts dive into the project

The project's busy autumn period has started off in earnest with a very busy Deep Dive schedule. After Nice and Patras this September, PLUS experts have now perfectly appropriated the Deep Dive methodology, which is already opening new perspectives for the improvement of cities' urban lighting strategies. Iasi and Bassano del Grappa will be the next Deep Dive hosts in the month ahead.

The Brussels Briefing, also taking place this September, marks a new stage in the development of the PLUS project.


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It will be the opportunity to give a European overview of sustainable lighting practices and to discuss ways to assess and evaluate public lighting policies in cities.

Workshop

Patras Deep Dive

The City of Patras welcomed lighting experts from six PLUS partner cities to its Deep Dive on the 19th and 20th of September. During two intense days, visiting experts interviewed the heads of the lighting and technical departments, the Vice Mayor of the city, engineers and technicians from the planning departments and environmental NGO representatives, amongst others. They also made field visits to the new lighting installations in the city squares as well the impressive Rion-Antirion bridge project.

The Rion-Antirion bridge

The Rion-Antirion bridge, crossing the Gulf of Corinth near Patras, is the world's longest multi-span cable-stayed bridge. Designed by architect Berdj Milkaelian and implemented by Vinci, the 2 252 m bridge, considered a feat of engineering, required a lighting solution that could also withstand winds of over 200 km/h and strong seismic activity.

Designed by Roger Narboni, the concept underlying the decorative lighting of the bridge is that of a thin golden thread woven through four large blue-tinted needles. The bridge's four pylons are thus lit with an intense blue light using 176 (44 per pylon) high pressure metal halide lamps (MASTER MHN-SAX830 ROD 1800W) with total installed power of 316.8 kW.

The bridge deck is lit in yellow with 592 metal halide lamps using plastic and ceramic technology (HQI-T 150 W/830 and HCI-T 150 W/WDL) with total installed power of 88.8 kW.

The functional lighting for the bridge's four traffic lanes consists of 164 metal halide lamps (HCI-T W/WDL 250 W) of 41 W in total. All these light points are controlled using a SCADA (supervisory control and data acquisition) system.


© CONCEPTO, lighting design Roger Narboni, CONCEPTO

New lighting for Nice's historic waterfront walkway


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Nice Cote d'Azur Urban Community will soon be implementing a project renovating the lighting of its celebrated walkway, the Promenade des Anglais. The Urban Community aims to reduce light pollution and increase energy efficiency while simultaneously retaining the iconic spherical lamps that form Nice's waterfront "pearl necklace".

A call for tenders will enable the replacement of damaged columns and lamps and improve the electrical network with the installation of new equipment and class II electrical cabinets. The Urban Community will also replace 400 W and 700 W mercury lamps by 250 W metal halide lamps, leading to a reduction in energy consumption by 1.2 million kWh per year and saving approximately 10 000 euros annually.

Feedback from Nice

Jean-Charles Maleysson, the Nice PLUS Project Manager, gives us the Urban Community's feedback on the results of the Deep Dive held in Nice on the 6th and 7th of September 2011...

"Nice (NCA) has drawn positive conclusions from our PLUS Deep Dive. The methodology adopted during the event placed importance great on the workshops. Spending a large amount of time in these workshops enabled our European partners to understand the functioning of the Public Lighting Department, and to therefore focus their recommendations. The Public Lighting Department plans to make a SWOT (Strengths/ Weaknesses/ Opportunities/ Threats) analysis on the basis of this experience and the Deep Dive recommendations will also be incorporated into a master plan for sustainable public lighting"

Forum

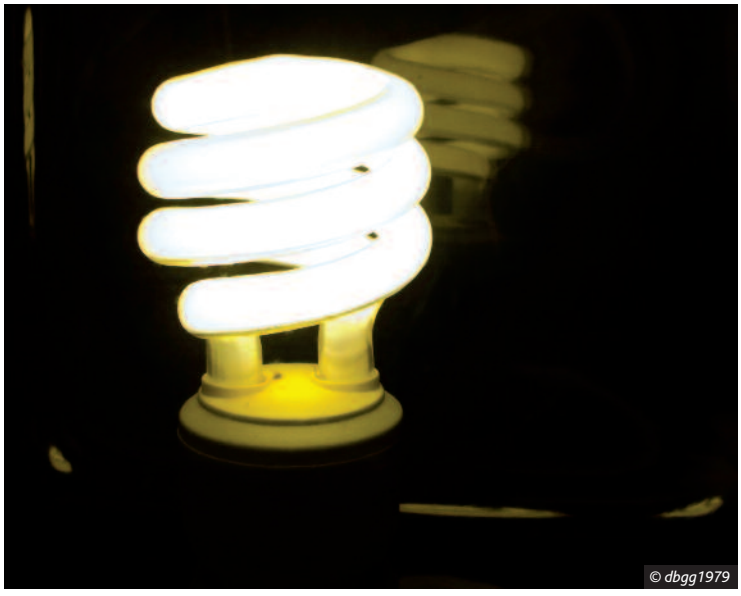
EU invites opinions on the health effects of artificial light

The European Commission, in consultation with the Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR), is inviting stakeholders to contribute to a public consultation on the pre-consultation opinion on health effects of artificial light.

