

For your information

Consultation document

Realization of the 2030 Urban Lighting Roadmap for the municipality of Eindhoven

Municipality of Eindhoven

19 March 2013

In 2012, the 2030 Vision and Urban Lighting Roadmap for Eindhoven was completed. Based on an analysis of the present situation, prognosis workshops with external parties, i.e. ILI, BNG, Resources, TNO and PPS Consult, an exploration of technological developments, and relevant organizational changes, this document outlines a roadmap for urban lighting in 2030. The roadmap describes the steps that need to be taken to realize an intelligent lighting grid which integrates sustainable solutions, lighting and ICT (IP). More information on the intelligent lighting grid can be found in the 2030 Vision and Urban Lighting Roadmap for Eindhoven via the site: www.eindhoven.nl/slimlicht. Such a grid will also lead to other user options and design opportunities for the public space.

The municipality of Eindhoven intends to implement a market consultation in anticipation of realizing the 2030 Vision and Urban Lighting Roadmap for Eindhoven. This market consultation aims at the exchange of information between municipal officials and interested parties on the feasibility of realizing an intelligent lighting grid on the basis of an earning model or models for the investments made, in light of possible changes in the role and responsibilities of the municipality.

This document describes the request for information on which the market consultation is based, i.e. the questions which need to be answered in writing by the parties participating in the consultation in relation to the 2030 Vision and Urban Lighting Roadmap for Eindhoven. The market consultation request will be publicly available. Based on the reactions received, discussions will be held with a number of parties to evaluate the market interest for realizing the 2030 Vision and Urban Lighting Roadmap for Eindhoven and its feasibility. The information obtained from the market consultation will be used to prepare a request for tender.

I EXPLANATION

1.1 Ambition and goal of the 2030 Vision and Urban Lighting Roadmap for Eindhoven

Ambition: Improving the quality of life in Eindhoven via newly developed products and services as well as products and services to be developed in the future course of the project, with the help of an intelligent lighting grid, based on:

1. Innovative lighting solutions for public spaces;
2. Innovative lighting solutions developed in cooperation with relevant stakeholders, e.g. residents, companies, knowledge institutions, etc.;
3. Lighting as a key innovative platform for other services, implying a willingness to think outside the box;
4. Building knowledge and innovation networks for alternative applications.

Goal: Developing, setting up, and operating the intelligent lighting grid.

Points of departure:

1. Lighting is viewed as a service associated with innovative solutions that will be implemented in an ongoing fashion over the coming period until 2030;
2. Scope is the entire city;
3. An initial application to be realized end of 2014;
4. The normal annual operating budget for public lighting earmarked for maintenance, replacement and innovation until 2030 can be used for investment purposes, if possible also supplemented by integral costs of energy etc.;
5. The focus is on data and services in utilizing the intelligent lighting grid to improve the quality of life in the city based on creative applications, whereby an ongoing learning process continually leads to new insights and new services;
6. Provides an impulse for the local economy, whereby large as well as small companies are given the opportunity to develop services and products related to lighting solutions.

1.2 Intended result

At the highest level of abstraction, the intended result is the realization of an intelligent lighting grid that optimizes public lighting, sustainable solutions, and (design) opportunities for the public space. The market consultation is intended to facilitate a tender process leading to the concrete realization of the project goal.

1.3 Points of attention

The municipality considers it important for the following aspects to be included in realizing the intelligent lighting grid. Each point of attention is explained further below.

1.3.1 Cooperation within a 'Quadruple helix'

This refers to an interactive, spiral or helix type of cooperation, in this case between businesses, knowledge institutes, local government, and residents. In realizing the roadmap, it's important to

ensure that the underlying higher goal, namely ongoing innovation, is assured so that new products and services can be continually tested and developed. The cooperation between parties from the public and private sectors will have to take this into account and focus in particular on the integration of knowledge in order to realize a total system and new earning models. Residents will have to become actively involved in the process and will play an important role in the quadruple helix. Within this context, it's important to ensure that the public interest is taken into account.

