

Knowledge en Experience exchange PIP – LUP

Introduction to Programme for Innovation Procurement

December 1st, 2023



- ▶ **What**
- ▶ **How**
- ▶ **PIP methodology**
- ▶ **PIO portfolio and results**
- ▶ **Challenges ahead**





What? Programme for Innovation Procurement – PIP

Programma Innovatieve Overheidsopdrachten - PIO

MISSION to stimulate **Flemish public sector** to use public procurement as a strategic instrument to stimulate innovation

FOCUS development and/or validation of **INNOVATIVE SOLUTIONS**, through public procurement, in response to concrete public needs

WHY No spontaneous uptake of innovation procurement


- Public purchasing power in Flanders > 30 billion euro

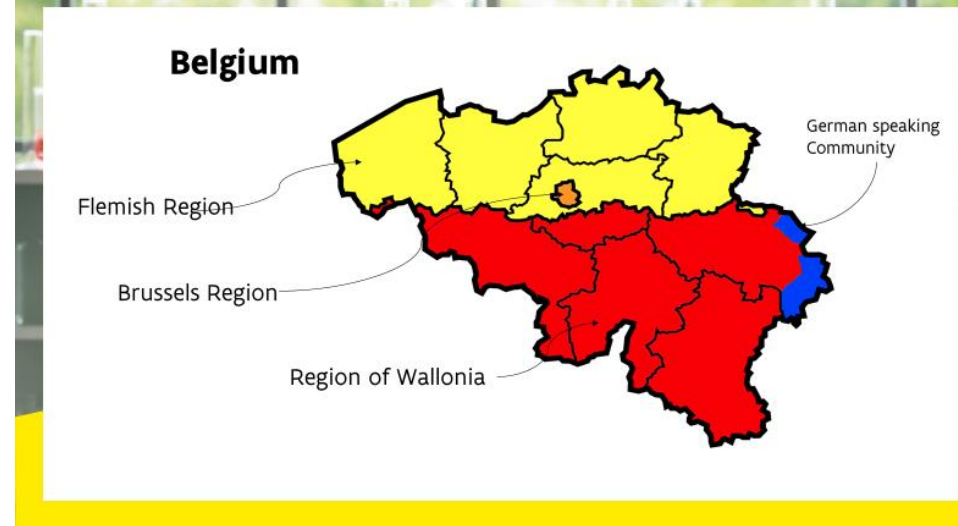
Procuring innovation with triple impact:

- Improving the performance of public services & government functioning
- Strengthening the competitiveness of enterprises
- Opportunities to tackle major societal challenges

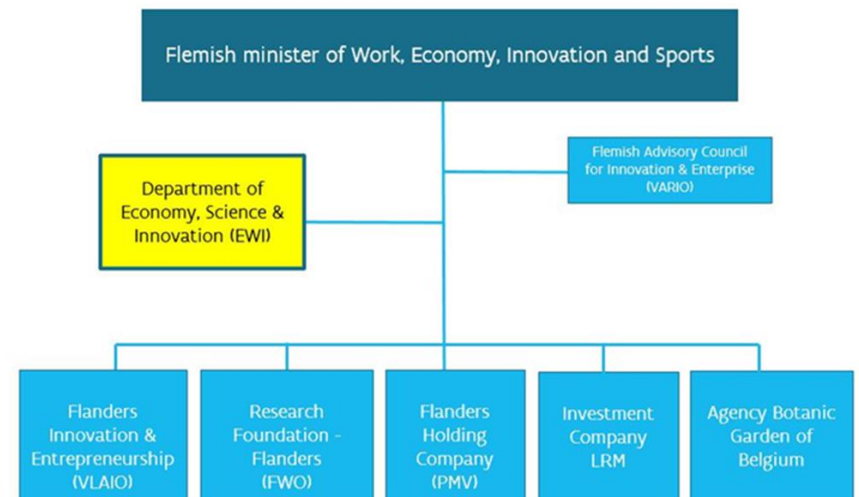
INITIATIVE Pilot Programme of Government of Flanders (2016 – 2019 - 2023)
Regular **innovation policy instrument** from 2024 on