In the context of promoting the wide-spread use of energy saving lamps and the phasing-out of incandescent lamps, the Commission had asked the SCENIHR, in April 2008, to assess whether the symptoms of some diseases could be aggravated by energy saving lamps. In its following report, the SCENIHR presented an analysis of a wide range of lighting technologies and of associated potential health risks. In addition, it pointed at possible solutions to mitigate potential risks and identified relevant research needs.

The public consultation regarding this report will run until the 30th of September 2011 at: **http://ec.europa.eu/health/scientific_committees/consultations/public_consultations/scenihr_consultation_14_en.htm**

Following the consultation period, a scientific hearing will be organized in Brussels on the 10th of October (registration at **http://ec.europa.eu/health/scientific_committees/events/ev_20111010_en.htm**).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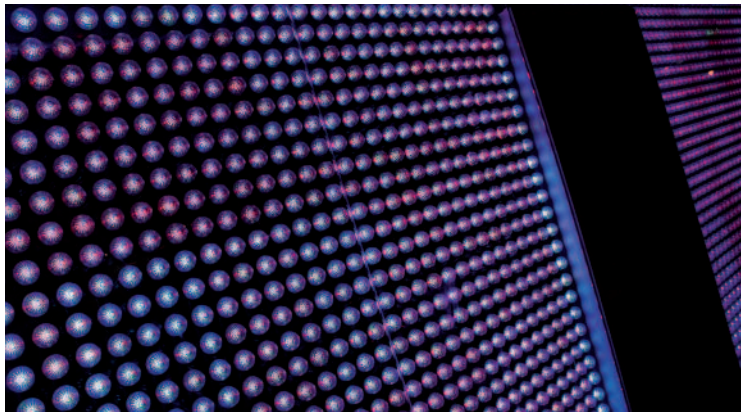
EU Green Paper on Solid State Lighting (SSL)



As part of the Digital Agenda for Europe, the European Commission will soon publish a Green Paper on Solid State Lighting (LED and OLED based) and launch an open consultation on this topic. In this Green Paper, the Commission will outline a number of new policy initiatives and initiate a public debate in Europe on how to accelerate the pace of SSL in Europe and how to further support the innovation and competitiveness of the European lighting sector.

A large number of stakeholders, including researchers and developers, consumers and professional users, the lighting and construction industries, the building sector, architects, lighting designers, electrical installers and public authorities will be invited to provide their contributions to the consultation.

Information on the latest status of this initiative is available at: http://cordis.europa.eu/fp7/ict/photonics/digitalagenda-and-ssl_en.html

Three projects on Solid-State Lighting (SSL) selected from the CIP call

The 5th call for proposals of the Competitiveness and Innovation framework Programme (CIP) concerning innovative lighting systems based on Solid-State Lighting (SSL), came to a close on the 30th of May 2011. The call was for large scale "flagship actions" demonstrating the benefits of using advanced SSL solutions in a range of different applications and settings.

A total of 13 proposals were submitted requesting more than 30 million euros of EU funding. Three proposals covering several pilot sites in complementary areas of lighting (indoor, outdoor or street lighting) have been invited for negotiations for an EC contract. The new projects are expected to start in late autumn 2011 or early 2012.

Further information on these projects coming soon!

LUCI explores lighting poles in conference at Metallurgic Park

A conference on lighting poles, co-organised by LUCI, will take place on the 14th of October 2011 at Metallurgic Park, a knowledge centre on metallurgy and industrial science in north-eastern France.

The conference will present the history and future of lighting poles as an element of urban furniture as well as their multifunctional potential. Through presentations by manufacturers, industrial designers and municipality technicians, the conference will address the design and aesthetics of lighting poles, their functions and uses, as well as the recycling of the materials used.

See the full programme at www.luciassociation.org or www.metallurgicpark.com

Summit on regional cooperation for financing energy efficiency projects in Croatia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The Sustainable Energy Finance and Investment Summit Croatia 2011 will take place in Dubrovnik from the 19th to the 22nd of October 2011. The summit, organised by the Regional Energy Efficiency Agency (REGEA) of Croatia, aims to help decision makers (amongst which many municipalities) identify ways of financing energy efficiency/renewable energy projects through regional cooperation.

LUCI will be participating in a workshop on "Green Cities" on Friday the 21st of October to present the LUCI Charter on Urban Lighting along with the network's vision of urban lighting in sustainable cities.

Go to http://www.croenergy2011.com for more details

AIDI Umbria invites Italian municipalities to conference on urban lighting

The AIDI (Associazione Italiana di Illuminazione) Umbria delegation will organize a conference entitled "Urban Lighting: Light to the City" on the 18th of November 2011 at the Perugia Faculty of Engineering in Italy.

