



## Using Public Procurement To Enable Innovation: Lessons From The City of Copenhagen's Public Private Innovation Model

Prepared by the Western Cape Economic Development Partnership (EDP), on behalf of the Western Cape Government.

### Executive Summary

The Western Cape Government (WCG) is keen to ensure that the public sector plays a more active role in supporting innovators within the Western Cape. To date the WCG has struggled to do so within the constraints of the procurement regulations. The City of Copenhagen, however, has been innovative in developing a pre-tender Public Procurement of Innovation (PPI) model that encourages interactive learning, collaboration and innovation in response to specific challenges, in this case an intelligent transport system, while maintaining transparency and conforming to the existing regulatory framework.

#### Key points to note:

- The process was run as a pre-tender process with the tender itself budgeted at +-R115m (60m Kr).
- It was accepted as a valuable and warranted expense by local government to spend up to 10% of the value of the tender to run the PPI process.
- The complete process was run over a period of six months.
- It was not mandatory to participate in the PPI to submit a tender application.

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The key to the PPI model is its focus on transparency and collaboration, both principles that underpin South Africa's procurement regulations. This makes it a model that could potentially be implemented in the Western Cape at both provincial and municipal levels.

## Introduction

Governments around the world are facing increasingly complex societal problems and need to find innovative solutions to these problems. Innovation is particularly important in public procurement, as there are cases where there is no obvious solution available for a specific problem, so it is difficult for the public sector to specify and write a tender. The difficulty largely arises because solutions are not clear, and if a tender is too narrowly specified it appears that a particular service provider is being favoured, while if the tender is too broad, the received bids are way off the mark in terms of what is required. The City of Copenhagen

has been innovative in developing a pre-tender Public Procurement of Innovation (PPI) model that encourages interactive learning, collaboration and innovation in response to specific challenges.

## What is Public Procurement of Innovation (PPI)?

Public Procurement of Innovation is something that:

...occurs when a public agency acts to purchase, or place an order for, a product – service, good, or system – that does not yet exist, but which could (probably) be developed within a reasonable period of time, based on additional or new innovative work by the organization(s) undertaking to produce, supply, and sell the product being purchased. (Edquist and Hommen, 2000:5 in Rolfstam 2009)

## What is innovation?

“The roots of great innovation are never just in the technology itself. They are always in the wider historical context. They require new ways of seeing. As Einstein put it, ‘The significant problems we face cannot be solved at the same level of thinking we were at when we created them’.”

David Brooks  
New York Times columnist

“Innovation is fostered by information gathered from new connections; from insights gained by journeys into other disciplines or places; from active, collegial networks and fluid, open boundaries. Innovation arises from ongoing circles of exchange, where information is not just accumulated or stored, but created. Knowledge is generated anew from connections that weren't there before.”

Meg Wheatley  
Author and management consultant,  
Leadership and the New Science, 2001

Innovation is a creative process that has unknown, and often unexpected results, so when designing a process one cannot guarantee a predetermined outcome. However, one can provide the space and the circumstances for innovation and so enable something creative to happen. Public Procurement for Innovation (PPI) is one tool that can be used to enable innovation by creating the space in which collaboration (and innovation) can happen.

Rolfstam (2009) states that rather than being viewed as a market related process based on price only, PPI should be viewed as an important interactive learning opportunity (Lundvall, 1988; 1992) and that the social and collaborative aspects of the process need to be highlighted.

Rolfstam states that the Lisbon goals of 2002 aimed to set the EU on a path to become the most competitive and dynamic knowledge-based economy in the world by 2010 and that in 2003 public procurement was identified as a means to increase private sector R&D (European Commission, 2003b). Increasingly, the importance of public procurement has been recognized in the EU, and in 2008 the EU set up a panel of experts on public procurement and risk management.

## Developing a strategy for PPI

Abby Semple, writing in *Guidance for public authorities on Public Procurement of Innovation* provides a number of guiding principles that are worth noting when developing a strategy for PPI.

