

Interreg



CENTRAL EUROPE

European Union
European Regional
Development Fund

Dynamic Light

TAKING
COOPERATION
FORWARD



Transnational Training Seminar
Cesena, October 24th 2018



Policy aspects of dynamic lighting implementation



Dynamic Light | University of Greifswald | José Mercado Ph.D.

AGENDA

Introduction

Methodology
aspects

EU Policy
Framework



AGENDA

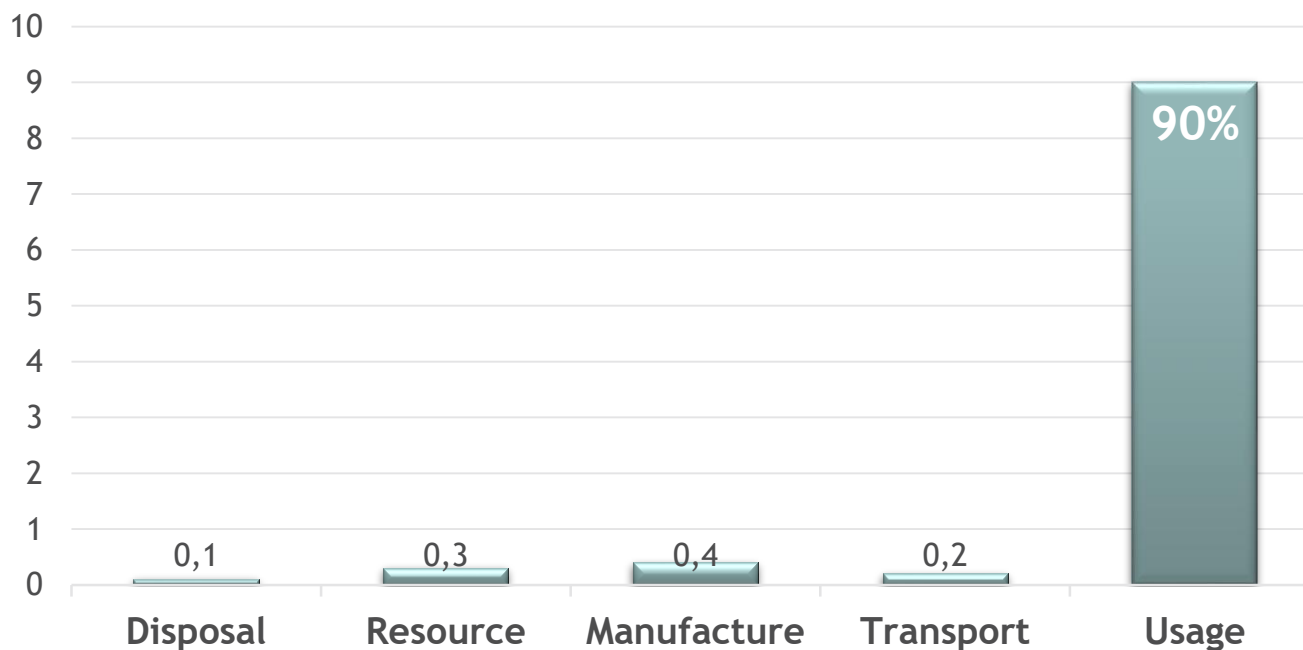
Introduction

Methodology
aspects

EU Policy
Framework



Public Lighting in the EU - Key environmental impacts



Source: European Lamp Companies Federation (2005)



Public Lighting in the EU - Key environmental Impacts

PRODUCTION PHASE

- Materials used will influence the impact in production and end of life phases
- Glass, metals, plastics, ...
- Mercury
- Maintain optimal life cycle performance and maximum energy efficiency

USE PHASE

- Energy consumption
- Energy efficiency and efficacy
- Wasted light
- Obtrusive light / light pollution
- Product durability



Public Lighting in the EU - Key environmental Impacts

END OF LIFE AND WASTE MANAGEMENT

- Recycling of the used materials
- Special facilities that have the required technology
- Managing of possible environmental impacts such as ecotoxicity



Public Lighting in the EU - Key figures



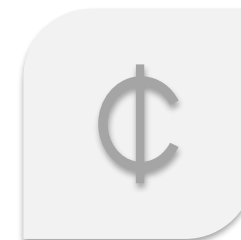
CITY GOVERNMENTS
SPEND 30-50% OF ENERGY
COSTS ON STREET
LIGHTING



50% OF THE ELECTRICITY
CONSUMPTION IN CITIES IS
CAUSED BY LIGHTING



LOCAL GOVERNMENTS
SPENT ABOUT €7.6
BILLION ON POWERING
PUBLIC STREET LIGHTS IN
2015



POSSIBLE SAVINGS: €5.3
BILLION PER YEAR (70%)



Public Lighting in Germany Key figures

- €3.4 billion for municipal electricity and heat supply
- 40% of them for public lighting
- Energy efficiency savings potential: €400 million or kWh 2.2 billion per year