Flemish Region

- ▶ The **Flemish authorities** consist of:
 - the Flemish Parliament
 - the Government of Flanders
 - the Flemish administration
- ▶ **Flemish administration** is subdivided into **10 policy areas**:
 1. Chancellery, Public Governance, Foreign Affairs and Justice
 2. Finance and Budget
 3. **Economy, Science and Innovation** → 
 4. Education and Training
 5. Welfare, Public Health and Family
 6. Culture, Youth, Sport and Media
 7. Work and Social Economy
 8. Agriculture and Fisheries
 9. Mobility and Public Works
 10. Environment
- ▶ Each **policy area** is composed of a **department** and **several agencies**.



Policy Area Economy, Science & Innovation in Flanders



How?

▶ Action Plans

- [2017 – 2019](#) and [2020 - 2023](#)
- 2024 – 2025 (awaiting approval)

▶ Operational goals

- PILLAR 1 - Develop a portfolio of inspiring innovation procurement projects
 - × through open annual calls for proposals
 - × guidance & co-financing of selected projects
- PILLAR 2 - Knowledge building, diffusion and networking
 - × website, newsletter, information and inspiration sessions, ...
- PILLAR 3 - Be present on international level

▶ Scope

- Whole of public sector organisations in Flanders
- Open to all sectors and domains - no thematic priorities

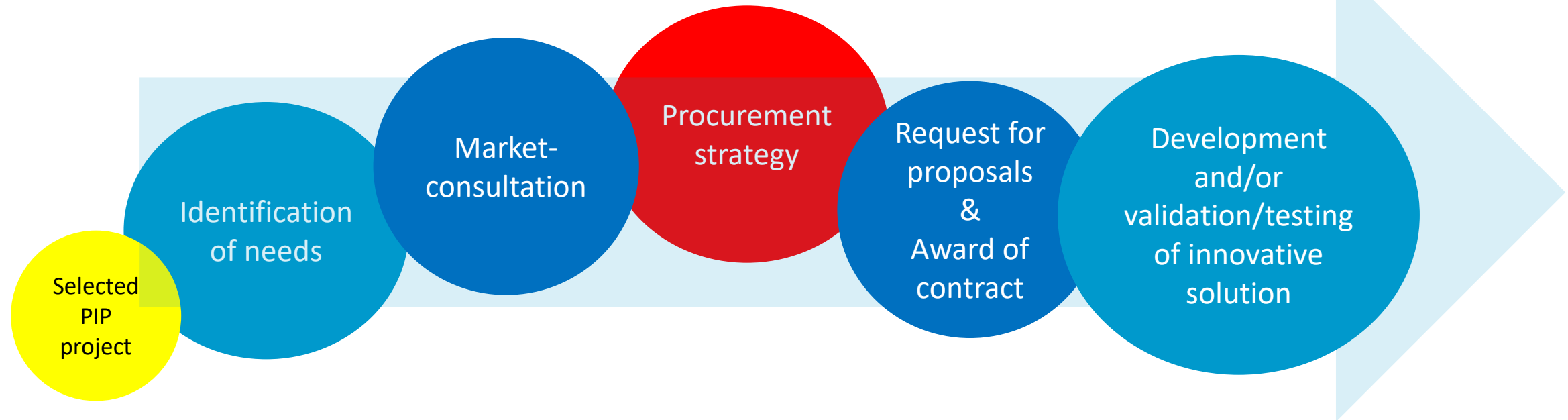
▶ PIP team (ca. 6 FTE) and budget (ca. 3 mio euro)

How? PIP offering to the public sector

- ▶ All Flemish public organisations (CA) can obtain:
 - Information and advice on how to implement and execute innovation procurement
- ▶ PIP-projects, selected after calls for proposals can obtain:
 - Guidance: by PIP-team and external consultant *(if necessary)*
 - Financial support Indicative amounts
 - Preparatory track ca. 40 000 euro (100% PIP)
 - Feasibility studies 5.000 euro – 30.000 euro (50/50 partnership)
 - Development projects 15 000 euro - 1 000 000 euro (50/50 partnership)
 - Pilot projects 15 000 euro - 1 000 000 euro (50/50 partnership)

PIP Methodology

Customized approach depending on the needs and complexity of the selected project



How to deal with the identified risks?

