

Smart Cities

Stakeholder Platform

Public Procurement for Smart Cities



Smart Cities
and Communities

SMART CITIES STAKEHOLDER PLATFORM

FINANCE WORKING GROUP

GUIDANCE DOCUMENT

PUBLIC PROCUREMENT

FOR SMART CITIES

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DISCLAIMER

This report is based on the voluntary work and contributions from a specialised topic group consisting of members of the Finance Group and other contributors. The Finance Group met four times from June 2012 to March 2013, and the topic group pursued the work online and through teleconferences.

The contents are the sole responsibility of the editor, the text and recommendations do not necessarily represent a full common position agreed by all members, nor do they necessarily represent the views of the institutions to which the members belong.

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ABSTRACT

There is growing recognition that the low-carbon and environmental goods and services (LCEGS) sector is a growing part of the EU economy, with the associated economic and social benefits that this brings. This high-value sector has potential for exponential growth based on increased global demand for low-carbon, resource-efficient goods and services.

The public sector will increasingly become a key player in driving investment in smart technologies in the LCEGS sector through public procurement by, for example:

- 1) retrofitting of public sector building stock, smart energy grids and broadband access, electric vehicle charging infrastructure, installation of heat networks;
- 2) onsite renewable energy generation;
- 3) involvement in more general adaptation / mitigation.

Smart cities need to be able to identify and procure the best technical solution for their communities and businesses whilst demonstrating the local economic benefit of that procurement. Wherever possible, the procurement process should also be used to increase innovation in sustainability.

This guidance document has the objective of assisting cities to implement the most appropriate public procurement mechanisms, while advising the EU and national authorities of potential reforms. The document will thus:

- 1) identify existing good public procurement practice in smart cities;
- 2) identify the common characteristics of exemplary procurement processes;
- 3) identify current barriers to the uptake of exemplary procurement processes and potential solutions;
- 4) offer guidance to the Commission, City Authorities and Member States on how to accelerate the uptake of exemplary procurement processes to optimise investment in the LCEGS sector; and
- 5) offer guidance to the Commission, City Authorities and Member States on how businesses in the LCEGS sector can more easily access and respond to tendering opportunities.

OBJECTIVE OF THIS DOCUMENT

This guidance document has been prepared by the public procurement topic group of the Smart Cities Stakeholder Platform. The objective of this document is to highlight the characteristics that a public procurement process has to have to ensure it is in line with smart city investment needs. Procurement processes need to account for the whole lifecycle costs and benefits, rather than only the basic investment costs.

This document will:

- identify existing good public procurement practice in smart cities;
- identify the common characteristics of exemplary procurement processes;
- identify current barriers to the uptake of exemplary procurement processes and potential solutions;
- offer guidance to the Commission, City Authorities and Member States on how to accelerate the uptake of exemplary procurement processes to optimise investment in the LCEGS sector; and
- offer guidance to the Commission, City Authorities and Member States on how businesses in the LCEGS sector can more easily access and respond to tendering opportunities;

1. PUBLIC PROCUREMENT CHALLENGES

Context

The responses to the Commission's consultation on the Smart Cities and Communities Initiative¹ indicated that respondents believed that innovative low carbon products and services for smart cities should be supported by market uptake measures including: innovative financial schemes and facilities, the development of new business models, the standardisation and labelling of products and services and public procurement.

Since January 2006, public procurement in the EU has been influenced by two public sector procurement Directives: Directive 2004/18/EC and Directive 2004/17/EC. These Directives include the simplification and consolidation of existing Directives for public works, supplies, services and utilities and contain provisions that are supportive of sustainable procurement criteria. The Directives introduced new processes and aims to reduce complexities and set out clearly how social and environmental criteria can be applied in awarding contracts. A reform of the directives is under negotiations (COM(2011) 897 final), if adopted this document will be reviewed in light of the decisions.

Since then there has been some progress in cities adopting public procurement measures to enhance innovation and sustainability, with several notable pilots,

¹ http://ec.europa.eu/energy/technology/consultations/doc/public_consultation_report.pdf

although examples of this being completely embedded within city procurement practices are few.