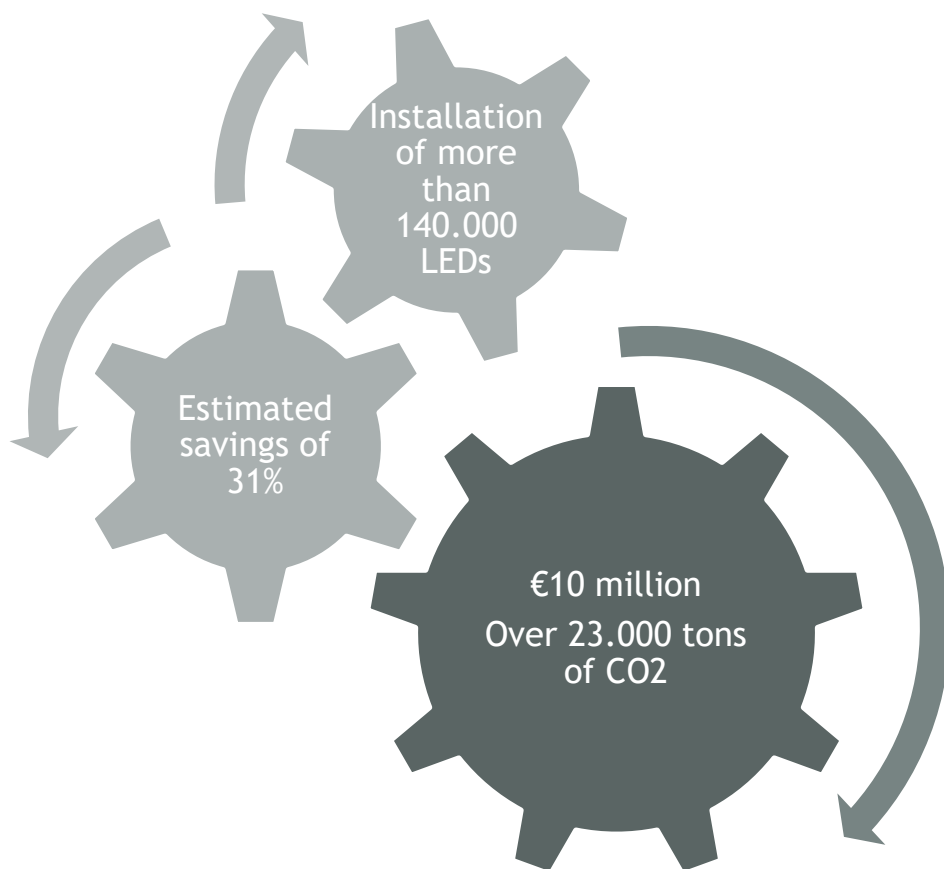
Public Lighting in Italy

Key figures

- Italy spends more on street lighting than any other EU country
- €1.7 billion in 2015
- Potential energy savings with a public lighting efficiency system: up to €400 million per year



Public Lighting in Italy - The example of Milan



- 23.650 less tons of CO2
- 60.000 less bulbs every year
- 9 tons of waste will be saved per year
- Removing of all mercury and other polluting materials



Public Lighting in EU - Examples from the Streetlight-EPC Project

	Municipality of Gunskirchen (Upper Austria)	Municipality of Kostrena (North-West Croatia)	Municipality of Gdansk - SOWA Piecewska (Pomerania, Poland)	Municipality of Trhové Sviny, South Bohemia (Czech Republic)
Inhabitants	5.800	4.180	460.430	5.100
Electricity cost savings €/year	12.500	24.000	2.300	1.090
Maintenance cost savings €/year	28.000	20.500	/	740
Reduction electricity consumption kWh/year	78.300	222.500	16.000	9.900
CO2 reduction tons/year	36	102	7.4	4.6

* (not guaranteed in the EPC contract)



AGENDA

Introduction

Methodology
aspects

EU Policy
Framework



Methodological Approach

- **Main Task: “Developing strategy on promoting dynamic lighting with legal certainty”**
 - Meeting EU and Local Legal and Policy Frameworks
- Qualitative data analysis -> content analysis
- Main source of information provided by PPs:
 - Questionnaires about legal questions and policy aspects regarding public lighting development
- Secondary data analysis provided complementary information for a comprehensive comparative analysis
- Main Outcomes:
 - 6 Country Reports (Croatia, Czech, Germany, Italy, Poland, Slovenia) and European Report (EU Report)
 - Strategy to facilitate the integration of dynamic lighting from a legal perspective



Challenges for the Policy and Legal inquiry

- Lacking of a clear definition
- Working definition within the DL-Project:
 - *“Dynamic lighting is adaptive lighting, i.e. it is being provided where and when it is needed depending on different variable conditions, such as travelling speed, traffic volume and/or composition, ambient luminances, weather and other exterior factors in a way that it reduces light pollution as well as energy consumption; beyond that it recognizes varying human and social needs, such as aesthetics or feeling of safety, as a basic concern and key factor in the design of adaptive public lighting.”*
- What kind of lighting does the project tackle?
 - *Street*
 - *Urban*
 - *Public*



