PUBLIC PROCUREMENT OF INNOVATION: THE CASE OF DIGIPOLIS

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BEN DE CONINCK
STIJN VIAENE
JAN LEYSEN
CHRIS VAN DER AUWERA

IN COOPERATION WITH NIDO ILAB

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A CHANGING ENVIRONMENT FOR THE PUBLIC SECTOR...

Public organizations are increasingly facing a volatile, uncertain, complex and ambiguous (VUCA) environment, catalysed by digitisation. This dynamic environment can be summarized by the four realities that characterize today's digital economy, and that force organizations to build new capabilities and to find alternative ways of working[1].

The four realities of the Digital Economy

1. **Experience is value.** Citizens want to take control over their lives' journeys – and digital allows them to do so. Winners use digital to design great experiences connecting the physical and the digital worlds seamlessly.

2. **Citizens are moving targets.** With digital, citizens switching between value propositions is the rule rather than the exception. Winners use digital to successfully staple themselves to the citizen's digital self to stay relevant and appealing.

3. **Ecosystems co-create value.** No single organisation owns all of the data, digital skills and capabilities to serve today's demanding and dynamic digital citizens. Winners bring partners to the table to grow the pie together.

4. **Digital platforms boost value co-creation.** Your digital innovation capability depends on how effective you are at combining your digital assets with those of others. Today's most valuable ecosystems are enabled by digital platforms – carefully managed architectures of reusable digital assets.

Adapting to this set of new realities occurs against the backdrop of the immense challenges that the public sector faces. In its 2017 White Paper on the Future of Europe, the European Commission indicated that *"Europe's challenges show no sign of abating."* Instead, citizens are increasingly demanding a public sector that utilizes its resources as efficiently as possible, and implements a range of effective policies targeting diverse topics such as innovation, sustainability, and employment generation. Additionally, calls for more transparency and an increased engagement of a broad array of stakeholders further intensify the pressure on public sector organizations.

Leveraging the expertise and knowhow of external partners, as encapsulated by reality 3, is necessary for the public sector to capture innovation opportunities and to keep up with the rapid pace of the digital economy. This 'openness' is rooted in the idea that the public sector should broaden its search for solutions outside the organizational boundaries in order to address the myriad of challenges it is facing. One way of mobilizing these external partners is through the mechanism of **Public Procurement of Innovation (PPI)**, which refers to the purchasing of innovative solutions by public organizations allowing to simultaneously: (1) improve the quality, efficiency, and effectiveness of public services; and (2) use the purchasing power of the public sector as a strategic instrument to stimulate innovation in the private sector.

[1] For more information on the four realities, we refer to the article Viaene, S., & Danneels, L. (2015). Driving Digital: welcome to the ExConomy. *Journal of Financial Perspectives*, 3(3), 182-187; or the video at https://youtu.be/OIx5IDK-WPo

Despite the potential, still little public procurement is aimed at innovation[2]. On 14 November 2017, we organized a workshop with the ambition of introducing **the Belgian best practice case of Digipolis** to a broad audience from the public and private sector. Through interactive group discussions, participants gained a thorough understanding of Digipolis' procurement strategy overhaul and were offered practical take-aways that can be inspirational for the own organization. The workshop also provided the opportunity to bring together a diverse community of like-minded practitioners to share experiences and reflections.

The workshop was aimed at participants from both the public and private sector of Belgium. In total 55 participants joined, of which 34 from the public sector and 21 from the private sector. Some of the public sector organizations that were represented are: Royal Library of Belgium, British Embassy in Belgium, FPS Policy and Support, FPS Justice, Federal Police, and Brussels Regional Informatics Centre. From the private sector, we welcomed among others Securitas Technology, SD Worx, and SAS Institute, and many startups such as dataroots, NoisyChannels, and mobicities.

The workshop was organized in the context of **Nido Federal Innovation Lab** and the ongoing doctoral research project at **Vlerick Business School**–**Royal Military Academy of Belgium**, with the support of the Belgian **Cabinet of Public Administration**. The doctoral research focusses on how Innovative Public Procurement ('innovating the procurement process or strategy') can serve as a lever for Public Procurement of Innovation ('the purchase of innovative solutions by public sector organizations'). Through a close cooperation between the involved partners, we not only broaden the understanding of this nexus but we simultaneously ensure that the research outputs are continuously translated into pragmatic insights with the aim of stimulating the adoption of Public Procurement of Innovation in Belgium.