What Smart Cities need

Over the next decade, as the costs of energy continue to fluctuate and cities strive to increase economic growth whilst achieving carbon reduction targets, there are likely to be increasing opportunities for the public sector to drive investment in smart technologies in the LCEGS sector through public procurement by, for example:

- retrofitting of public sector building stock;
- smart energy grids and broadband access;
- electric vehicle charging infrastructure;
- installation of heat networks;
- onsite renewable energy generation;
- involvement in more general adaptation / mitigation.

There is growing recognition that the LCEGS sector is a growing part of the EU economy, with the associated economic and social benefits that this brings. This high value sector has potential for exponential growth based on increased global demand for low-carbon, resource efficient goods and services.

Smart cities need to be able to identify and procure the best technical solution for their communities and businesses whilst demonstrating the local economic benefit of that procurement. Wherever possible, the procurement process should also be used to increase innovation in sustainability.

2. EXISTING GOOD PRACTICES

Several examples of existing good procurement practice exist. These include:

- Sustainable procurement programme by ICLEI, providing a number of initiatives to assist local governments in introducing sustainable procurement processes².
- Smart SPP – Innovation through sustainable procurement provide a number of evaluated case studies from various Member States.³
- The city and state of Hamburg procured new lighting systems (state-of-the-art technology) for its public buildings.
<ftp://ftp.cordis.europa.eu/pub/innovation-policy/studies/case1.pdf>
- Ener-in-Town was an Intelligent Energy Europe funded project that commenced in January 2006 and lasted for 30 months. Its aims were to establish greater control over energy consumption in municipal buildings which was extended to 37 municipalities in the Basque Country.
<http://www.enerintown.org/home>

² Information on ICLEI's activities can be found at: www.iclei-europe.org/sustainable-procurement

³ http://www.smart-spp.eu/fileadmin/template/projects/smart_spp/files/Case_studies/SMART_SPP_Case_Studies_ENG-www.pdf

- The procurement and deployment of an electric vehicles recharging network in the Basque Country was *a 50:50 joint venture by the Basque Government and a private company*.⁴
- Mayor of London's Green Procurement Code: <http://www.greenprocurementcode.co.uk/>
- The Sustainable Procurement Toolkit (Forum for the Future), <http://www.forumforthefuture.org/sites/default/files/project/downloads/sptoolguidance.pdf>
- Although only partially developed to date, the City Protocol (www.cityprotocol.org) is intended to address some of the barriers raised in this document through collaborative initiatives.

2.1 Common characteristics of exemplary procurement processes

A needs assessment to carry out and participate in the procurement of innovative technologies and solutions was undertaken by the SMART SPP Programme⁵. The "Guide on dealing with innovative solutions in public procurement"⁶ also provides examples of good practice. The lessons learned from this work suggest that there are common characteristics which **encourage, enable, engage and exemplify** innovative sustainable procurement opportunities:

Encourage

- Public authorities should have clear political carbon reduction strategies and targets in place which cascade down to procurement mandates/strategies and budgets, as well as to other kinds of strategies (e.g. normative commitment).
- Strong leadership is required to embed and innovate through standard or advanced public procurement processes .
- A well-defined economic framework, which identifies the benefits of procurement for innovation, can accelerate the pace of change.

Enable

- Public procurement of innovative solutions requires intelligent organization (e.g. centralized process management) and professional well-trained staff.
- Procurers need to have a strong appetite for risk – this emphasises the value of peer-to-peer training of public procurement professionals.

⁴ <http://www.eve.es/Noticias/Los-cuatro-proyectos-energeticos-impulsados-por-el.aspx?lang=en-GB>

⁵ http://www.smart-spp.eu/fileadmin/template/projects/smart_spp/files/SMART_SPP_D2.1_Needs_AssessmentReport.pdf

⁶ <http://www.proinno-europe.eu/publications>

- Defined assessment criteria seeking value for money, not just the lower price, should be in place.
- The tendering of well-defined Energy Services Contracts is a key way to finance investment in public buildings and infrastructure.

Engage

- Strong engagement with the market to procure sustainable solutions is essential.
- Public Administrations should identify, via technical dialogue or by other means, what is actually available on the market, before deciding whether and what to buy.
- Public administrations should work with companies that will deliver the service or product, so that they can translate their needs and companies can therefore offer a more tailored service that meets the needs of cities. Companies and the market must understand the city's objectives, strategies and vision and must be able to turn them into "business cases".
- The procurement must take into account the engagement of end-users. It is essential to inform citizens about the benefits and their involvement in the overall strategy.

