

# Vilnius City Street Lighting Modernization

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# Vilnius

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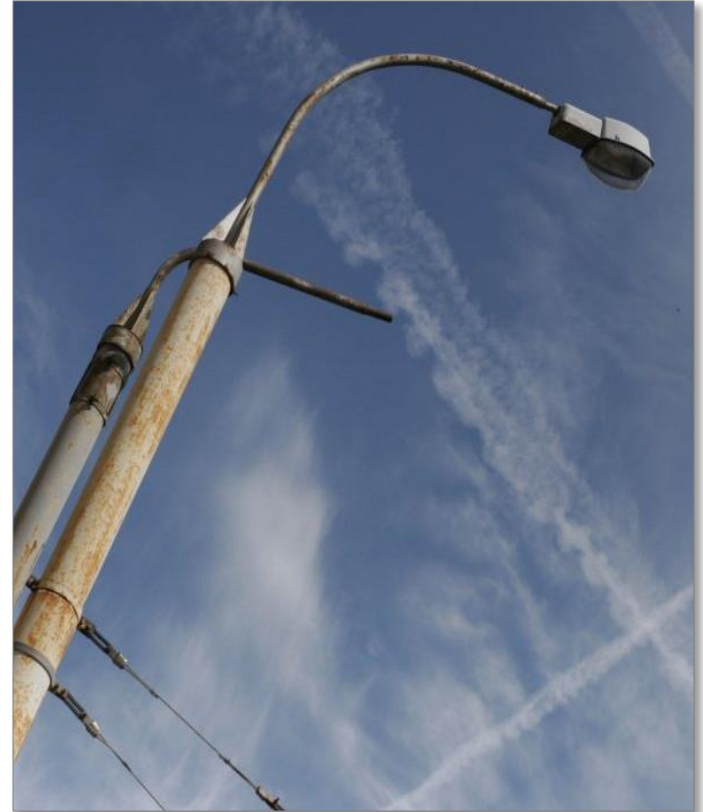
- **401** sq. km
- **523 000** inhabitants
- Buildings cover 29.1% of the city and the remaining area consists of **greenery (69%)** and etc.
- Vilnius, the **capital of Lithuania**, is the center of the country's political, economic, social and cultural life
- Aims to decrease the usage of electricity for street lighting by **50%**
- Modernization of the street lighting system is expected to make the city **more environmentally friendly and safer for residents and visitors**



# Vilnius City Street Lighting Challenges

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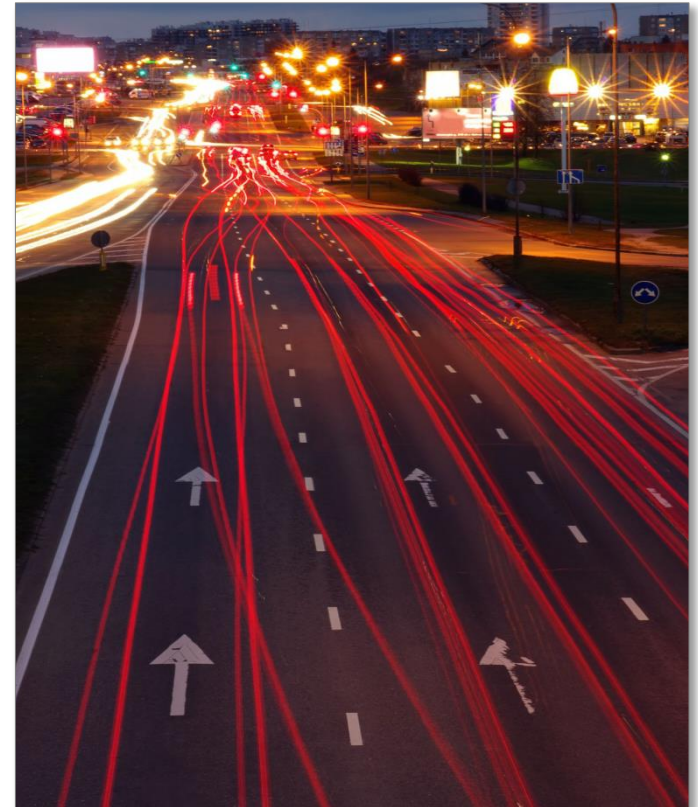
- **Inefficient**
- **Outdated**
  - Useful time of operation left – up to 2 years
  - Depreciation of infrastructure – 90+%
- **Low-end technology**
  - Annual electricity consumption – 19 M kWh
- **Vulnerable to energy prices**
  - Annual expenditure – EUR 3.8M
- **Unfriendly to the environment**
- **Under EU regulation**
- **Dangerous**