They include:

- Start early
- Know the market
- Assess and actively manage risks
- Competition is a tool to get the best

solution

- Use flexible procedures
- Don't over-specify
- Make information freely available
- Agree an intellectual property strategy
- The contract needs to be clear, with key performance indicators, incentives and penalties, licensing rights, termination and renewal clauses. Insurance and indemnities could also be important.

## Why use PPI?

There are cross-cutting benefits from the use of the PPI model, and the public sector, suppliers and society as a whole can all benefit.

PPI is a pre-tender process of collaboration, which is open and transparent. It is an inclusive process that harnesses the expertise of interdisciplinary sectors and creates a space for interactive learning. By managing the risks, the public sector encourages participation and innovation. Collaborative teams are legalised only at the point of tender appointment, which removes a large amount of red tape for the participating companies, as well as allowing free movement of participants between the teams.

The process allows the procurer to widen the net in search of potential suppliers. It also allows the suppliers to find potential partners.

By encouraging the diffusing of innovation solutions, the public sector can potentially lower costs. It also can improve the delivery of social services and improve regional competitiveness. By encouraging, and funding collaboration the model can improve the participation of small businesses that might otherwise not have the resources to participate in the tender process.

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## Background to Copenhagen's PPI Model

During a visit to Cape Town in early 2014 the Mayor of Copenhagen reported that its local government believed that finding ways to innovate, even within a stringent governance framework, could lead to economic development in the region. To this end, the Danish capital had developed and was piloting a model for Public Private Innovation (PPI).

At the time, the City of Copenhagen was experiencing difficulties in encouraging innovation and the challenges included:

- the required governance processes of EU regulation are onerous and stringent, making it significantly challenging to put out a tender for procuring new innovations;
- new innovations are difficult to specify in a tender;
- government personnel are unlikely to possess the technical skills to accurately specify new innovations for procurement; and
- there was difficulty in changing the status quo - it is easier and more convenient to avoid having to procure new innovation.

These challenges mimic those of public procurement in Cape Town and the Western Cape. When developing the model Copenhagen set the following objectives:

- the process had to encourage collaboration, and
- it was an imperative to support regional economic development.

In order for a challenge to be put through a PPI process, certain criteria has to be met i.e. there needed to be:

- a strong competence in the geographic region to fulfill the challenge;
- adequate resources (both financial and human);
- a good strategic fit in the overall development plan for the region;
- both a local market need and equally important a strong export market potential; and
- the ability to build on historic strengths.

## The Model

The Public Private Innovation (PPI) Model is a pre-tender process that was initiated by the City of Copenhagen and designed by the Danish Design Institute. It is designed as a process to tackle a specific challenge, and not necessarily as a process to help specify a tender.

The model was piloted on the challenge of designing and developing an intelligent transport system (ITS). It was applied as a pre-process to a tender of about R115m, which was sufficient incentive to warrant participation in the process and to justify the transaction costs of running the process.

## What is an ITS?

An intelligent transport system is a set of technical solutions that contribute to the more efficient, environmentally friendly and safe flow and dispersal of traffic.

Examples include:

- Traffic signals which adapt to the traffic situation.
- Speed boards and road markings that change throughout the day.
- Information boards that provide citizens with the updated traffic situation.

- Green waves for cyclists that fit their current speed.

Source: City of Copenhagen, Offer to companies and knowledge institutions to participate in a collaborative innovation project about intelligent transport systems (ITS).

The structured collaborative innovation project was run from November 2013 to April 2014. Copenhagen believed that by showcasing its innovative solutions to challenges facing cities around the world, it would create a platform from which to sell its solutions. The City aimed to use the collaborative project to formulate a functional brief for the actual tender.

The goals of the collaborative project were as follows:

- To create value for the public and private companies participating and for the citizens affected by the solutions;
- To use collaboration to enhance the prospect of selling ITS solutions nationally and internationally; and
- To support the City of Copenhagen's goal of purchasing in an innovative way.