AGENDA

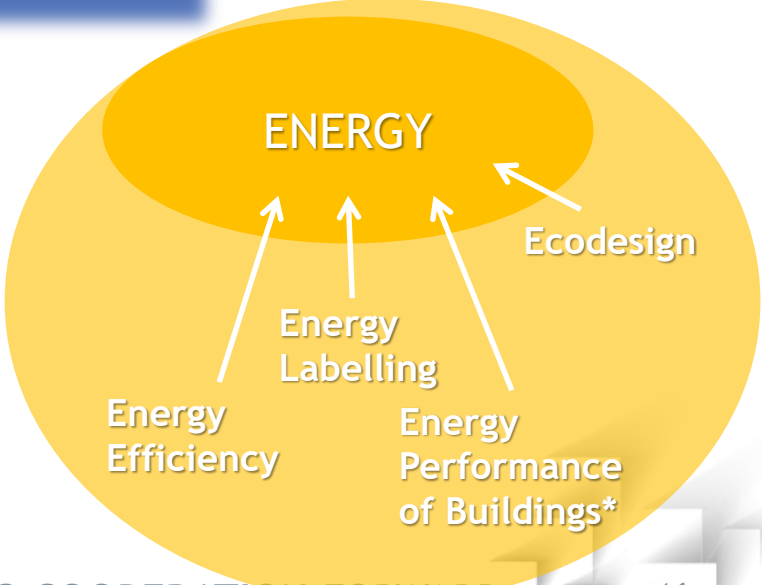
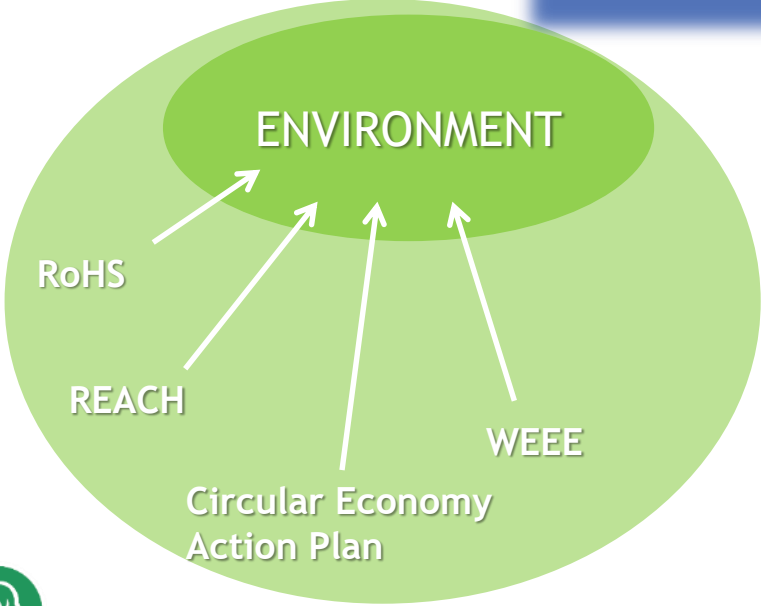
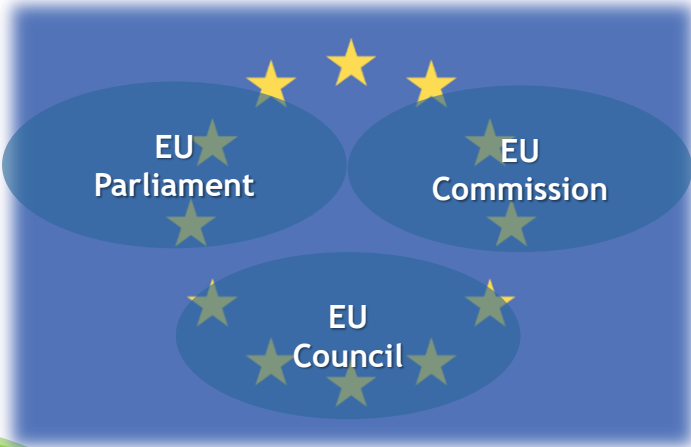
Introduction

Methodology
aspects

EU Policy
Framework



EU - POLICY FRAMEWORK



Comparative Inventory of the political/legal framework

A. Norms, standards and regulations

- A. Ecodesign Directive: Directive 2009/125/EC
- B. Energy labeling Directive: Directive 2010/30/EU
- C. Ecodesign and energy labelling - Directional and LED lamps:
 - A. Commission Regulation (EU) No 1194/2012 - ecodesign requirements for directional lamps, light emitting diode lamps and related equipment.
 - B. Commission Delegated Regulation (EU) No 874/2012 - Directive 2010/30/EU regarding energy labelling of electrical lamps and luminaires.
 - C. Commission Regulation (EU) 2015/1428 of 25 August 2015 amending Commission Regulation (EC) No 244/2009 with regard to ecodesign requirements for non-directional household lamps and Commission Regulation (EC) No 245/2009 with regard to ecodesign requirements for fluorescent lamps without integrated ballast, for high intensity discharge lamps, and for ballasts and luminaires able to operate such lamps (repealing Directive 2000/55/EC and (EU) No 1194/2012)
- D. Regulation (EC) No 245/2009 with regard to eco-design requirements for fluorescent lamps without integrated ballast, for high intensity discharge lamps, and for ballasts and luminaires able to operate such lamps (repealing Directive 2000/55/EC, and Regulation 347/2010).
- E. Directive 2000/55/EC on energy efficiency requirements for ballasts.
- F. ...

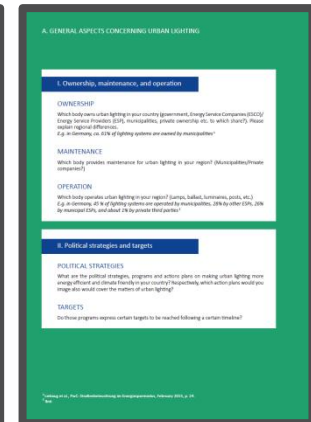
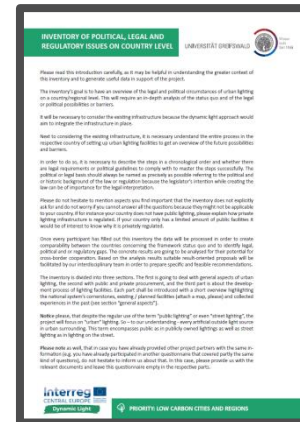
No worries ... we are not going to read the whole list!!