# Project Objectives

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- **Modernization** of the system
- **Electricity savings** by 9.5 M kWh/year
- **Increase safety** on the streets
- **Reduce CO<sub>2</sub> emissions** by 5t/year
- **Reduce O&M expenditures**
- Implement **central monitoring system**
- Ensure **network maintenance**



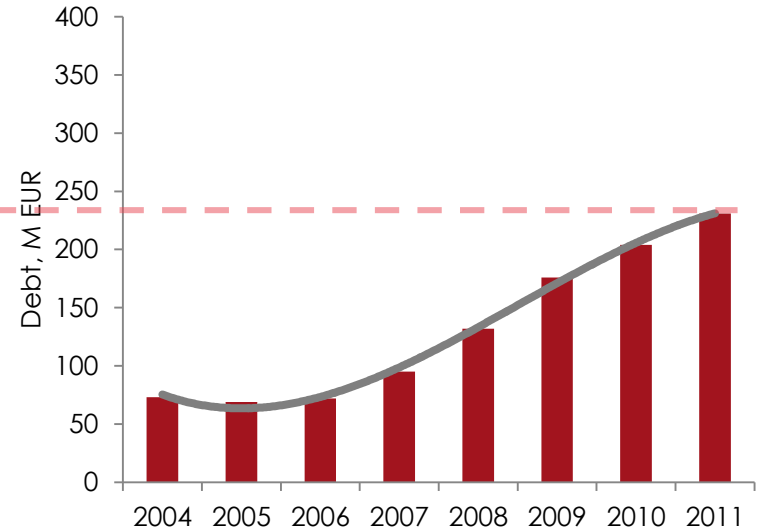
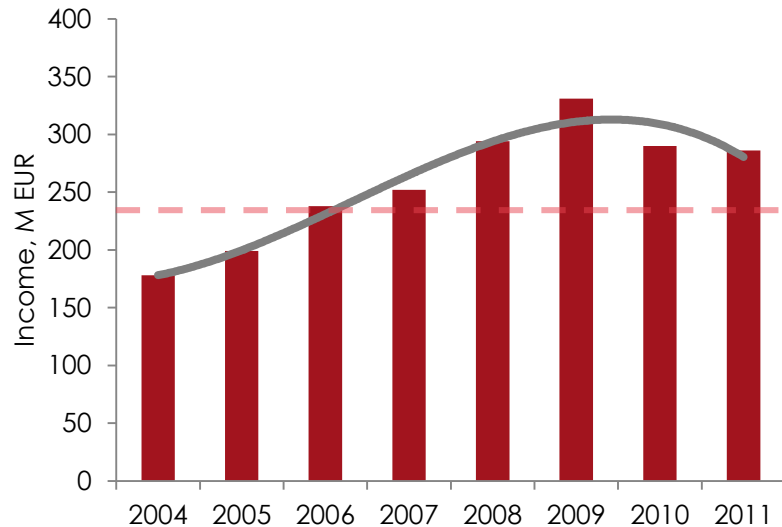
# Feasibility Study for a PPP Project

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<b>Feasibility of PPP</b>	Feasible
<b>Value for money</b>	7 %
<b>Availability</b>	<ul style="list-style-type: none"><li>• Available</li><li>• Can be structured to be self financing</li></ul>
<b>Bankability</b>	High interest from the banks and other lenders (JESSICA; EBRD; EIB; NIB incl.)
<b>Finance blending</b>	Can be partly financed by MINISTRY OF ENVIRONMENT/ Climate change foundation
<b>Investors</b>	Very high interest
<b>Technology</b>	<ul style="list-style-type: none"><li>• Any modern and energy efficient technology</li><li>• Feasibility study was structured under the assumption of using LED technology</li></ul>