1.3.2 Earning model

Due to the limited investment resources of the municipality and its new role as a facilitator, the intelligent lighting grid will have to be realized primarily by one or more market parties. New earning models will be needed to create an environment in which businesses will be willing to invest in the necessary and sustainable structural developments. However, as soon as basic infrastructure in the form of an intelligent lighting grid becomes available, new and interesting business models are expected to become feasible. Earning models that could justify the necessary investments can be based on:

- ◆ municipal budget for public lighting infrastructure maintenance;
- ◆ municipal budget for investing in public lighting infrastructure to replace outdated systems;
- ◆ selling existing as well as new products and services to clients in the private sector;
- ◆ savings in energy costs that benefit the municipality and players in the private sector;
- ◆ possible subsidies by stakeholders and municipality for new products and services;
- ◆ incidental municipal budget for new investments in public lighting.

NB:

Whether new products and services are eligible for subsidies, depends, as far as the municipality is concerned, on the value of the new product or service in terms of cost savings or facilitating the realization of municipal goals. This depends upon the specific product or service concerned and is generally subject to ad hoc political decision-making

Annual municipal budget for public lighting

There are presently separate budgets available for curative maintenance (i.e. repairing damage and/or resolving malfunctions), electricity, regular maintenance and replacements. Within the framework of the market consultation, the municipality also aims to explore whether the bundling of these budgets into a single overall budget for the integrated tendering of research & development, implementation, management, maintenance and exploitation of all urban lighting is a realistic option and whether it could lead to benefits in terms of improved efficiency. In answering the question on earning models, we request that you also deal with this aspect.

Based on the present situation, the point of departure taken for this market consultation is a total available budget of between € 2,000,000 and € 2,500,000 per year. The resources available at the moment are actually insufficient to maintain the urban lighting infrastructure at the desired level. The incidental budget referred to above amounts to approximately € 500,000 per year.

For your information:

The current urban lighting infrastructure consists of approximately 47.500 points of light with an installed capacity of 3.500 kW.

1.3.3 Innovation

The primary focus is on continuous innovation as opposed to building a system on a one-off basis or the delivery of a specific product or service. From this perspective, it's important to realize an open system with access to the system at four levels:

1. Open knowledge: access to knowledge acquired in developing applications for co-creation by partners;
2. Open data: access to data collected to be used in the general interest of all parties concerned;
3. Open access: access to the system for the development of new services by third parties;
4. Open connectivity: access to the infrastructure in order to provide new public services.

The above requirements imply that the party awarded the contract must be willing to take a flexible approach and work with other partners in identifying and taking advantage of present and future innovations (trendwatching).

2 The tender

2.1 Object of the tender

The object of the tender is not the intelligent lighting grid itself as a product but rather the development of the present public lighting system into an intelligent lighting grid together with existing and new services based on that grid, each of which individually contributes to improving the quality of life in the city. The intelligent lighting grid itself is a system that remains in a state of ongoing development in order to continually contribute to improving the quality of life in the city. The new ideas and insights needed to accomplish this must be generated in the 'quadruple helix' structure of cooperation. To fulfil this ambition, it's essential to establish and maintain a long-term relationship, preferably until 2030. However, due in part to the points for attention described above in 1.3, it is not possible to work out the details of this tender in terms of its exact nature, scale and cost base. This has consequences for the tender procedure, as explained below in 2.3

2.2 Suitable service provider profile

The need to work together within the limiting conditions described above, the open focus on innovation required, the lengthy period of time needed for continued development, namely until 2030, and the scale of the lighting grid itself, namely the entire city of Eindhoven, when taken together, generate a profile for a suitable service provider. This profile is characterized by:

- willingness to establish a partnership based on mutual trust;
- guarantees regarding the continuity of the services provided and therefore also reflecting a solid financial position of the partner;
- willingness to learn from quadruple helix partners, to innovate, to share, to change, and to think out-of-the-box;
- willingness and resources to invest upfront and earn back the investment on the basis of long-term operating income;

- possessing as a core competence an ongoing ability to develop innovative products and services over a longer period of time, and not just on a one-off basis, that target specific groups and clients;
- possessing the skills needed to develop alliances within network frameworks;
- willingness to act as an intermediary in encouraging and facilitating other service providers, as exemplified by the Appstore.

2.3 Tender procedure

The municipality is considering the use of the 'Best Value Procurement' method for the tender. Thereby, instead of a set of specifications, the scope of demand is provided for parties wishing to submit a tender, and these parties are expected to submit their best possible offer for the scope of demand, together with an assessment of the project risks as well as opportunities for improving on the result of the project.