Conceptual Clarity Through The Public Procurement Matrix

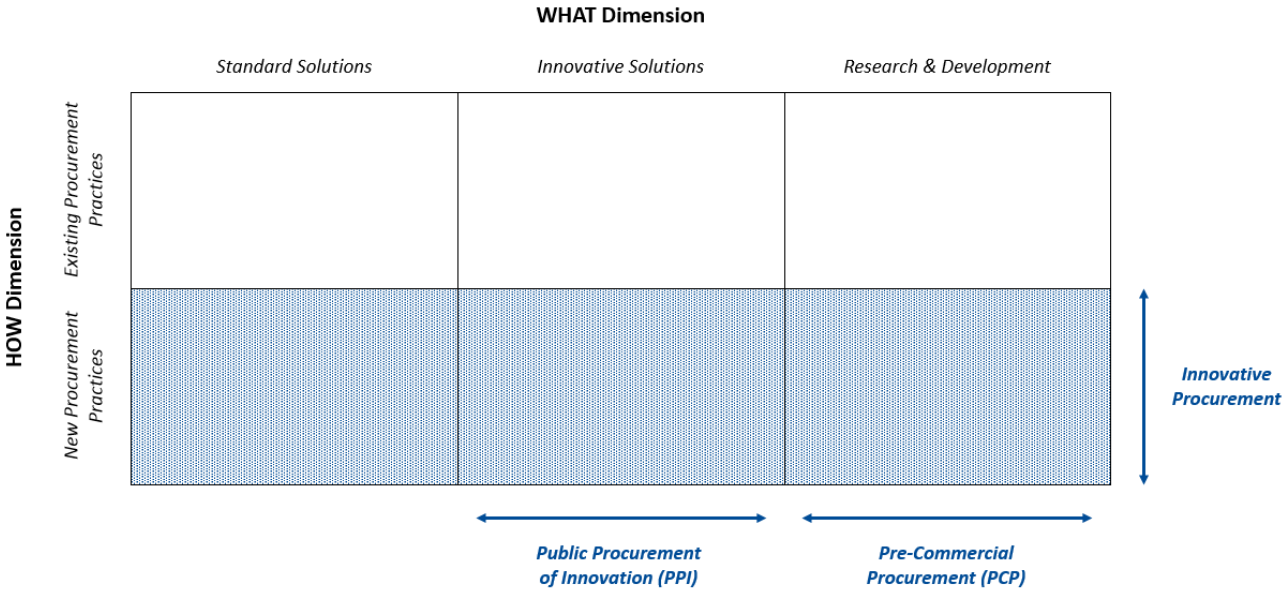
Discussions on Public Procurement of Innovation can easily become hindered due to a high degree of ambiguity resulting from the many terms used in this context. By introducing the Public Procurement Matrix we aim to provide conceptual clarity by positioning the key terms vis-à-vis one another. The Public Procurement Matrix defines public procurement along two dimensions:

- **The WHAT dimension** describes the outcome of the procurement process, which can either be a standard solution, an innovative solution, or Research & Development (R&D) services. *Standard solutions* refer to ready-made, off-the-shelf products. These are the traditional, well-established products that many public organizations turn to when they complete a procurement procedure. *Innovative solutions*, on the other hand, are solutions that are novel to the buying organisation. As such, they can either be completely new-to-the-world products, or products that already exists but have not been previously adopted by the buying organisation. This concept is often referred to as 'Public Procurement of Innovation' (PPI). *Research and Development (R&D) services* are the R&D activities that are required for the development of a new solution. There are no near-to-the-market products yet, and R&D is still needed to develop a commercially-stable solution. In this case, the scope of the procurement process is not a finished product; it is an R&D service only. It precedes the commercialization phase of the product, and may include R&D activities such as solution

[2] See e.g. De Coninck B., Viaene S., Leysen J., & Van der Auwera C. (2017). Barometer Innovative Public Procurement in Belgium. Available at https://www.vlerick.com/~/media/corporate-marketing/our-expertise/pdf/20170927BarometerInnovativePublicProcurementpdf.pdf

exploration, solution design, prototyping, up to the development of a test series. This concept is often referred to as 'Pre-Commercial Procurement' (PCP).

- **The HOW dimension** indicates that any of these solutions can either be purchased using existing procurement practices or using new procurement practices. Taking the example of e-procurement to illustrate the difference: procurement was originally done exclusively on paper and through registered mail. With the rise of the internet, however, it became possible to procure using an electronic platform (i.e. a new method), removing the need for administration on paper. This resulted in increased transparency, enhanced competition, and cost savings. Rethinking the way that public organizations purchase goods and services is what we refer to as "Innovative Procurement".