MAIN RESULTS

Inventory Part I

- The inventory’s goal is to have an overview of the legal and political circumstances of urban lighting on a country/regional level.
- 3 sections
 - **General aspects concerning urban lighting**
 - Ownership, maintenance, and operation
 - Political strategies and targets
 - Actors and Stakeholders
 - General Legal Background
 - **Public and Private Procurement**
 - National Public Procurement
 - Regional Procurement
 - International Procurement
 - Green Procurement
 - **Development of Lighting Facilities**
 - Planning and authorization
 - Refinancing sources/mechanisms
 - Construction
 - Cost relevant aspects



MAIN RESULTS

Inventory Part II

- Most national obligations for EU Member States are derived from international law
 - i.e. International treaties
 - Research should focus on a common international framework/EU Framework
- Project is a Central European effort, so the main sources here are:
 - EU Legislation
 - EU Policies

Project info: CE42 - Dynamic Light
Lead partner: Hochschule Wismar
Deliverable number and title: D14.2.1. Comparative inventory of the public lighting framework
Responsible partner (FPF name and number): Euro-Mediterranean University of Crete (EMUC) (FP 10)
Project website: <http://www.interreg-central.eu/Content.Node/Dynamic-Light.html>
Delivery date: 2017-03-31

Annex II: EU Norms/Standards/Regulations & EU Policies

A. Norms, standards and Regulations

Ecological requirements are mandatory for all standard bulbs, fluorescent lamps, and spot lights sold in the EU. These regulations on energy efficiency requirements and other factors such as bulb lifetime and warranty time.

Findings Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products (2012 L 31, 14 October 2009)
Energy Labelling Directive 2005/62/EC of the European Parliament and of the Council of 19 May 2005 on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products (2012 L 15, 18 June 2010)

- Commission Regulation (EC) No 1194/2012 of 12 December 2012 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for directional lamps, light emitting diode lamps and related equipment (2012 L 342, 14.12.2012)
- Commission Delegated Regulation (EU) No 874/2012 of 11 July 2012 supplementing Directive 2009/125/EC of the European Parliament and of the Council with regard to energy labelling of electrical lamps and luminaires (2012 L 206, 26.07.2012)
- Commission Regulation (EC) 2005/428 of 25 August 2005 amending Commission Regulation (EC) No 244/2009 with regard to ecodesign requirements for non-directional household lamps and Commission Regulation (EC) No 245/2009 with regard to ecodesign requirements for fluorescent lamps without integrated ballast, for high intensity discharge lamps, and for ballast, and luminaires able to operate such lamps and replacing Directive 2004/109/EC of the European Parliament and of the Council and Commission Regulation (EC) No 1184/2011 with regard to ecodesign requirements for directional lamps, light emitting diode lamps and related equipment (2012 L 226, 27.8.2012)

Regulation (EC) No 245/2009 with regard to eco-design requirements for fluorescent lamps without integrated ballast, for high intensity discharge lamps, and for ballast and luminaires able to operate such lamps, replacing Directive 2004/109/EC, and Regulation 147/2009 (Regulation 245/2009/EC has subsequently been revised by Regulation 147/2010A, dated 14 April 2010)

Directive 2005/62/EC on energy efficiency requirements for ballasts

CIE 015:1982: Road lighting as an accident countermeasure
CIE 018:1993: Fundamentals of the visual task of night driving
CIE 115:2010: CIE reference Recommendations for the lighting of roads for motor and pedestrian traffic
CIE 131:1996: The photometry and goniophotometry of luminaires
CIE 134:1997: Guidelines for determining U₀ glare
CIE 135:1996: Guide for lighting outdoor work areas
CIE 137:1999: Design methods for lighting of roads
CIE 138:2000: Guide to the lighting of urban areas
CIE 139:2000: Road lighting calculation
CIE 142:2001: Road surface and road marking reflection characteristics
CIE 150:2003: Guide on the limitation of the effects of adverse light from outdoor lighting installations
CIE 153:2003: Report on an investigation of measurements of the luminance flux of high-pressure sodium lamps
CIE 154:2003: Measurement of outdoor lighting systems
CIE 156:2011: On the measurement of the photometric properties of road and tunnel lighting

B. Policies

2007/14 ECU: EU-Parking for SLL RAL¹

Policy	Summary	Project results
CELEX	The Green Paper recommends the introduction of several new policy initiatives, and also urges a public debate within Europe with all interested parties for increasing the use of SLL (Cold State Lighting) / deployment. The Green Paper has the ambition to aggressively address the	Greater Energy efficiency: e.g. 30% higher efficiency in hotels; Lighting Quality and visual comfort; design and aesthetic; business and convenience: e.g. shopping malls have achieved up to 60% savings Business in LED in general: low quality LED products, high initial purchase costs, no awareness of advantages and capacities, insufficient product information, concerns on biological hazards, rapid technology and changing standards

¹ http://www.lightingcommission.eu/Uploads/Doc_1_-_Working_Back.pdf
² http://ec.europa.eu/energy/energy_efficiency/energy_efficiency_en.htm