The project was focused on increasing Copenhagen's green mobility, reduce CO<sub>2</sub>

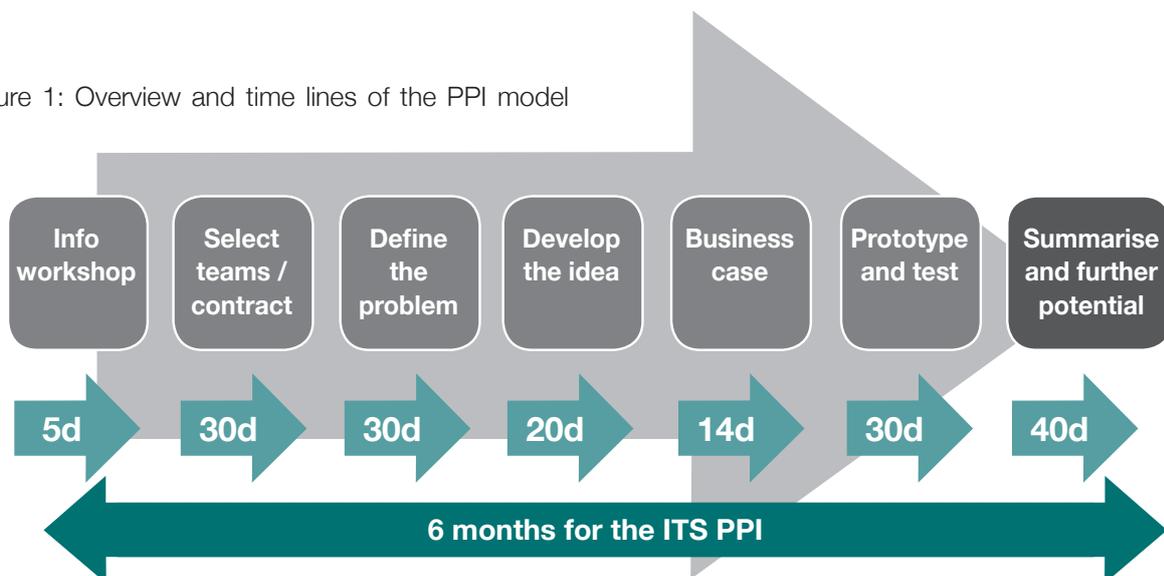
emissions and congestion and increase citizen satisfaction with the traffic flow in Copenhagen and it had a number of development goals. The focus here is on the model rather than the project itself.

The City wanted large and small businesses to participate in the project in order to maximize the innovation. The project was based on teams consisting of consultants, research institutions, designers and innovators and the City set out a skill set that would be desirable. However it was not a requirement that participants should possess all of the skills.

At the beginning of the process the City of Copenhagen envisaged that the participating companies would benefit from:

- Cross-disciplinary innovation;
- International input;
- Access to knowledge and networks through the City of Copenhagen;
- The opportunity to test and showcase ITS solutions in Copenhagen;
- Exploring the commercial potentials; and
- Applying for a grant from the Danish Market Maturation Fund to test a prototype or concept.

Figure 1: Overview and time lines of the PPI model



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## The collaborative process included a number of stages

See Graphic Summary: Figure 1

### Stage 1: Information workshop

At this workshop the participants heard about the global market potential for innovative solutions to ITS.

The first stage includes a 1-minute skills pitch and facilitated 'speed dating'. The companies formed collaboration partnerships (only to be formalised at the stage of winning the tender). The companies could form teams of three or four companies or as a single company, and the collaboration partnerships could change over the course of the PPI process. In some instances the City of Copenhagen paired possible teams based on the competence descriptions and expressions of interest that the companies completed when registering for the workshop.

Each group had access to an advisor from the City of Copenhagen and the City also covered the cost of the process consultants and legal advice.

The City, as the driver of the process, communicated:

- The focus of the particular Challenge
- The success criteria for the tender
- The goals of the Challenge
- The open innovation nature of the Challenge
- The benefits of participation, e.g. that companies could enhance their prospects for national and international sales by participating
- The City's objectives to procure in an innovative way
- All relevant information - PPI process steps, timeframes, costs covered etc.