Exemplify

- Examples of initiatives which have used combined purchasing power (collaborative purchasing) to achieve significant cost reduction, accelerated deployment and to positively tackle a city's waste and energy and reduce carbon emissions.
- Examples of using whole-life cost analysis rather than least cost when considering value for money.

3. COMMON BARRIERS, POTENTIAL SOLUTIONS

The barriers and solutions identified below have been extrapolated from this and other work.

	Identified Barrier	Potential Solutions (Options)
1	There is a lack of awareness among public procurement professionals of how to specify smart LCEGS sector goods and services.	
A	Create a “how to” suite of tools which enables the public sector to procure goods and services from companies primarily in the LCEGS sector (including risk assessments and whole-life cost analyses) – see SMART SPP guidance: www.smart-spp.eu/guidance .	
B	Targeted dissemination of tools to ensure these resources are embedded in the purchasing practices of public sector organisations.	
C	Well-trained staff not only in procurement skills, but also in project and contract management.	
D	When using qualitative award criteria, it is important to be clear on how to evaluate proposals against these criteria. A fair comparison of bids is required so as not to disadvantage the most innovative proposals. This requires fair objective procedures and a skilful evaluation committee.	
2	There is a lack of up-to-date knowledge of the best technical solutions for specific needs.	
A	Have a sustainable procurement technical expert embedded within or accessible to procurement teams or create a project team to support the specification process.	
B	Create an updated library of innovative technical solutions with evaluation of costs and benefits to make researching the market easier.	
C	Promotion of collaborative procurement between smart cities.	
D	Increased use of accreditation, standardisation and labelling mechanisms.	
E	Centralise public procurement for a number of Public Authorities using intermediate experts: regional agencies, experts hired for a tendering process, etc.	
F	Consult the market before tendering: Public Administrations should identify, through technical dialogue or by other means, what is actually available on the market, before deciding whether and what to buy. Discussions will reveal whether the requirements can be met and whether there are enough potential suppliers for effective competition.	
3	There is confusion as to ‘allowable’ procurement solutions under EU procurement rules.	
A	Produce practical guidance (e.g. UK Green Book) and wording for clauses that can be used by local	

	public sector organisations when making purchasing decisions.
B	Reassess current procurement roles in public authorities to allow input of sustainable innovation expertise and wider assessment of whole life costs.
4	There is a tension between procuring the best technical solution and procuring a 'local' solution.
A	Identify and collate best practice examples of public sector procurement where tendering processes have been optimised to engage with local supply chains.
B	Consult the market before tendering: identify, through technical dialogue or by other means, what is actually available on the market. This technical dialogue will also give an opportunity to local companies and service providers to learn the PAs purchasing plans in advance and therefore better define their strategies and develop products and services that could be competitive during future tendering processes.
C	Give an earlier indication to businesses/the market of what innovative procurements are being considered.
5	Lack of consistent leadership on innovative sustainable procurement.
A	Have climate protection as a political policy object of the public authority, with targets for carbon reduction and a sustainable public procurement strategy in place.
B	Raise the profile of innovative procurement by defining executive level commitment and/or creating local leaders/champions within each Department of a Public Authority.
6	Lack of mechanisms to engage the market.
A	Involve the market in the city's strategic processes, vision and future priorities as the future success of cities not only depends on Public Authorities but on companies as well. Companies need to provide what cities need, rather than cities buying what companies provide.
B	All Public Administrations, regional governments and Member States are developing policies around promoting internationalisation of local companies. These policies should be in alignment with policies for the public procurement of innovative solutions at the different levels of EU/Member States/cities.
C	Access at the European Single Market is not easy for new entrants. Work is required to lower the barriers to access the European Single Market, especially for SMEs. In general, SMEs focus on the local market and need special assistance, training and coaching. Coordinated action would be useful here.
D	Increase dissemination of European Innovative Public Procurement offers through a single portal.
E	Energy Services Contracts are potentially key to foster investment in public buildings and infrastructure. It is necessary to increase awareness and expertise of these kinds of processes, to develop this market in many countries in which there is no energy service culture.
F	Public Authorities need legal support throughout the tendering process to ensure ESCO contracts are fair and avoid risks during the long term relationship with the energy services providers. A thorough risk assessment is required. In some countries/municipalities with high debt rates, the risks linked to the

