

**PLUS (Public Lighting Strategies for Sustainable Urban Spaces), financed by the EU's INTERREG IVC programme, capitalizes 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 and action plans.**

PLUS partners

- Lead Partner: Eindhoven (The Netherlands)
- Bassano del Grappa (Italy)
- Birmingham (UK)
- Burgos (Spain)
- Iasi (Romania)
- Leipzig (Germany)
- Lyon (France)
- Métropole 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 €  
 Duration: October 2010 to December 2012



## ➤ PLUS Final Event this autumn!

City representatives and lighting professionals are invited to attend the PLUS project's Final Event which will take place in Eindhoven (The Netherlands) on the 25<sup>th</sup> of October 2012.

The conference, to be held during the Dutch Design Week 2012, will present PLUS project results and outputs, including partner cities' lighting strategies and action plans, as well as the future challenges facing public lighting. This event will also see the release of the PLUS mainstreaming guide - a document



## ➤ PLUS cities prepare their future lighting strategies with Regional Lighting Forums

The past few months have seen quite a few PLUS partners bring together stakeholders for their Regional Lighting Forums, a vital step in the elaboration of their future lighting strategies and action plans...

### Nice: conference on energy efficiency

Métropole Nice Côte d'Azur organized its 3<sup>rd</sup> Regional Lighting Forum on the 5<sup>th</sup> of July 2012 at the "Centre Universitaire Méditerranéen" in Nice, in conjunction with a conference on "Energy efficiency: a response to the needs of our territories" organized by the European Commission Representation in France.

Speakers such as the European Deputy Gaston Franco and the Head of the Representation of the European Commission in France, Anne Houtman, took part in the event, along with the Public Lighting Directorate of Nice, which presented the PLUS project's activities on strategic and technical levels.

The Regional Lighting Forum, which according to Jean-Charles Maleysson, PLUS Project Manager for Nice, "aimed to strengthen Nice Côte d'Azur's public



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bringing together all the information produced within the framework of the project.

More information and registrations soon on [www.luciassociation.org/plus](http://www.luciassociation.org/plus)

lighting strategy and facilitate its implementation for a safer and more comfortable use of urban space", was attended by 110 participants including key local stakeholders.



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### Eindhoven: unveiling the lighting vision and roadmap 2030

The City of Eindhoven revealed its future lighting vision and roadmap 2030 at its 3<sup>rd</sup> Regional Lighting Forum on the 27<sup>th</sup> of June 2012.

The forum, which brought together various internal and external lighting stakeholders, also presented the lessons learned from the PLUS project as well as the results of Eindhoven's lighting strategy SWOT analysis from the city's 2<sup>nd</sup> Regional Lighting Forum. "The PLUS project has stimulated the development of the vision very

strongly", stated Eindhoven City Councillor Mary-Ann Schreurs, as she gave an introduction to the outlines of the new lighting roadmap for Eindhoven.

The city's ambitious vision outlines how public lighting of the future in Eindhoven will be flexible and multi-functional with a smart-grid to enable new possibilities in public spaces. The city aims to create an open infrastructure, develop new services, and finally, integrate lighting within the smart city.

## Lyon: preparing its 3<sup>rd</sup> lighting master plan

The City of Lyon held its 3<sup>rd</sup> Regional Lighting Forum on the 26<sup>th</sup> of June 2012, bringing together lighting stakeholders (researchers, manufacturers, service providers, municipalities, etc.) from the region to discuss its upcoming 3<sup>rd</sup> lighting master plan.

The forum aimed to explore certain issues that were identified through the SWOT analysis of Lyon's lighting strategy (conducted during the city's 2<sup>nd</sup> Regional Lighting Forum held last October), as key topics to be addressed in its new lighting master plan.

The three areas of focus were: how to better incorporate residents' feedback and requirements in the city lighting strategy; how private lighting initiatives can contribute to the city nightscape; and how to move towards an overall night-time strategy for the city. A lively discussion resulted in a number of recommendations for Lyon's future lighting strategy and action plan.



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## Bassano del Grappa: exploring sustainable public lighting planning choices

The City of Bassano del Grappa organised its 2<sup>nd</sup> PLUS Regional Lighting Forum on the 25<sup>th</sup> of June 2012 with a conference entitled "Sustainable public lighting planning choices: light and energy for design that enhances our cities".