Featuring the national President of AIDI, Dr. Eng Gianni Drisaldi, the conference will address the key issues that characterize the lighting industry today. It aims to draw Italian municipalities' attention to the necessity for city lighting master plans and the improvement of management strategies, maintenance and remote control systems.

More information at www.aidiluce.it

PLUS at the LUCI AGM in Gothenburg this November

PLUS partners are invited to attend the LUCI AGM in Gothenburg (Sweden) from the 16th to the 19th of November, where the PLUS project will be presented in the framework of the City of Eindhoven's presidency of the LUCI Sustainable Lighting Commission.

Besides a look at the lighting strategy of the host city and its light festival "Gothenburg Christmas City", the AGM will also feature the Glasgow-led Culture Commission's report on the economic and cultural benefits of light festivals, a discussion on the steps forward concerning the LUCI Charter on Urban Lighting, as well as the introduction of a new initiative on tourism and lighting.

Go to www.luciassociation.org for the programme and registrations


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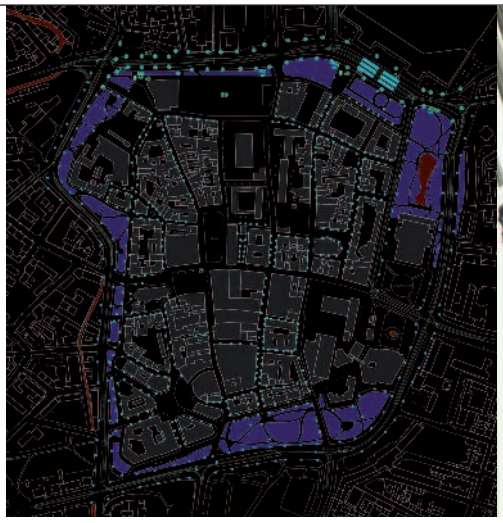
Intelligent light in the city centre, Leipzig (Germany)

The City of Leipzig is implementing a sustainable integrated approach to reduce energy consumption and CO_2 emissions while improving the lighting quality in the inner city area of Leipzig. Lars Loebner, Principle Planner Public Space Design, City Planning Office of Leipzig, shares the project details with us.



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"Improving the lighting atmosphere and enhancing cultural heritage"

What is the context of the project?

The German government plans to publish an integrated energy and climate programme that will set global standards. The German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety therefore offered an award, in 2009, for the discovery of ideas and concepts on "Energy Efficient Public Lighting". The City of Leipzig participated in this competition with a concept for the public lighting of the inner ring road in the city center using LED technology. It won the 3rd prize with this concept and will thus receive financial support from the Federal Ministry for 40% of the realisation costs of this project.

What concrete action will be taken?

The concept is composed of two different sub-projects. The first concerns the City Centre - Inner Ring Road where the luminaires and lamps will be replaced in autumn 2011. The new lamps will produce white light (4 200 K white) with a color rendering index of Ra 85 and efficiency of 90 lm/W.

The second sub-project concerns the entire city centre and has changed 360 "Schinkelleuchten" type lamps to LED technology. The new lamps emit 2 700 K warm white light with a color rendering index of Ra 86 and efficiency of 72 lm/W. They also have covers and reflectors to avoid glare.

What are the expected impacts?

With this project we expect to lower the energy costs by € 38 000 per year and to reduce CO_2 emissions by 162 tons per year. Regarding the improvement of light quality, the inner city sub-project has already reduced blinding and obtrusive light in the city centre, thereby enhancing the comfort of citizens and saving energy by 74%. By reducing the road lighting to minimal standards around the inner ring road, a subtle and finely adjusted illumination of the buildings surrounding the inner ring becomes possible with lower energy consumption. Intelligent control of the lighting intensity based on traffic flow will result in extra savings in energy consumption of about 10%.

PROJECT IDENTITY CHIP

Location : Leipzig (Germany)

Stakeholders

Project director: Hartmut Erdmann and Rainer Barth, Department for Public Lighting, City of Leipzig

Lighting design:

Project 1: Augsburg Lichtarchitekten Leipzig

Project 2: Rainer Barth, City of Leipzig, Department for Public Lighting

Manufacturers:

Project 1: Schreder GmbH

Project 2: Braun Schaltgeräte and Service Berlin

Installation: Department for Public Lighting, City of Leipzig

Maintenance: Department for Public Lighting, City of Leipzig

Implementation

Project launch date: 1 January 2011

Duration of the project: 7 months

Inauguration date: 30 September 2011

Budget

Running cost: € 37 662

Maintenance cost: € 16 500 per annum

Total cost: € 53 912

Technical details

Luminaires: Citea Maxi and Schinkelleuchten

Lamps: ceramic metal halide lamps and LEDs

Power (watts): 72 600 W

Energy consumption: 235 390 KWh/year

Estimated life expectancy: 20 – 25 years

ADVANTAGES:

- Economic amortisation of the project will be reached in 10.2 years
- CO_2 savings of 162 tons per annum = 50%
- The use of LEDs and CDOs results in better lighting quality by changing orange light to a warm white light

DISADVANTAGES:

- High investment costs