	consolidation of this kind of contract as “public debt” can make this mechanism of financing investments unfeasible.
7	Procurement frameworks can inhibit innovation.
A	Include clauses to let providers introduce innovations during the contract life.
B	Reduce the duration of a framework contract when it is focused on a specific technology.
C	Focus on the service provided and not on the technology used. In this instance, longer contracts can help the provider to introduce new more efficient solutions.
D	Define selection criteria and tools to help civil servants to evaluate and rank the different innovations that an offer could include.
8	There is potential for conflict between Public Procurement contractors and EU funding in projects. If a smart solution to a problem is found and procured, the contractor then becomes a partner in the EU funding project bid. The innovative solution becomes fixed and impossible to change without a new procurement. This means that comments from evaluators of the bid on the proposed solution cannot be considered without making a new procurement, which leads to elongated processes with the EU.
A	Allow for greater flexibility in projects funded under EU Programmes. Projects that include innovative public procurement processes could be authorized by the CE officers to modify or evolve from their original scope as new solutions are defined, if justified by the evolution of the proposed solution during the project’s development and innovations resulting from the tendering processes.

4. RECOMMENDATIONS FOR CITY AUTHORITIES

The recommendations identified for city authorities are:

- Establish well-defined economic frameworks which embed the need to transition to a low-carbon economy through the utilisation of innovative public procurement mechanisms.
- Promote greater engagement with other city authorities to understand what has worked well and foster closer collaboration.
- Organise collective (e.g. centralised) procurement processes, to take advantage of knowledge and synergies from different PAs that have the same needs: potentially through delegation of innovative procurement processes to agencies or intermediate bodies that gather technical and legal expertise for investments of this kind.
- Promote Public/Private Partnerships and work closer with industry, so that it can provide what is needed. Create permanent or systematic working groups and information forums in which procurement professionals and technical experts from the Public Authorities can interact and exchange market knowledge with companies and solutions providers.
- Ensure that there is flexibility built into local procurement frameworks to allow for innovation.
- Engage citizens and end-users with the proposed solution.
- Adopt standardised clauses, terms & conditions, evaluation criteria and sub-contracting guidance.

5. RECOMMENDATIONS FOR MEMBER STATES

The recommendations identified for Member States are:

- Provide clear and concise guidance (e.g. UK Green Book) on allowable solutions for considering the whole life cost of projects to enhance transparency and avoid misinterpretation.
- Provide local administrations with standardised clauses, terms & conditions for tendering processes and for energy services contracts, compliant with EU Directives but adapted to: specific national legal frameworks, available financial and insurance mechanisms, energy sources availability and prices, local business practices and even climate conditions.
- Where required, create and implement financial and legal mechanisms to minimize the risks derived from energy service contracting e.g. by the guarantee of payments from the Public Authority customer to the service provider, defining ownership of assets during the contract, guarantee of supply and service in the event of the provider's failure or bankruptcy, easy/affordable/quick solutions for discrepancies, complaints, liabilities arising from the service conditions.

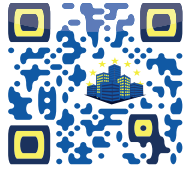
6. RECOMMENDATIONS FOR THE EUROPEAN INSTITUTIONS

The recommendations identified for European Institutions are:

- Provide leadership through the introduction of clear and concise guidance to Member States on the structuring of contracts to support innovative and collective procurement mechanisms.
- Establish mechanisms to enable greater engagement with the market and support public-private collaborations at the trans-Member State level.
- Consider how flexibility can be built into EU funding bid processes/contracts to allow for subsequent technological innovation.
- Set clear evaluation criteria for assessing the technical or qualitative merits of bids to include innovative procurement within tenders.
- Train members of the evaluation committees in the fair application of these criteria.



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Smart Cities Stakeholder Platform

...brings together people, industry and authorities from across Europe to make our cities more energy efficient, better to live in and growth-friendly.

...is about developing concrete innovative solutions for cities through tailored innovations.

...facilitates the exchange of knowledge and best solutions across smart cities in Europe.