

## ENERGETICAMENTE Seminario tematico

# FUTURLIGHTS

### L'ILLUMINAZIONE DEL FUTURO Die Beleuchtung der Zukunft

Matteo Mazzolini  
Udine, 15 dicembre 2011



Agencia Per l'Energia  
del Friuli Venezia Giulia  
www.apes.fvg.it





cooperazione territoriale europea  
programma per la cooperazione  
transfrontaliera  
**Italia-Slovenia**  
evropsko teritorialno sodelovanje  
program čezmejnega sodelovanja  
**Slovenija-Italija**

2007-2013





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Progetto cofinanziato dal Fondo europeo di  
sviluppo regionale  
Projekt sofinancira Evropski sklad  
za regionalni razvoj

**PROJECT SUMMARY**

**Priority nr. 1:** «Environment, Sustainable Transport, Territorial Integration»

**Duration:** 36 months - from 02 November 2011 to 30 October 2014



**Budget:** 1.157.000€ of which 560.000€ for direct investments in street lighting to improve energy efficiency and reduce light pollution

**Objective:** create the conditions at crossborder level for sustainable street lighting planning and for reducing present light pollution

**Partners:**

- LP** Municipality of Šempeter Vrtojba (SLO)
- P1** Municipality of Tolmin (SLO)
- P2** Temno nebo Slovenije (SLO) - Dark Sky Association Slovenia
- P3** APE - Energy Management Agency of Friuli Venezia Giulia (I)
- P4** Province of Gorizia (I)
- P5** Municipality of Doberdò del Lago (I)
- P6** Municipality of Portomaggiore (I)

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## SPECIFIC OBJECTIVES & ACTIVITIES

*All the objectives are referred to the crossborder area covered by the project*

1. Reducing light pollution depending from wrong street lighting systems
2. Reducing energy demand for street lighting
3. Joint sustainable planning of street lighting
4. Awareness raising of citizens and professionals on the problem of light pollution

*Main activities to achieve the over mentioned objectives*

*WP1: Project management and coordination*

*WP2: Analysis of present state*

*WP3: Common strategy*

*WP4: Pilot projects implementation*

*WP5: Communication & Awareness Raising*

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## WP2-ANALYSIS OF PRESENT STATE

### Activity 2.1

*Definition of a common methodology including a set of indicators for the analysis of street lighting situation in the project area*

**WHO:** *all partners coordinated by the Province of Gorizia*

**WHAT:** *defining procedures (how to), identifying indicators and law requirements (check-lists), collecting existing data from partner areas*

**WHEN:** *01 January 2012 - 31 March 2012*

**WHERE:** *Municipalities of Šempeter-Vrtojba, Tolmin, Doberdò del Lago, Portomaggiore and Province of Gorizia*

**WHY:** *to create the necessary conditions for the systematic analysis of street lighting in the project area*

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## WP2-ANALYSIS OF PRESENT STATE

### Activity 2.2

*Development of an open-source platform (WebGIS database) in accordance with the common methodology to collect street lighting data and identify light pollution areas in the project areas*

- WHO:** all partners coordinated by the Energy Agency of Friuli Venezia Giulia
- WHAT:** developing a WebGIS database as a cadastre for street lighting, collecting and entering data for the 5 pilot areas, calculating most important indicators concerning energy efficiency and light pollution
- WHEN:** 01 April 2012 - 31 March 2013
- WHERE:** Municipalities of Šempeter-Vrtojba, Tolmin, Doberdò del Lago, Portomaggiore and Province of Gorizia
- WHY:** to allow a complete and detailed overview of state of the art of street lighting in the project area in order to suggest interventions to improve energy efficiency and reduce light pollution on the basis of present law requirements

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## WP2-ANALYSIS OF PRESENT STATE

### Activity 2.3

*State of the art analysis on available technologies and innovative approaches for street lighting solutions in the project area*

- WHO:** all partners coordinated by the Energy Agency of Friuli Venezia Giulia
- WHAT:** global overview (included best practices) on best available technologies and innovative solutions with respect to energy consumption and light pollution reductions
- WHEN:** 01 June 2012 - 31 December 2012
- WHERE:** Municipalities of Šempeter-Vrtojba, Tolmin, Doberdò del Lago, Portomaggiore and Province of Gorizia
- WHY:** to allow a complete and detailed overview of the state of the art of best available technologies in the field of street lighting as well as innovative approaches in the development of strategies (e.g. improving the perception of light at low intensity)

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## WP3-COMMON STRATEGY

### Activity 3.1

*Definition of a common strategy to work out street lighting action plans in the cross-border area*

**WHO:** all partners coordinated by the Energy Agency of Friuli Venezia Giulia

**WHAT:** preparation of a long term action plan (i.e. strategy) based on the present state survey (cadastre of street lighting), on detected problems of light pollution, on the best available technologies, on innovative approaches at global level and on present legislation in the cross-border area

**WHEN:** 01 January 2013 - 31 October 2014

**WHERE:** cross-border area

**WHY:** availability of a common strategy (i.e. a long term action plan) for street lighting in the cross-border area based on the most advanced technologies and the most innovative approaches (solutions) with respect to local problems

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## WP3-COMMON STRATEGY

### Activity 3.2

*Guidelines on sustainable street lighting in the cross-border area*

**WHO:** all partners coordinated by the Energy Agency of Friuli Venezia Giulia

**WHAT:** identification of the short term actions to reduce light pollution and improve energy efficiency of street lighting on the basis of the common strategy