European Lighting cities (2015)	2014/2010 and could be the basis to build up a potential European Innovation Partnership on Smart Cities ¹
A report on accelerating the deployment of innovative lighting in European cities has been published on 18 June 2015. The report is aimed at decision makers that are responsible for both indoor and outdoor lighting in European cities, in close cooperation with the Commission's General Directorate for Content and Technology	<ul style="list-style-type: none"> • Preparing transition to SLL • Develop the economic case to justify the investment, including return on investment and life cycle costing analysis: e.g. The Swedish Environmental Management Council has established Procurement Criteria for Lighting Products based on LCC • Identify and engage with the key stakeholders: e.g. Local citizens, developers, Municipal departments, Lighting industry and Green Paper 'Lighting the Future' (COM(2015)0888) • Commission set up a SLL network • Making transition to SLL • Selecting the SLL system and supplier • Securing the finance to cover initial investments • Procuring and installing the SLL system • Transition: Initial initial installation where they will have most immediate benefits: Do not install new lighting where it is not needed, but replace SLL as an integral part of all new infrastructure projects. Choose some high visibility 'transition' projects to showcase the benefits of SLL to the community • Ongoing benefits: Choose the lighting designs that most effectively reduce the specific lighting task, balancing function, aesthetics, energy efficiency

The new report is the result of the work of the Task Force. It provides concrete guidance that may help cities and municipal services to develop and implement a forward-looking, sustainable urban