The matrix conveys the strong message that there is a strict divide between the terms Public Procurement of Innovation ('the purchase of innovative solutions by public sector organizations') and Innovative Procurement ('innovating the procurement process or strategy'). As a consequence, the matrix helps to avoid ambiguity in terminology and allows to make more explicit how innovative procurement can serve as a lever for Public Procurement of Innovation.

DIGIPOLIS: BUY FROM STARTUPS PROGRAM[3]

During the workshop on 14 November 2017 we introduced the participants to the case of Digipolis – the public, not-for-profit ICT service provider of the various public sector organizations in the City of Antwerp, Belgium. As the IT partner of the city, Digipolis aims to support Antwerp in its ambition to offer comprehensive digital services to residents, businesses, visitors, students, and so on. To this end, the ICT service provider is responsible to meet the wide array of digital needs of the city administration, the local police and fire brigade, the local social welfare organization, and various public schools in Antwerp.

At the start of 2015, Digipolis realized that because it was frequently partnering with traditional, large-scale software vendors, such as IBM, Oracle and SAP, the company was missing out on innovative solutions typically developed by startups. A closer investigation of why Digipolis was failing

[3] We would like to thank Digipolis and in specific Peter Crombecq for the information provided in the run up to the workshop and for the participation to the workshop. Their valuable input helped to ensure the success of the workshop.

to attract these startups revealed a procurement process dictated by the needs and wishes of large-scale ICT vendors. In January 2015, Digipolis embarked on a strategic journey aimed at implementing a new procurement strategy to radically boost the startup participation rate and increase the number of purchased innovative solutions. The workshop challenged the participants to devise a new procurement strategy for Digipolis, centred around 3 key challenges that the ICT service provider faced at the time of its strategic overhaul in 2015:

CHALLENGE 1

Context: Digipolis' strategic ambition of shifting the focus from large-scale ICT vendors to small, innovative startups was rooted in the idea that by doing so it could provide the Antwerp public sector better value-for-money, faster delivery, and more innovative solutions. This shift, however, represented a clear break with the past, and neither employees nor top management had a clear idea of how to approach these startup companies.

Challenge for Participants: How do we evolve towards a collaboration from 0 to 100 startups in one year?

Some key lessons learned during the workshop:

- As a public organization, it is important to be open to collaborate with partners outside your comfort zone. Digipolis brought in local partners to help design a strategy tailored to startups. The Advisory Board consisted of iMinds (a Flemish ICT research institute), Startups.be (a national interest group for Belgian startups), and the Startup Manager of the City of Antwerp.
- Have an open mindset to explore and get familiar with the environment in which startups operate. The advisory board suggested that in order to evolve towards a collaboration with startups Digipolis would need to:
    (a) Create an ecosystem of startups
    (b) Publish bite-sized challenges
- Rather than overthinking, dare take the jump and try. Be aware of the risk of ending up in a state of analysis paralysis.

CHALLENGE 2

Context: After researching the needs and wishes of startup companies, Digipolis realized that it would need to break through the organizational boundaries of the company, gather startups around its new ambition, and generate meaningful interaction with these startups. However, the ICT service provider was still confronted with the key question of which 'ingredients' it would need to create and sustain this ecosystem over time.

Challenge for Participants: How do we create an ecosystem of startups and small, creative entrepreneurs?

Some key lessons learned during the workshop:

- Do not attempt to reinvent the wheel. By mobilizing startup authorities (e.g. Startups.be) and clusters (e.g. Cronos) in Belgium, Digipolis leveraged their expertise and activated them as communication hubs.
- A straightforward, easy-to-navigate website (https://antwerpen.digipolis.be) was set up as focal point for the startup ecosystem. The website provides information and allows to register in order to receive news and updates.
- Through a Meetup.com group (https://www.meetup.com/DigAnt-Cafe), Digipolis offers startups a broad platform for knowledge sharing, networking, and gaining inspiration. Regular meetups, focusing on hot topics such as blockchain and Internet of Things, are organized in the form of talks, hackathons, and testimonials.

CHALLENGE 3

Context: For startups, the existing procurement process was too bureaucratic in time (i.e. too lengthy procedures), in form (i.e. too many administrative steps and documents were required), and in content (i.e. prescriptive specifications specified in great detail the desired solutions, leaving little to no room for creativity on the part of the supplying company).