The topics addressed included the lighting of historical city centres (with a focus on Bassano del Grappa's Alpini Bridge), the lighting strategy of Bassano del Grappa with regards to energy-use, the lighting plan communication strategy, involving stakeholders and citizens in sustainable city planning, experimenting with technology and

participatory design, as well as possible solutions for upgrading the city lighting network and financing this process (with a focus on public-private cooperation and green procurement).

The forum, which was opened by the Mayor of Bassano del Grappa, Stefano Cimatti, and chaired by Andrea Zonta, City Councillor in charge of Sustainability and Mobility, was attended by a diverse set of participants including architects, lighting experts, citizens and political representatives from neighbouring municipalities.

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## ➤ PLUS cities present their vision on the future of LEDs at EUSEW 2012

Over 60 participants were present as the PLUS partners unveiled the project's first conclusions on LEDs as a solution for energy efficient public lighting strategies, at the "LED Lighting Strategies for Urban Spaces" conference held on the 20<sup>th</sup> of June during the EU Sustainable Energy Week 2012 in Brussels.



*"With their high energy efficiency, longer life spans and increased flexibility, LEDs are often proclaimed as the urban lighting solution of the future. However, through our Deep Dive analysis in cities that have implemented this technology, project lighting experts have come to the conclusion that while LEDs are appropriate in particular contexts for some cities, the high investment costs involved and the rapid technological evolution means that they might not be the best answer for all cities at the moment,"* said Rik van Stiphout, PLUS Overall Project Manager and Programme Manager Lighting in the City of Eindhoven. However, even though LEDs are not the only (cost efficient) solution for cities at the moment, they bring new visions for structuring and boosting public lighting systems.

The conference brought together the knowledge on the use of LEDs in outdoor lighting with speeches from the European Commission's Joint Research Centre (JRC), the DG INFSO Photonics Unit (which is leading the green paper and task force on solid state lighting), as well as other European projects such as BLISS and LED - Light in Public Space.

Go to <http://www.luciasociation.org/presentations-eusew-led-lighting-strategies-for-urban-spaces.html> to download the presentations made during the event!

## ↘ Results of the public consultation on the future of LED-based lighting in Europe

The European Commission has published the results of the public consultation on the future of LED-based lighting in Europe which was held from the 15<sup>th</sup> of December 2011 to the 29<sup>th</sup> of February 2012 as part of the Digital Agenda for Europe.

The consultation was based on the Green Paper "Lighting the Future", in which the Commission proposed measures to speed up the deployment of innovative and eco-friendly LED lighting in the European Union and to foster the position of the European lighting industry.

125 interested parties submitted their views on existing challenges to a wider market uptake of LED-based lighting solutions and how to overcome them. Amongst the main findings of the report are major concerns raised by respondents, such as the risk of buying products of unproven or insufficient quality, the lack of information for consumers and professional end users, and high initial purchase costs.

The full report on the results of the consultation can be downloaded from [http://ec.europa.eu/information\\_society/digital-agenda/actions/ssl-consultation/index\\_en.htm](http://ec.europa.eu/information_society/digital-agenda/actions/ssl-consultation/index_en.htm)

## ↘ Applications open for the Auroralia award 2012



Has your city recently implemented an outdoor lighting project with a minimal environmental footprint?

Applications are now open for the 4<sup>th</sup> edition of the Auroralia Award, for which cities are invited to enter their best initiatives in sustainable urban lighting.

The winning entries, selected by a jury composed of individuals from the international press, will be announced at the Auroralia award ceremony during the Lyon Light Festival (6 - 9 December 2012) in Lyon, France.

The winner of the last edition, Arraiolos (Portugal), was the first Portuguese town to implement a large scale project to light its historical town centre using LEDs, resulting in a dramatic reduction in energy consumption and CO<sub>2</sub> emissions.

The Auroralia Award, initiated by Schröder with the support of LUCI, is indeed a perfect opportunity for cities to increase their international profile and position themselves as front-runners in the international environmental challenge.

Download the application form at [www.auroralia.org](http://www.auroralia.org)

**The deadline for applications is the 26<sup>th</sup> of October 2012.**

## ↘ New FP7 photonics call

The European Commission will launch a call for projects under its FP7 ICT Cooperation Work Programme 2013 (ICT call 11), with an overall budget of €236.5 million, this autumn.