COMPARATIVE ANALYSIS

B.I. National Public Procurement	GERMANY	SLOVENIA	ITALY	POLAND	CROATIA	CZECH REPUBLIC
	<p>Sum Germany uses the EUR as its currency.</p> <p>General Aspects Law in Germany regarding urban lighting that have been implemented due to a legal act on an EU level include Directive 2004/18/EC – on the award of concession contracts, Directive 2004/29/EC – on public procurement, and Directive 2007/23/EC – on procurement by entities operating in the water, energy, transport and postal services sectors.</p> <p>The nationally implemented laws regarding urban lighting include the Kommunalleistungsbeschaffungs-Gesetz (KLBG), Verordnung über die Vergabe öffentlicher Aufträge (VgV), Allgemeine Verwaltungsvorschriften über Beschaffung energieeffizienter Produkte und Dienstleistungen (AVV-EnE), Verordnung über Ausschussaufträge für Strom und Gas (i. d. F. VgV), Antidotterverordnung (AdDV), Unterschwellenvergabeordnung (UVVO).</p> <p>All parts of the above mentioned directives have been implemented, and all rules for procurement above threshold values have been transposed into the GWB. Relevant National Laws in regard to general obligations and procurement:</p> <ul style="list-style-type: none"> • Mindestlohngesetz (Minimum Wage Law) • Federal States' minimum Wage Law • Certain Federal state laws (i.e. Gesetz Mindestförderung in Baden-Württemberg) • Tarifrangengesetze der Länder (Law on Collective Agreements of the respective federal states) <p>National threshold values Below threshold values, procurement law is purely regulatory ruling, and not legally visible. There is no legal protection quite like it ruled in the GWB. Still, it is possible to go before civil courts and sue for damages or temporary legal protection.</p> <p>Above threshold values, there are possibilities for review by supervisory authorities, such as a review of the decision of a procurement chamber by a high court (Oberlandesgericht/Vergabekammer) sofortige Beschwerde § 171 GWB.</p> <p>If a tender goes beyond the European thresholds, it is still possible to have "single bids", who can be procured on a national level, if their estimated net worth is below EUR 80,000 for services and below EUR 1,000,000 for building/construction works and together they account for less than 20% of the entire order volume (so-called 20% contingent, § 1 Abs. 8 VgV).</p> <p>All federal states have threshold amounts which allow the contracting authority to award a tender via restricted procedure with or without competition. The following sections illustrate the above mentioned thresholds in the example of the Bavarian Federal State. For example, in Bavaria:</p> <ul style="list-style-type: none"> • Services: EUR 100,000 for municipalities – above that, only under special circumstances, § 3a VOB/A / § 3 VOL/A • All federal states that have threshold amounts which allow the contracting authority to award a tender directly without explanation ("Schwellige Vergabe"). For example, in Bavaria: <ul style="list-style-type: none"> • Works: EUR 30,000 for municipalities; EUR 10,000 for federal state procurement departments • Services: EUR 30,000 for municipalities; EUR 25,000 for federal state procurement departments • Below EUR 50k, a contracting authority or public agency can directly and simply purchase goods. <p>Central, National, and Regional Databases for Public Procurement Informational databases utilized for public procurement purposes in Germany include the Deutsches Vergabeportal / Federal states also have their own informational databases between on governmental level.</p> <p>Method of Lighting System Acquisition The acquisition of lighting fixtures is carried out almost exclusively by public procurement.</p> <p>Regional Procurement In Germany, every federal state has its own legislation regarding regional procurement, and threshold values may differ by region.</p>	<p>Sum Slovenia uses the EUR as its currency.</p> <p>General Aspects Laws in Slovenia regarding urban lighting that have been implemented due to a legal act on an EU level include Directive 2004/18/EC – on the award of concession contracts, Directive 2004/29/EC – on procurement by entities operating in the water, energy, transport and postal services sectors. The nationally implemented laws in Italy regarding urban lighting is the D. Lgs. 50/2016 – Public Contracts Regulation, and it adopts the EU directives on the subject of grants and tenders in both ordinary and special sectors.</p> <p>The D.Lgs. 50/2016 must be enforced with reference to all parts reserved to tenders with values both above and below the EU thresholds.</p> <p>Relevant National Laws in regard to general obligations and procurement The D. Lgs. 50/2016 (Public Contracts Regulation) is the basic law used to tender, and it is to be integrated with the Guidelines issued by ANAC (Autorità Nazionale Anticorruzione – National Anti-Corruption Authority), the authority established for surveillance on public tender.</p> <p>Legal protection below threshold values Legal protection for companies is available by filing an appeal to the Regional Administrative Court. Generally, on the basis of records, this proves to be quite a good level of protection.</p> <p>National Thresholds All tender procedures are regulated by the D. Lgs. 50/2016 (Public Contracts Regulation). There may be exceptions within regional laws of some regions with Political Autonomy in certain matters such as the Autonomous Provinces of Trentino-Alto Adige.</p> <p>Central, National, and Regional Databases for Public Procurement The ability to review tender notices is possible via the database available at ANAC (Autorità Nazionale Anticorruzione – National Anti-Corruption Authority) or on the Ministry of Infrastructure and Transport website. It is also possible to find tender notices published on the Regional Observatory website for the Lombardy Region territory.</p> <p>Method of Lighting System Acquisition The acquisition of lighting systems is carried out mostly through public tenders.</p> <ul style="list-style-type: none"> • In the general field: <ul style="list-style-type: none"> ○ EUR 134,000 for public supply or service contracts awarded by a contracting authority referred to in point a) or b) of paragraph 1 of Article 9 of this Act, for design contests organized by a contracting authority, and for public supply contracts for products listed in Annex II to Directive 2014/24/EU if such contracts are awarded by a contracting authority referred to in point a) or b) of paragraph 1 of Article 9 of this Act operating in the field of defence; ○ EUR 207,000 for public supply or service contracts awarded by a contracting authority referred to in point c) of paragraph 1 of Article 9 of this Act, for design contests organized by a contracting authority, and for public supply contracts for products not listed in Annex II to Directive 2014/23/EU if such contracts are awarded by a contracting authority referred to in point a) or b) of paragraph 1 of Article 9 of this Act operating in the field of defence; ○ EUR 5,186,000 for public works 	<p>Sum Italy uses the EUR as its currency.</p> <p>General Aspects Laws in Italy regarding urban lighting that have been implemented due to a legal act on an EU level include Directive 2004/18/EC – on the award of concession contracts, Directive 2004/29/EC – on public procurement, and Directive 2007/23/EC – on procurement by entities operating in the water, energy, transport and postal services sectors.</p> <p>The nationally implemented law in Italy regarding urban lighting is the D. Lgs. 50/2016 – Public Contracts Regulation, and it adopts the EU directives on the subject of grants and tenders in both ordinary and special sectors.</p> <p>The D.Lgs. 50/2016 must be enforced with reference to all parts reserved to tenders with values both above and below the EU thresholds.</p> <p>Relevant National Laws in regard to general obligations and procurement The D. Lgs. 50/2016 (Public Contracts Regulation) is the basic law used to tender, and it is to be integrated with the Guidelines issued by ANAC (Autorità Nazionale Anticorruzione – National Anti-Corruption Authority), the authority established for surveillance on public tender.</p> <p>Legal protection below threshold values Legal protection for companies is available by filing an appeal to the Regional Administrative Court. Generally, on the basis of records, this proves to be quite a good level of protection.</p> <p>National Thresholds All tender procedures are regulated by the D. Lgs. 50/2016 (Public Contracts Regulation). There may be exceptions within regional laws of some regions with Political Autonomy in certain matters such as the Autonomous Provinces of Trentino-Alto Adige.</p> <p>Central, National, and Regional Databases for Public Procurement The ability to review tender notices is possible via the database available at ANAC (Autorità Nazionale Anticorruzione – National Anti-Corruption Authority) or on the Ministry of Infrastructure and Transport website. It is also possible to find tender notices published on the Regional Observatory website for the Lombardy Region territory.</p> <p>Method of Lighting System Acquisition The acquisition of lighting systems is carried out mostly through public tenders.</p> <ul style="list-style-type: none"> • In the general field: <ul style="list-style-type: none"> ○ EUR 134,000 for public supply or service contracts awarded by a contracting authority referred to in point a) or b) of paragraph 1 of Article 9 of this Act, for design contests organized by a contracting authority, and for public supply contracts for products listed in Annex II to Directive 2014/24/EU if such contracts are awarded by a contracting authority referred to in point a) or b) of paragraph 1 of Article 9 of this Act operating in the field of defence; ○ EUR 207,000 for public supply or service contracts awarded by a contracting authority referred to in point c) of paragraph 1 of Article 9 of this Act, for design contests organized by a contracting authority, and for public supply contracts for products not listed in Annex II to Directive 2014/23/EU if such contracts are awarded by a contracting authority referred to in point a) or b) of paragraph 1 of Article 9 of this Act operating in the field of defence; ○ EUR 5,186,000 for public works 	<p>Sum Poland uses the EUR as its currency.</p> <p>General Aspects Laws in Poland regarding urban lighting that have been implemented due to a legal act on an EU level include Directive 2004/18/EC – on the award of concession contracts, Directive 2004/29/EC – on public procurement, and Directive 2007/23/EC – on procurement by entities operating in the water, energy, transport and postal services sectors.