Challenge for Participants: How can we make bidding for public procurement contracts attractive for startups and small, creative entrepreneurs?

Some key lessons learned during the workshop:

- A FAST procurement procedure was implemented that drastically reduces the average throughput time from four months (at minimum) to four weeks.
- Instead of Digipolis designing a solution itself, the ICT service provider publishes a challenge with a clear problem statement. This prevents limiting itself to the knowledge and expertise that is available in-house, thereby stimulating the development of out-of-the-box solutions provided by small-scale, innovative companies.
- Digipolis adopted short, bite-sized tender documents, ensuring that every section contains relevant information and is phrased in a 'sexy manner'.
- Interested companies are invited to present their proposed solution during a thirty-minute pitch. The pitch stimulates direct contact between Digipolis, the end client, and the supplier, creating an opportunity for co-creation between the supply and demand-side before an official tender is submitted.

The case of Digipolis highlights many interesting lessons learned on the building blocks of a procurement strategy overhaul that taps into the knowhow of startups. More generally, the case demonstrates four overarching take-aways for the successful implementation of Public Procurement of Innovation in a public organization. Rather than being context-dependent, these take-aways are generalizable lessons learned that derive from the case.

Key Take-Aways

1. **Rethinking the way that the public organization purchases can serve as an essential lever to buying innovative solutions.**
2. **Letting go of the preconception that the contracting authority is the expert gives companies the freedom to think outside of the box in solving public sector challenges.**
3. **Collaborate as a strategy by embedding the public organisation in a broad innovation network. Innovative procurement can be more than only streamlining the procurement process.**
4. **The need for an internal culture shift from an internally-focused public organisation that is tightly in control of the procurement outcomes towards an open, innovation-oriented mindset.**

About Us

NIDO INNOVATION LAB is the federal iLab of the FPS Policy and Support that was founded in 2016. Nido means 'nest' and is an abbreviation of 'Nurturing Ideas and Developing Opportunities'. The lab is a self-organizing small team that operates as a start-up. Its goal is to unlock the innovation potential within government and to provide a safe environment for public servants to experiment and to learn how to innovate. Nido realizes these goals by: (1) setting up a lean process that enables to nurture innovative ideas and develop opportunities; (2) providing government agencies with the tools & services to unlock their innovation potential and to grow an innovation culture; and (3) establish an innovation ecosystem and create a collaborative learning centre of expertise with partners inside and outside government.

VLERICK BUSINESS SCHOOL is a leading international business school. The school is consistently ranked among Europe's best business schools and belongs to a select group of business schools in the world that hold all 3 major international accreditation labels in the world of management education. The school offers a wide array of management programmes. The ongoing doctoral research of Ben De Coninck, under the supervision of prof. dr. Stijn Viaene and prof. dr. Jan Leysen, focuses on how Innovative Public Procurement ('innovating the procurement process or strategy') can serve as a lever for Public Procurement of Innovation ('the purchase of innovative solutions by public sector organizations').

ROYAL MILITARY ACADEMY is the military university of Belgium. Based in Brussels, the school is responsible for the basic academic, military and physical training of future officers, and for the continuing advanced training of officers during their active career in the Defence department. As university, the school also offers advanced academic training, such as master-after-master and PhD programmes. The Royal Military Academy is one of the partner universities involved in the ongoing doctoral research project.

CABINET OF PUBLIC ADMINISTRATION is the cabinet of Minister Steven Vandeput – Belgian Federal Minister of Defence, in charge of the Civil Service. The cabinet is led by Chris Van der Auwera, and strives for a modern, innovative, and customer-centric government. The central focus of the cabinet and its administration, FPS Policy and Support, is on providing high-quality public services for citizens and businesses. Recently, the cabinet has taken on a leading role in the founding of a federal Procurement Centre aimed at federally centralized purchases. It is also one of the key sponsors of the doctoral research project.

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BRUSSELS - GHENT - LEUVEN - ST. PETERSBURG
VLERICK BUSINESS SCHOOL - THE BUSINESS SCHOOL OF GHENT UNIVERSITY AND KU LEUVEN
STICHTING VAN OPENBAAR NUT - PUBLIC UTILITY FOUNDATION - VAT BE 0424 244 049
HQ: REEP 1 - 9000 GHENT - BELGIUM - T + 32 9 210 97 11
INFO@VLERICK.COM - WWW.VLERICK.COM