# Financial Status of the City in 2011



- City debt / income ratio: **81%** by the year 2011

“The municipality has repeatedly announced procurements to raise loans, but a lot of them failed - banks do not want to give money to the indebted city.” – 15min.It, 18 May 2012



# Project Highlights

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<b>Project Owner</b>	Vilnius City Municipality
<b>Project Term</b>	25 years
<b>Capital Investment</b>	27 M EUR (VAT excl.)
<b>Installed Street Lights</b>	36 k units
<b>Electricity Savings</b>	50%
<b>Project Scope</b>	<ul style="list-style-type: none"><li>•Street lighting renewal</li><li>•Energy supply renewal</li><li>•Installation of a dynamic online control system</li><li>•Regular maintenance and operation</li><li>•Installation of modern and energy efficient technology</li></ul>
<b>PPP Contract</b>	Design-Build-Finance-Maintain (DBFM)
<b>Call for Proposals</b>	2012.09.28
<b>Financial Close</b>	2014 3Q



# Project Technical Parameters

Assets	Total existing	Total to be replaced
Luminaries	39,219	36,624
Energy panel boxes	239	230
Energy power points	623	586
Central monitoring system		To be installed
Local sensors at energy power points		To be installed

# of luminaries to be replaced	From	To (LED)
17,270	70W	42W
2,407	100W	42W
11,348	150W	82W
5,180	250W	114W
419	400W	212W



Savings in electricity **up to 70%\***



\* Includes up to 50% dimming

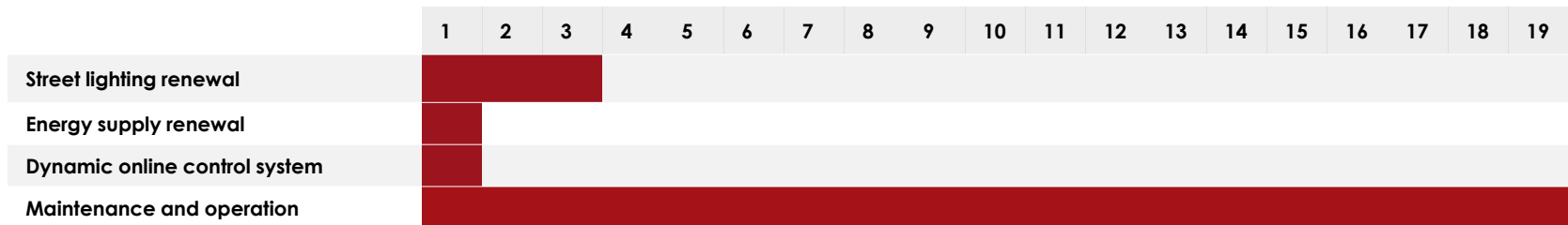


# Project Scope

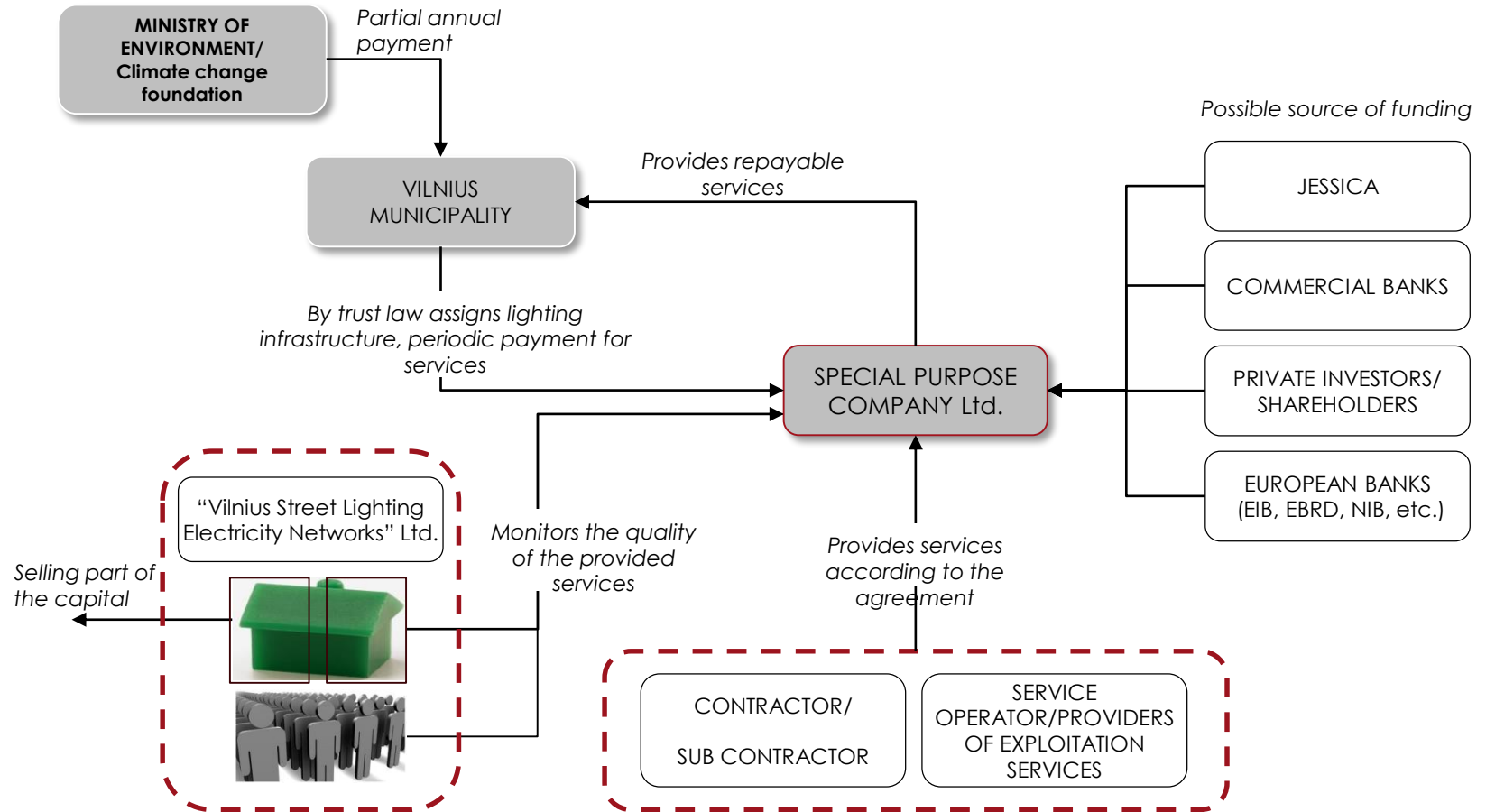
- Street lighting renewal
- Energy supply renewal
- Installation of a dynamic online control system
  - Central monitoring and management, localised management and sensors
- Installation of modern and energy efficient technology
- Regular maintenance and operation