### Stage 2: Select teams and contract

The company collaborations were self-organised and not influenced by the City. Strong legal support was needed to provide guidance and templates for:

- Confidentiality agreements
- Protection of intellectual property rights
- Collaboration/Partnership agreements
- License agreements (including cross group licensing)

### Stages 3,4 and 5: Develop the business case

Teams collaborated in order to:

- Develop and compile an understanding of the user needs and to prepare problem statements.
- Develop the solution concept.
- Build a business case for their envisaged solution.

Groups self-managed themselves in the process and there was the opportunity for new participants to join the collaboration.

The business cases were presented which enabled the City to understand the challenge in better detail along with possible solutions.

### Stages 6 and 7: Concept/Prototype delivery and summary

The groups developed and presented solution concepts (e.g. story boards, simulations) or prototype solutions. The groups shared all relevant information with the City for the tender process. Where necessary, legal terms for sharing of solutions across groups were developed.

## Key points to note:

- The process was run as a pre-tender process with the tender itself budgeted at +-R115m (60m Kr).
- It was accepted as a valuable and warranted expense by local government to spend up to 10% of the value of the tender to run the PPI process.
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## Outcomes

The city expected to get in the region of 12 to 15 companies participating as three to four collaborations (companies collaborating to submit one tender). In reality approximately 40 companies participated in 10 collaborations.

## What have we learned?

The process rests on the principles of **Transparency, Collaboration**, and adherence to good governance. Local government's **Commitment to the process** results in sufficient funding and support being directed to the process and results in the creation of a space which fostered collaboration and innovation.

### Transparency

In the Copenhagen ITS example, at the outset the intentions for the tender and draft tender specifications were shared with all participants. Furthermore the tender specification and all information raised as part of the PPI process was shared with all participants as well as those who were not part of the PPI process, but who nevertheless were still eligible to submit tenders.

### Collaboration

The collaborations were designed to be self-managing and non-prescriptive i.e. companies

could collaborate as they saw fit. Any company could drop out at any stage if they wished and any company could be accepted into a collaboration team at any stage of the process.

Each group had, as one of the members, an advisor from the city who was intimately involved with the project who could advise on whether the team was aligned to the vision of the city or not. The group could seek advice and clarity from the advisor. The advisor shared any information deemed significant with all other groups.

The City chose to use a professional facilitation company to facilitate all workshops at each stage of the process.

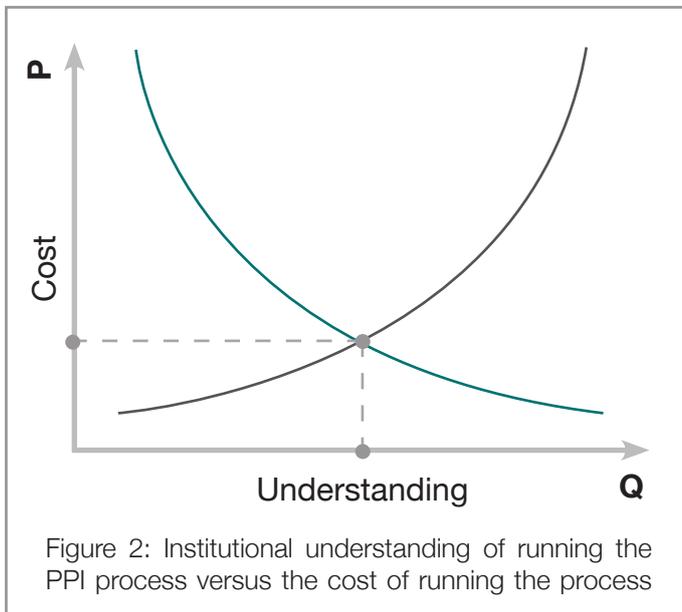
Companies were encouraged to participate in the pre-tender process with the promise of a large tender. An additional inducement was the knowledge that a public entity is committed to buying the solutions that arise from the collaborative process.