</p> <p>The nationally implemented law in Poland regarding urban lighting is the Act of 25 January 2004 - Public Procurement Law - as amended.</p> <p>National Public Procurement rules for values above the EU thresholds The Act of 22 June 2011. Amending the Act - Public Procurement Law and some other acts. This act implements to national law EU directives mentioned above: Classic Directive (Directive 2004/24/EC), Sectorial Directive (Directive 2014/23/EU) and Directive 2014/23/EU. The new regulation of the Prime Minister was published on 23 December 2015, on the value threshold of contracts and design contests which imposes an obligation for the dispatching of notices to the Publications Office of the European Union. The Regulation provides for the following EU thresholds, also applicable from 1 January 2016:</p> <ol style="list-style-type: none"> for construction works regardless of the estimated value: 5,235,000 EUR; for the supply of goods: <ol style="list-style-type: none"> classical contracting: 135,000 EUR; sectorial contracting and in the fields of defense and security: 414,000 EUR; for other authorities: 200,000 EUR; for services: 135,000 EUR. <p>The new Regulation of the Prime Minister was published on the 28th of November 2015 on the basis for converting the value of public contracts. According to this Regulation, euro exchange rate for determining the estimated value of 4.3740 is obligatory from 1 January 2016. The most important changes of the Public Procurement Law resulting from these directives:</p> <ol style="list-style-type: none"> Simplification of procedures for the award of contracts and their flexibility; better use of negotiations as a means to clarify the terms of contracts with contractors in order to obtain services; new rules also reduce the formal duties at the stage of applying for the award of the contract - the contractor has to only submit a statement about fulfilling conditions for participation in proceedings and no grounds for exclusion, then only the selected entity will present other documents (mandatory above EU thresholds and, optionally, other procedures); Promotion of non-economic public objectives such as the environment, social integration and support for innovation. In this regard, the amendment focuses on multiple values, regarding choices and not only the prices or cost. The amendment also introduces Innovation Partnerships, which is designed to acquire products and services that are not yet available on the market. The new regulations also promotes the employment of disadvantaged people who may be disabled or homeless, ultimately fighting unemployment rates; Providing better access for small and medium-sized enterprises to the market and the introduction of the upper ceiling of the conditions of participation in the proceedings, regarding the economic capacity (average annual turnover, which the contracting authority may require, shall not exceed twice the estimated value of the contract); The introduction of more flexible solutions to notify public procurement contracts - new evidence making it possible to modify the terms of contracts or the termination of contracts; Facilitation of procedures for the award of social contracts and other services including legal, hospitality, gastronomic, cultural, and health services. <p>National Public Procurement rules for values below the EU thresholds</p>	<p>Sum Croatia uses the EUR. The national currency in Croatia is the Kuna (HRK).</p> <p>General Aspects Laws in Croatia regarding urban lighting that have been implemented due to a legal act on an EU level include Directive 2004/18/EC – on the award of concession contracts, Directive 2004/29/EC – on public procurement, and Directive 2007/23/EC – on procurement by entities operating in the water, energy, transport and postal services sectors. The nationally implemented laws regarding urban lighting include the Law on Concessions (NN 143/12), the Law on public procurement (NN 90/13, 80/13, 44/13, 13/14), and the Law on public works (NN 100/12).</p> <p>National Public Procurement rules for values above the EU thresholds The procurements for values above the EU thresholds is by Contract awarded on the procurement of high value. The procurement documentation must be delivered to both the national Electronic Public Procurement Advertisement (ECPA - www.eppa.hr) and as in the Tender's Electronic Daily (TED), in open procurement procedures and in restricted procurement procedures, the deadline for the application delivery is 40 days from the delivery of the procurement documentation to the ECPA and TED. In negotiation procedures with prior notice and competitive dialogue, the deadline for the delivery of an application is 30 days from the delivery of the procurement documentation to the ECPA and TED.</p> <p>EU Thresholds Procurement of a low value as all those which amount from 26,489 EUR (200,000 HRK) for goods and services and from 66,224 EUR (500,000 HRK) for works. The procurement documentation must be delivered only to the ECPA, in open procurement procedures and in restricted procurement procedures, the deadline for the application delivery is 30 days from the delivery of the procurement documentation to the ECPA. In negotiation procedures with prior notice and competitive dialogue, the deadline for the application delivery is 20 days from the delivery of the procurement documentation to the ECPA.</p> <p>Relevant National Laws in regard to general obligations and procurement</p> <ol style="list-style-type: none"> 1. The decision of the Constitutional Court of the Republic of Croatia no. U-I-1678/2013 from December 10th, 2013, (NN 13/2014) 2. The law on Concessions (NN143/2012) 3. The Law on Public-Private Partnership (NN172/2012, 152/2014) 4. The law on state commission for the control of public procurement (NN151/2014, 127/2015, 47/2014) 5. Regulation on the methodology of making and the treatment of procurement documentation and tenders (NN 10/2012) 6. Regulation on the announcement of the public procurement (NN 10/2012) 7. Regulation on the supervision of the implementation of the Law on public procurement (NN10/2012) 8. Regulation on public procurement for the purpose of defense and security (NN 89/2012, 144/2014) 9. Rulebook on selection in the public procurement sector (NN 06/2012, 125/2014) 10. Rulebook on application of Common procurement vocabulary (CPV) (NN 06/2012) 11. Rulebook on public procurement in diplomatic missions and consulates (NN 10/2012) 12. Rulebook on standards used in public procurement procedures for the 	<p>Sum The Czech Republic uses the EUR. The national currency in the Czech Republic is the Czech Koruna (CZK).</p> <p>General Aspects Laws in the Czech Republic regarding urban lighting that have been implemented due to a legal act on an EU level include Directive 2004/18/EC – on the award of concession contracts, Directive 2004/29/EC – on public procurement, and Directive 2007/23/EC – on procurement by entities operating in the water, energy, transport and postal services sectors. The nationally implemented laws regarding urban lighting which have been implemented is Act 134/2016 of April 29 2016 on Public Procurement, which transposes the EU directives into national law without nearly any changes.</p> <p>Relevant National Laws in regard to general obligations and procurement</p> <ol style="list-style-type: none"> 1. When awarding a contract to the highest threshold value, the contracting authority may apply an open procedure as well as, provided that the conditions stipulated below are fulfilled, a negotiated procedure with prior publication, a negotiated procedure without prior publication, a competitive dialogue procedure or an innovative partnership procedure. <p>National Public Procurement rules for values below the EU thresholds Small scale public procurement limits entail that limits to exclude the application of the Act are EUR 77,800 (CZK 2,000,000) for supplies and services and EUR 133,220 (CZK 6,000,000) for construction work. The contracting authority is not obliged to use the procurement procedure for the awarding of a small scale public contract, however, when awarding a small scale contract, the contracting authority must comply with the principles of procurement such as transparency and in an appropriately proportionate manner.</p> <p>Public contracts below threshold means that a contract estimated value is below the threshold number and also exceeds the values for exclusion from the Act. The choice of procurement procedures are either to award a public contract below the threshold, meaning the contracting authority must apply a simplified procedure, with the exception of a contract whose value exceeds EUR 1,948,918 (CZK 50,000,000) or type's above-threshold procedures, in which case the contracting authority shall proceed pursuant to above-threshold procedures.</p> <p>Relevant National Laws in regard to general obligations and procurement</p> <ol style="list-style-type: none"> 1. Regulation no. 148 – on determining the scope of public procurement for public works contracts and contractors of works, supplies or services including statements of measures. 2. Regulation no. 170 – on establishing the lump sum for the costs of proceedings to review the actions of the contracting authority during the awarding of public contracts. 3. Regulation no. 248 – on elements of the application for a prior contract and on modification of the contractual obligation pursuant to the Act on Public Procurement. 4. Government Decree no. 172 – on the determination of thresholds and amount for the purposes of the Act on Public Procurement. 5. Government Decree no. 173 – on determining binding award criteria of public contracts for the acquisition of road vehicles. <p>Legal Protection Below threshold values Objections may be filed by the economic operator who has been harmed or is at risk of being harmed by the practices of the contracting authority, committed to the awarding of below-threshold or above-threshold public contracts, including concession contracts, with the exception of small-scale concessions. The objection must be filed in writing and may be filed against the awarding of the procurement procedure as well as against the proceedings, including the setting of the award criteria, the selection of the type of the procurement procedure, and/or the practice of the contracting authority.</p>