Under this call, objective 3.2 photonics will focus on actions fostering innovation in SSL, specifically coordination and support actions, for which a budget of € 7 million has been set aside. The call will open on the 18<sup>th</sup> of September 2012 with a closing date on the 16<sup>th</sup> of April 2013.

Municipalities might be particularly interested in the topic within this call addressing cooperation between the lighting industry and end users. Other key topics include facilitating the cooperation of actors along the value chain to promote innovative design and new business models; analysing the effects of SSL in applications related to health and well-being; and addressing issues related to scarcity of

materials, use of hazardous materials, recyclability and disposability of SSL products.

For more information, go to <http://ec.europa.eu/research/participants/portal/page/cooperation?callIdentifier=FP7-SMARTCITIES-2013>

*The Seventh Framework Programme for Research and Technological Development is the EU's main instrument for funding research in Europe, running from 2007 to 2013. FP7 supports research in selected priority areas - the aim being to make, or keep, the EU as a world leader in those sectors.*



## ↘ City-wide LED lighting in Birmingham (U.K.)

The City of Birmingham is implementing a large scale LED street lighting system through a PFI contract. Barry Hale, Street Lighting Director at Amey, the street lighting service provider for Birmingham, tells us more.....

“The biggest local government highways sector contract in the U.K.”

### ■ What is the context of this project?

In 2010, the Birmingham City Council signed a Private Finance Initiative (PFI) contract with public services provider Amey for the design, building, financing and operational maintenance of street lighting across Birmingham. This includes asset management with risk transfer to Amey and full responsibility for service delivery and management of the public lighting across the city. Under this contract, which lasts for 25 years, Amey is charged with the replacement, upgrading and maintenance of all highway street lighting within the city. With a value of over £ 2.7 billion, this is the biggest local government highways sector contract in the UK and has attracted over € 686 million in grants from the central government.

### ■ How will Birmingham’s public lighting change?

The project will see the replacement of approximately 50% of Birmingham’s 90 000 street lights by LEDs within the first 5 years, with the remainder of the lights being replaced and upgraded during the life of the project. A lighting control and management system will also be installed to connect every lighting point to the system in the first 5 years of the project. It will facilitate optimum management and maintenance, with dynamic and flexible control of each individual unit. Birmingham is one of the first local authorities to implement a control and monitoring system on this scale in conjunction with innovative LED lighting technology and systems. Dimming is also being introduced to vary light levels on each of the city’s lighting points based on traffic flows and street activity levels.

### ■ What kind of energy savings are we talking about?

The innovative low energy LED lighting will deliver significant energy reductions and savings over the full 25 year contract period. In addition, the constant light output techniques, variable light levels and switching refinements will deliver real energy consumption benefits and cost savings. The light output of individual lighting units can be infinitely modified, for example, by a single watt, rather than tens of watts, and it will be possible to use the minimum possible energy while maintaining the necessary lighting standards. The new lighting solution is expected to cut carbon emissions associated with public lighting by approximately 50%.



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### IDENTITY CHIP

**Location:** Birmingham (U.K.)

**Population:** 1 million

#### Stakeholders

**Project director:** Amey / Birmingham City Council

**Lighting design:** Amey

**Manufacturers:** Indal (WRTL) - LEDs, Telensa - Control and Monitoring System

**Installation:** Amey

**Maintenance:** Amey

#### Implementation

**Project launch date:** June 2010

**Duration of the project:** 25 years (initial 5 year mass lighting replacement programme)

#### Technical details

**Luminaires:** Indal (WRTL)

**Lamps:** Indal (WRTL) - Cree LED chips

**Power (watts):** variable LED configurations

**Energy consumption:** 62 500 MWhr (Year 1) to 31 250 (Year 25)

**Estimated life expectancy:** 25 to 30 years (LEDs) / 50 years (lighting units)

#### Budget

**Running cost:** incorporated in total budget

**Maintenance cost:** incorporated in total budget

**Total cost:** £ 2.7 billion (over 25 years)

Find this experience and many others in the **best practice database** at [www.luciassociation.org/plus](http://www.luciassociation.org/plus)