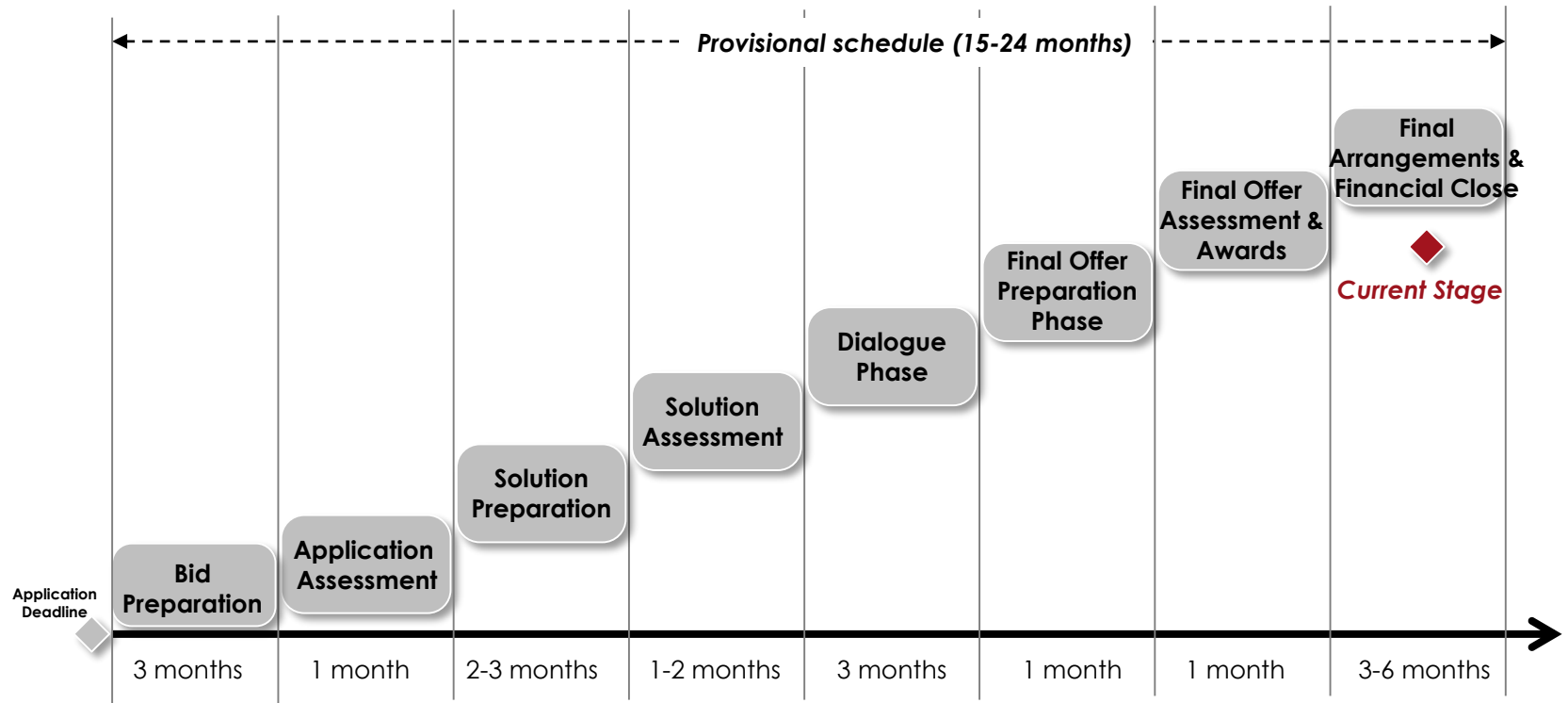
**Project Schedule**



# Partnership Scheme



# Procurement Process



**Competitive dialogue as a selection process is chosen to ensure inventive thinking and innovation**



# Qualification Requirements

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## Economical and Financial Requirements

### THE CANDIDATE SHALL HAVE:

- **Average annual income** within the last three financial years or since the day of registry received from street lighting services no less than **2,990,000 EUR**
- A **positive net profit** over the last three financial years or since the day of registration. The values for each year over the whole period shall be added together
- **Critical liquidity ratio** for the last full financial year not less than **0.5**
- **Capability of financing the Project**



# Qualification Requirements

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Technical and  
Professional  
Requirements

## THE CANDIDATE SHALL HAVE:

- **Successfully completed and (or)** has at least **one on-going street lighting contract** in the past three years, under which not less than **12,500 luminaires** were operated
- Successfully implemented within the last three years one to **three contracts for street lighting system renovation using modern technologies**, under which not less than **12,500 luminaires** were replaced
- The **management with the experience** of not less than three years in at least **one project** associated with street lighting network operations
- **Sufficient number of qualified and experienced specialists** which have experience of not less than two years in renovation, operation of street lighting and carrying out work in a **cultural heritage zone**
- **Implemented environmental management system** in the sphere of provided services
- **Implemented quality management system** in the sphere of provided services



# PQQ

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FRANCE



ITALY



AUSTRIA



# BAFO

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**Required**

**Offered or negotiated**

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Modernization of the street lighting