The municipality intends to call for tenders based on the following points of departure:

Choice of tender procedure: competitive dialogue based on Directive 2004/18/EC

Planned date of publishing the call for tender: no later than 1 July 2013

Throughput time for the tender procedure: 9 months

Pre-selection of 3 parties for submitting a tender

Number of dialogue rounds: at least two

Dialogue topics: exploitation (earning model) and contract terms and innovation of the lighting grid (technology, cooperation and services).

2.4 Contract type

It's clear that the realization of an intelligent lighting grid within the framework of an open form of cooperation (quadruple helix) with a focus on innovation aimed at improving the quality of life requires a new organizational structure. As of now, only the contours of such a structure are visible. As far as the role of the municipality is concerned, it is quite possible and perhaps even desirable for this role to change from that of the owner/problem owner to that of initiator/facilitator/watching over the public interest. Such a role shift also leads to a change in the activities carried out, whereby the emphasis is more on aspects related to mutual trust, communication and contract management and less on aspects involving design, realization and management efforts. This shift in activities helps determine what kind of contract would be most appropriate for the intended partnership, with a concession agreement or an integrated contract being the most logical alternatives. The concession could apply to the exploitation of the public lighting service and intellectual property rights. The contract terms and conditions would at any rate apply to the exploitation rights, ownership of hardware including the existing infrastructure, financing, term of the contract, risk distribution, the realization, management and implementation of new and innovative products and services, and exclusivity.

3 Market consultation

3.1 Goal of the market consultation

The primary goal of the market consultation is to evaluate the feasibility of realizing an intelligent lighting grid via one or more service-based earning models. The response to the consultation and the information obtained in the process are intended to:

- a) assess the level of interest in the project among market parties and to give them the opportunity to show us how the realization of the intelligent lighting grid can be structured;
- b) evaluate the feasibility of the vision that underlies the perspective sketched above;
- c) further work out the details of the tender criteria.

The market consultation is not intended to realize a selection of market parties.

3.2 Questions for the market consultation

The municipality wishes to include the following aspects in the consultation, and respondents will therefore also be asked to present their perspective on the following:

- Cooperation within a quadruple helix, whereby the public interest is ensured and the public also recognizes this as such;
- Which earning model or models can the party identify for itself within the proposed framework;
- Which innovative ideas can the party propose for realizing the intended goal;
- Which organizational structure would be the most suitable to enable realization of the roadmap.

3.3 Market consultation process

The following steps will be taken from March till May 2013:

- Public announcement of the market consultation (week 12);
- Presentation on the Urban Lighting Roadmap for the municipality of Eindhoven (week 16 – Tuesday 16 April from 09h00 – 11h00 in Town Hall of the Municipality of Eindhoven, Stadhuisplein 1 – Room: Raadzaal) Please reply before the 11th of April to roadmap2030@eindhoven.nl if you wish to attend this presentation;
- Feedback round in writing: interested parties can ask questions about the project and the consultation documents (week 18 – deadline is 3 May 2013);
- Publishing an information memorandum with answers to the questions submitted by the parties (week 20);
- One-on-one interviews with between 3 and 8¹ of the parties that have responded in writing in order to discuss their response to the questionnaire provided by the municipality (see section 4) in more detail (week 22).

The report giving the main conclusions of the market consultation will be made part of the subsequent tender procedure. This report will be included as an annex to the call for tender.

¹) the parties will be selected based on the range and variety of experience and ideas

At the end of this document, you will find a list of questions which need to be answered in writing briefly and succinctly beforehand. on the basis of which a number of parties ¹ will be invited for an interview to explain their answers in more detail.

3.4 Terms and conditions of the market consultation

By participating in the market consultation, the participants confirm that they agree to the following terms and conditions:

- Neither the municipality nor the party consulted can claim any rights or entitlements whatsoever on the basis of their participation in this consultation or on the basis of the information provided by either one within the framework of consultation;
- The market consultation does not aim at the selection or exclusion of market parties;
- Participation or non-participation in the market consultation will not affect the prospects of a company in a tender procedure;
- The languages of communication used in the consultation are Dutch or English;
- All communication outside of the consultation itself will take place in writing via the e-mail address roadmap2030@eindhoven.nl . Parties are not permitted to contact municipal employees and officials regarding this consultation via other channels.
- By participating in the consultation, the consulted party agrees that all or part of the information provided can be anonymously included in the report of the consultation. Any information which the consulted party explicitly specifies confidential will not be included in the report.
- The anonymized report is intended to assist the municipal administration in the decision-making process regarding the structure and content of the follow-up to the market consultation, i.e. the tender procedure. The report will be publicly and freely available to all interested parties.
- The consulted parties will be included in a list of participants unless an explicit request has been made by a participant not to be included. This list will be publicly and freely available to all interested parties.
- Correspondence and documents will not be returned after completion of the consultation.
- All costs of participating in this market consultation will be paid for by the consulted party.
- The municipality of Eindhoven is entitled to end the consultation at any time of its choosing without giving any reason for doing so.