**WHEN:** 01 June 2013 - 30 June 2013

**WHERE:** Municipalities of Šempeter-Vrtojba, Tolmin, Doberdò del Lago, Portomaggiore and Province of Gorizia

**WHY:** 5 street lighting action plans for the Municipalities of Šempeter-Vrtojba, Tolmin, Doberdò del Lago, Portomaggiore and for the Province of Gorizia

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## WP4-PILOT PROJECTS

### Activity 4.1 & 4.2

*Implementation of 4 pilot projects in the crossborder area*

**WHO:** all partner Municipalities coordinated by Šempeter Vrtojba (LP)

**WHAT:** preparation of executive projects for 2 investments in rural areas and 2 investments in urban areas as well as their implementation

**WHEN:** 01 November 2013 – 30 October 2014

**WHERE:** Municipalities of Šempeter-Vrtojba, Tolmin, Doberdò del Lago, Portomaggiore

**WHY:** 4 street lighting pilot investments to enhance local street lighting systems

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## WP5-COMMUNICATION PLAN

### Activity 5.1 & 5.2 & 5.3

*Awareness raising campaign on light pollution risks targeted to citizens and to professionals*

**WHO:** all partners coordinated by Temno Nebo Slovenije

**WHAT:** information campaign on light pollution dimensions and risks, website of the project ([www.futurelights.eu](http://www.futurelights.eu)), press conferencies, workshops and other events

**WHEN:** 02 November 2011 – 30 October 2014

**WHERE:** crossborder area covered by the project

**WHY:** to enhance awareness on what is light pollution and what are the related risks

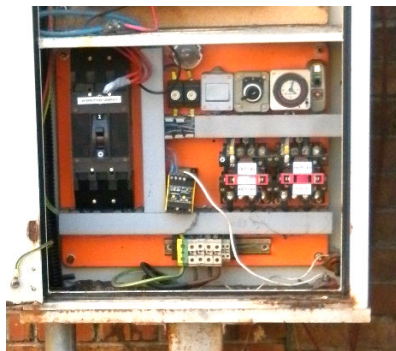
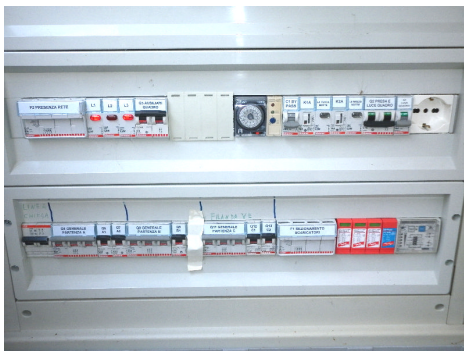
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## EXAMPLES FROM REALITY

*What you see when looking to reality*

*Power panels*



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## EXAMPLES FROM REALITY

*What you see when looking to reality*

*Luminaries*

*New full cut-off luminaries*



*Old luminaries*



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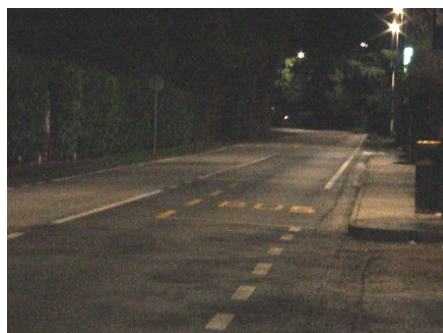


## EXAMPLES FROM REALITY

What you see when looking to reality

Lighting results

same power per meter but different luminaries



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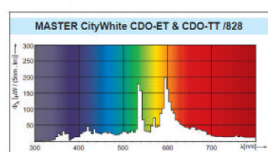
## EXAMPLES FROM REALITY

What you see when looking to reality

Lamps:

Ioduri metallici Metal Halide CDO TT CityWhite

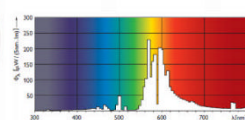
MH



Sodio alta pressione  
High Pressure Sodium



SON-T PIA senza mercurio  
NAV-E no Mercurium



Yellow  
(smooth)



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## EXAMPLES FROM REALITY

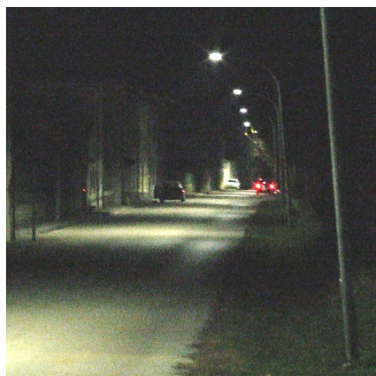
*What you see when looking to reality*

*Distances between lamp poles (post) the and light diagrams*

*Good uniformity of the light levels*



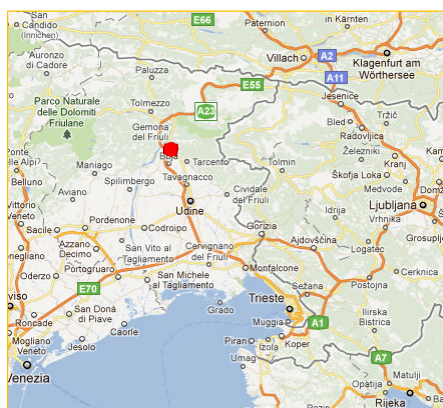
*Bad planning in uniformity ratio*



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## Contacts



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Grazie per l'attenzione!  
Vielen Dank für Ihre Aufmerksamkeit!

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Progetto FUTURELIGHTS è cofinanziato in virtù del Programma Transfrontaliero Italia-Slovenia 2007-2013, dal Fondo europeo di sviluppo regionale e dai fondi nazionali.



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