INTRODUCTION

A. GENERAL POLICY ASPECTS CONCERNING PUBLIC LIGHTING

- I. POLITICAL STRATEGIES AND TARGETS
- II. CURRENCY
- III. ACTORS AND STAKEHOLDERS
 1. Ministries
 2. Regulatory agencies
- IV. GENERAL LEGAL BACKGROUND

B. LEGAL ASPECTS

- I. OWNERSHIP, MAINTENANCE AND OPERATION
 1. Ownership
 2. Operation
 3. Maintenance
- II. PUBLIC PROCUREMENT
 1. EU Legal Framework
 2. National Legal Frameworks

C. DEVELOPMENT OF LIGHTING FACILITIES

- I. PLANNING AND AUTHORISATION
 1. Relevant Legal Aspects in Respect of Planning and Authorisation
 2. Opportunities for Public Civil and other Stakeholders' Participation in the Administrative Process
- II. CONSTRUCTION
- III. REFINANCING SOURCES AND MECHANISMS



[AVAILABLE ON LINE]



Political Strategies and Targets

- In its Energy 2020 strategy (2010) the European Commission (EC) stated:
 - *“Energy efficiency is the most **cost-effective** way to reduce emissions, improve energy security and competitiveness, make energy consumption more affordable for consumers as well as create employment, including in export industries”.*
- The Energy Efficiency Directive (EED) 2012/27/EU is the most relevant step towards the achievement of the Europe 2020 strategy for *“**smart, sustainable and inclusive growth**”*, within which the promotion of energy efficiency was planned. EED identifies energy efficiency as a major element in **ensuring the sustainability of the use of energy resources and sets the 20/20/20 targets by 2020**. Urban and street lighting systems are also subject to meet energy efficiency targets; therefore, the actions and plans in each Country are derived from/or in line with the EED.
- Under the EED, each Member State (MS) must **meet certain energy savings targets** between 01.01.2014 and 31.12.2020.
- The PPs implemented **National Energy Efficiency Action Plans (NEEAPs)** shortly after the Directive came into force, like Germany in 2014, or some years later, like Poland in 2016. Moreover, the implementation period of the NEEAPs vary amongst the MS varies from country to country; i.e. Germany sets targets until 2020 while Croatia considers the period 2014-2016. In either case, MS implemented monitoring instruments that are reported on yearly basis.



Main Actors and Stakeholders

	DE	SL	IT	PL	HR	CZ
Economy	X	X	X			
Energy	X		X	X	X	
Environment	X	X	X	X	X	
Buildings	X					
Nuclear Safety	X					
Nature Conservation	X					
Transport	X		X			
Digital Infrastructure	X					
Urban Development/Spatial Planning	X	X		X		
Infrastructure		X				
Finance		X	X	X		
Industry & Trade						X

Source: own elaboration



Grazie mille per la vostra attenzione!

Dr. José Mercado
+49-30-40818 70 - 17
jose.mercado@uni-greifswald.de