4. Questions to be answered in writing for the market consultation

The parties are requested to submit answers to the following questions within 5 weeks after the end date of the announcement of the market consultation on Tendered:

With regard to the consultation and available information:

1. Which information do you still need to be able to answer the questions below?
2. Do you have any questions related to this consultation document and the annexes?

We request that you submit this information and any questions you may have in writing no later than 03-05-2013.

With regard to the ambition and innovation targeted by the municipality:

3. The roadmap and this consultation document set out the ambition and goal of the municipality. In your opinion, are the ambition and goal:

☐ completely feasible
☐ partly feasible
☐ challenging but not impossible
☐ not feasible

Explanation:

.....

4. In your opinion, what is the biggest challenge faced by the municipality in realizing its ambition and goal?

5. Which concrete solutions could you provide to help realize the municipal ambition and goal?
Specifically: the realization of an intelligent lighting grid via one or more earning models based on operating and providing services.

6. Which concrete solutions does the municipality need to realize its ambition and goal?

7. In your opinion, what would be the best tactic and phased scheduling plan for realizing the municipal ambition and goal?

8. I am willing to share the knowledge developed by me with other partners?

☐ yes
☐ no

Explanation <you should at least specify your most important limiting conditions and points of departure here >

.....

9. I am willing to adopt and implement solutions for public services based on lighting systems in the public space developed by others?

☐ yes

☐ no

Explanation: < you should at least specify your most important limiting conditions and points of departure here >

.....

10. If the answer given to the previous question is no, the agreement must allow for an option in which the municipality itself purchases the newly developed services independently of the partner selected:

☐ I agree

☐ I agree subject to certain conditions

☐ I don't agree

Explanation: < you should at least specify your most important limiting conditions and points of departure here >

.....

With regard to the tender process

11. The tender process assumes that the contract will be awarded by autumn of 2014. In your opinion, is this:

☐ feasible

☐ partly feasible

☐ challenging but not impossible

☐ not feasible

Explanation:

.....

12. The municipality wishes to present an initial concrete result by the end of 2014. In your opinion, is this:

☐ feasible

☐ partly feasible

☐ challenging but not impossible

☐ not feasible

Explanation:

.....

13. The municipality will award the contract on the basis of the Best Value Procurement (BVP) method. In your opinion, which subordinate tender criteria, besides price, would be appropriate and which of these additional criteria should be given the most weight? In giving an answer, you should in any case take into account that the municipality also wishes to include the results of the interview, which is part of the BVP method, in its evaluation.

With regard to the quadruple helix

14. How do you view the role of the following parties in relation to realizing the ambition of the municipality?

☐ the role of the partner selected in the tender;

☐ the role of the municipality;

0 the role of the business community as a whole;

0 the role of knowledge institutes;

0 the role of citizens/residents and social institutions such as healthcare institutions, housing associations, sport clubs etc.

Explanation:

.....

15. What opportunities are there, in your view, for the SME to participate in this process?

With regard to citizen participation?

16. What experience do you have with regard to involving end-users in the process?

With regard to the public space?

17. What experience do you have with regard to participating in the spatial planning process?

With regard to risks

18. Do you see any risks, insurmountable or otherwise?

With regard to the 1-on-1 interviews

19. Do you have any suggestions regarding the interviews to be held within the framework of this consultation?

Separately enclosed Annex with a form for answering these questions

The answers should be sent by e-mail to: roadmap2030@eindhoven.nl

Please include the following information in a separate part of your e-mail in response to the above questions:

- name of company
- name of contact person
- his/her telephone number
- e-mail address

More information regarding the 2030 Vision and Roadmap Urban Lighting Eindhoven you can find via the site: www.eindhoven.nl/slimlicht

Annexes

Annex 1 Reply form