### Commitment to the process

The city understood that there were significant costs to run the PPI process. It was recognised that these costs would need to be borne by the city (allocating up to 10% of the tender budget to cover these costs). This was deemed acceptable since it was believed that as their understanding of running such a process increased, the costs

for running the process would decrease. For example it was expected that legal costs for opinions, drafting template etc.

would initially be high but that these would be lowered in subsequent PPI processes.



### Type of costs incurred:

- Committing city resources to the process.
- Process costs (development and implementation of the PPI process).
- Subsidise cost of participation (flat amount, just enough “not run at a loss”).

## What are other cities doing?

Barcelona and Philadelphia are two cities experimenting with ways of finding creative solutions to the challenges in their cities. Instead of assuming that they know the answer to a challenge, they are communicating the challenges themselves and seeing what innovative solutions are submitted. So, in Barcelona for example, instead of writing a specific tender for bike lockers, the City sets out the challenge itself, i.e. bike theft. In this way they encourage solutions from a range of suppliers, large and small, and they can pick the best solutions.

Source: [www.citylab.com](http://www.citylab.com); Citiscope

Philadelphia has developed a ‘business accelerator’ programme called FastFWD, designed to encourage companies to bid for City tenders. The City focused on public safety and together with its partners, identified areas that were ready for innovation. They then identified the problem areas and called for solutions. They received 82 applications from around the world, and ten were chosen to participate in a 12-week programme to develop their ideas. The participating companies received a stipend, as well as access to City officials. Three of the participating companies were awarded City contracts.

## Why use Public Procurement to support Regional Innovation in the Western Cape?

Public Procurement is a major component

of the Provincial spend in the Western Cape, which was R40b in the 2012/13 Budget (Capetownchamber.com). The procurement spend was R11,57b, and of this, the largest spend was on the health sector. Interdisciplinary innovation in the major sectors would not

only grow the sectors but could also result in savings, which would comply with the need to be cost effective in public spending.

Improved performance in regional innovation systems means more commercialization, more business, more growth and more participation in the economy.

ONECAPE2040 sets out 'to stimulate a transition towards a more inclusive and resilient economic future for the Western Cape region'. It states that it aims to act as a guide in order to:

- Promote fresh thinking and critical engagement on the future;
- Provide a common agenda for private, public and civil society collaboration;
- Help align government action and investment decisions; and
- Facilitate the necessary changes we need to make to adapt to our changing local and global context; and address our development, sustainability, inclusion and competitiveness imperatives.

The focus is on **collaboration, innovation, cost effectiveness, resilience** and **inclusivity**. This implies that we will look for new ways to adapt to the changing context. The vision for 2040 is:

**A highly skilled, innovation-driven, resource-efficient, connected, high opportunity and collaborative society.**

At a workshop at the EDP in May 2014, Greg Clark from the Business of Cities pointed out that increasing global competitiveness means that a region that wants investment needs to build a regional identity. He stated that the Western Cape's global visibility is relatively poor, particularly on the business side. Despite having a number of universities in the region, including the University of Cape Town, which is arguably Africa's finest university, Cape Town is better known for its tourism and leisure

potential than for its research and innovation. He recommended assertively positioning Cape Town and the Western Cape as Africa's innovation hub.

## The Policy Context in the Western Cape

Public procurement is governed by the Public Finance Management Act No 1 of 1999) (as amended by Act No.29 of 1999) (PFMA) and the Municipal Finance Management Act No 56 of 2003 (MFMA).

According to the National Treasury ([www.treasury.gov.za](http://www.treasury.gov.za)) the PFMA:

... 'promotes the objective of good financial management in order to maximise service delivery through the effective and efficient use of the limited resources. The key objectives of the Act may be summarized as being to:

- modernise the system of financial management in the public sector;
- enable public sector managers to manage, but at the same time be held more accountable;
- ensure the timely provision of quality information; and
- eliminate the waste and corruption in the use of public assets.

The PFMA gives effect to section 216(1) of the Constitution of the Republic of South Africa, 1996 (Act No 108 of 1996) which requires national legislation to 'establish a national treasury and prescribes measures to ensure transparency and expenditure control in each sphere of government...'