As required in tender documents

As required in tender documents

Energy savings

50%

70%

Duration of contract work

3 years

2 years

Duration of the contract

max 25 years

18 years



# Technical Details

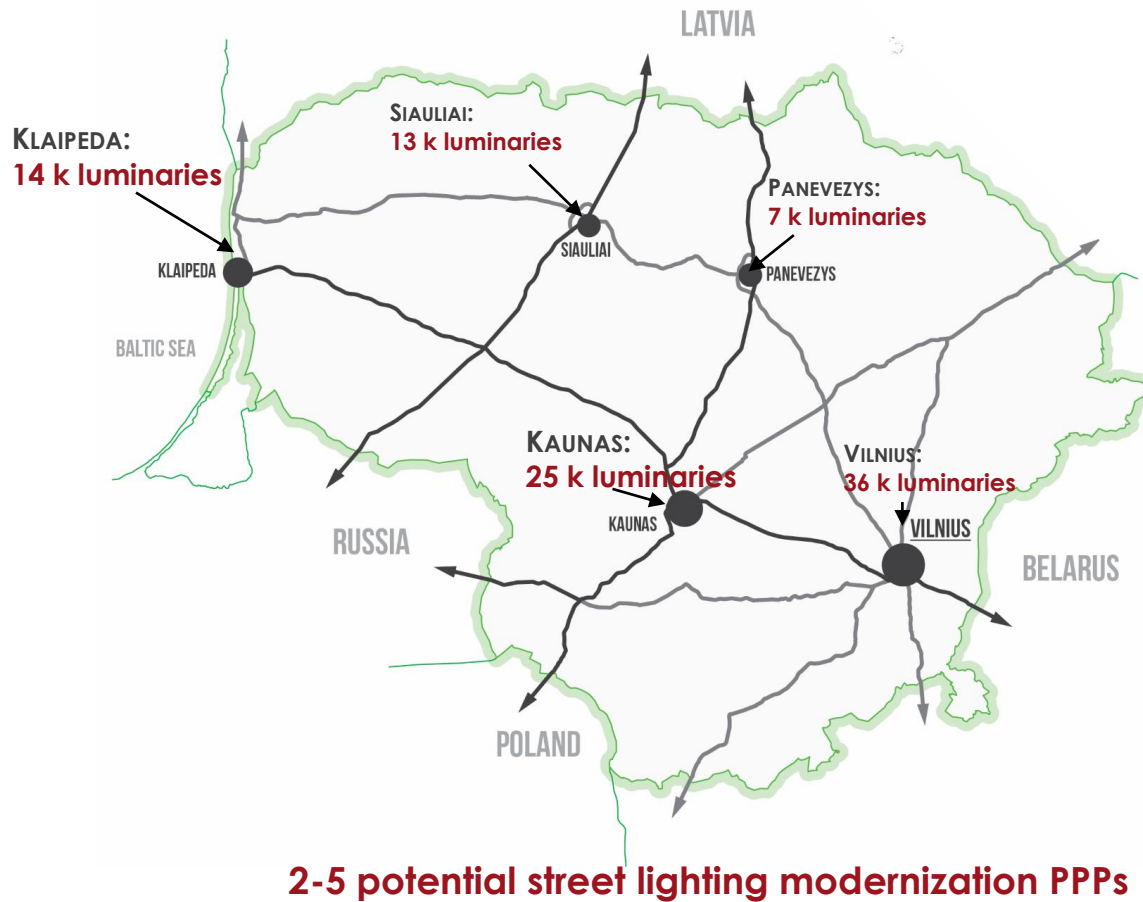
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- Efficiency: 120+ lumen/W
- Colour Temperature: 2,700 – 4,000 K
- Operation Temperature: -40 °C - +50 °C
- Dimming possibilities
- Exchangeable LED module
- Up to 100.000 operating hours
- Compensation of lighting flux





# Street Lighting PPPs in the Pipeline?



# About Invest Lithuania

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**Invest Lithuania is a government agency that provides free advice and introductions to the ground experts to global companies interested in doing business in Lithuania.**

Invest Lithuania:

- Prepares and facilitates PPP infrastructure investment projects initiated by central and local governments
- Advices investors on the preparation and participation in PPP projects
- Provides information and ongoing communications support
- Serves as a point of contact for foreign companies and guides international businesses through every step of the process of setting up operations in Lithuania



# Contacts

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