Furthermore, Section 217(1) states that procurement is to be 'in accordance with a system which is fair, equitable, transparent, competitive and cost-effective.'

## LEGISLATIVE FRAMEWORK GOVERNING PROCUREMENT

Constitution of the Republic of South Africa (Act No. 108 of 1996) – Section 217 states that government procurement systems must be Fair, Equitable, Transparent, Competitive and Cost Effective

Fair, Transparent, Competitive, Cost Effective			Equitable	
Public Finance Management Act (Act No. 1 of 1999)	Municipal Finance Management Act (Act No. 56 of 2003)	Construction Industry Development Board Act (Act No. 38 of 2000)	Preferential Procurement Policy Framework Act (Act No. 5 of 2000)	Broad Based Black Economic Empowerment Act (Act No. 53 of 2004)
PFMA	MFMA	CIDB	PPPFA	BBBEE
Public Sector Clients	Public Sector Clients	Public and Private Sector Clients	Public Sector Clients	Public and Private Sector Clients

Source: Capetownchamber.com

National Treasury states that the MFMA ‘aims to modernize budget, accounting and financial management practices by placing local government finances on a sustainable footing in order to maximize the capacity of municipalities to deliver services to communities. The MFMA is required by the Constitution, which obliges all three spheres of government to be transparent about their financial affairs.’ (mfma.treasury.gov.za)

### Existing Procurement methods in the Western Cape

The existing procurement methods in the Western Cape include:

- Informal bidding – purchasing to the value of R500 000
- Competitive bidding – purchasing more than R500 000
- Limited bidding where there is a sole supplier or limited suppliers

- Contracts arranged by National Treasury, Provincial Treasury, Government agencies; and other organs of state.
- Public Private Partnerships

The Western Cape Government has a number of initiatives to improve the provision of services. These include:

- Supplier Database Revision for the Provincial Departments;
- E-procurement solution (IPS)
- Supplier Open Days
- Red Tape Reduction Unit
- Construction Industry Development Board initiatives
- Drive and focus on Supply Chain Management (SCM) transparency, accountability and efficiency. This last initiative includes four focus areas that are particularly relevant to PPIs. These include efficiency of broader budgeting spend that is growth and development orientated; the better planning of tenders; improvement

of specifications and post-tender contract management; and the need to avoid a snapshot view but to take cognisance of long-term impact that delivers efficiency and value for money.

## Challenges to innovation in the Western Cape

The PFMA and MFMA hold officials and municipal managers accountable for not complying with the legislation. This means that government officials would invariably rather play it safe and stick to tried and tested methods of procurement than risk flouting the PFMA and MFMA rules and regulations and being held personally responsible. This approach does not encourage innovation.

## Conclusion

Part of developing a strategy would be to analyse the existing procurement resources in the Western Cape. For example the Cape Chamber of Commerce and Industry has a procurement portal that provides a platform to find new suppliers, access to tender opportunities and advice and information. Currently it has over 17 000 SMMEs.

Public Procurement of Innovation needs to be officially recognized as an important part of an innovation policy. Rolfstam (2009) states that in 2008 the European Commission established an expert group on public procurement and risk management, demonstrating their commitment to pursuing PPI in the European Union.

The question is whether PPI complies with the regulatory environment in South Africa. Copenhagen's PPI model is a pre-tender process based on collaboration for innovation in service delivery, and it rests on the principles of transparency and collaboration.

This model would need to be examined by Treasury's PFMA unit, but as long as transparency is key to the process, then it stands a good chance of complying with the PFMA and MFMA requirements of being 'Fair', 'Equitable', 'Transparent', 'Competitive' and 'Cost Effective'. It is recommended that an appropriate WCG tender be used as a pilot project in conjunction with the National Treasury unit, in order to test the model within the local regulatory environment.

Innovation is not a guaranteed outcome of a process, but creating a space within which role-players from different sectors, industries, and institutions can come together to share their knowledge and resources increases the chances of innovation taking place. As Steven Johnson says in his animation, *Where good ideas come from*...

'Chance favours the connected mind'.

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