- Need for phased approach? proof of concept? prototype development? testing?
- Most appropriate procurement procedure?
 - Procedure with negotiation, innovation partnership, ...
 - Precommercial procurement,

Outcome needs assessment and market consultation

defining use cases

What are we looking for? What do we need, what do we want? For Whom?

Needs are captured in **use cases/functional requirements** in workshops with end users

AS A [Stakeholder/user]
 I CAN [do / have something]
 SO THAT [I can achieve a certain goal]

Added value 13
 from end-user perspective

prioritizing use cases



Not important

Must



Market consultation

Use cases/functional requirements are evaluated on their technological complexity, required effort, development time, feasibility, contextual conditions, etc by experts (industry, knowledge institutions)



Off the shelf

Mission impossible

from technological perspective



PIP Methodology - What is different?

- ▶ **More attention to needs assessment**

- Functional requirements, instead of technical specifications
- In depth interaction with stakeholders, end users
- Prioritising needs

- ▶ **More in depth interaction with the market, preceding the tendering**

- Organising open market consultations, one to one's, ...
- Transparency by publishing results and reports on PIP website
- Stimulate competition

- ▶ **More attention on procurement strategy and implementation (risk management)**

- Identification and management of risks
- Enterprise & innovation friendly tender documents, adequate selection & award criteria, ...
- Information sessions, pitches, ...

PIP-portfolio and results

▶ > 100 inspiring projects

- <http://www.innovatieveoverheidsopdrachten.be/projecten>
- <http://www.innovatieveoverheidsopdrachten.be/en/projects>

▶ Mix of topics and domains

- Majority digitalization projects (broad sense)
- Circular economy, energy and social innovation projects

▶ Mix of big budget & low(er) budget projects

▶ Mix of innovation maturity levels

▶ Mix of procurement procedures

- Majority: negotiation procedures
- Only a few innovation partnerships and precommercial procurements

The screenshot shows the 'Projects' page of the PIP-portfolio. At the top, there is a search bar and three dropdown menus for 'Domain', 'Theme', and 'Status', each with a 'SUBMIT' button. Below this, a list of projects is displayed, each with a circular icon, a title, and a brief description. The projects include:

- App for healthy food**: Initiator: Flemish Agency for Care and Health (VAGG) - Flemish Institute for Healthy Living (VIGG). Many Flemish people eat unhealthy food. In order to change this behaviour the government wants to support its citizens at the moment they are in the shop buying food, but also before and after the purchase. In order to realise this, the Flemish Agency for Care and Health and the Flemish Institute for Healthy Living want to develop a smartphone application.
- Assessment framework/grid for alternative fire safety measures**: Initiator: Department of Welfare, Public Health and Family (VWV) and Flemish Infrastructure Fund for Personal Hazards (VIBB). Many alternative technologies already exist in the field of fire safety in buildings. However, these are not always optimal for use in new or existing care facilities because their effectiveness in combined applications is insufficiently known. On top of this, a regulatory framework is lacking.
- Capsat: Satellites imagery information for a better agricultural policy in Flanders and Europe**: Initiator: Department of Agriculture and Fisheries. The Department of Agriculture and Fisheries monitors the correct and timely implementation of policies. High-resolution images from various satellites are able to map out the correct information faster. This allows better monitoring, guidance and control of farmers.
- Sustainable street lights**: Initiator: City Council Halle. The aim of the project is to develop a service contract for the purchase of street lighting according to the principles of the circular economy. The energy used is locally produced and supported and financed through civic participation.
- Integrated Smart City Operating System for Flanders**: Initiator: Digipolis and VICTOR. The aim of this PIP project is an Integrated Smart City Operating System that is modularly (thus sustainably) built from reusable generic IT components and that allows and supports Flemish cities and municipalities to develop their specific IT applications faster, thus cheaper.
- Digital Elevation Models of Coastal Areas (DEMCA)**: Initiator: Department Mobility and Public Works (MOM) - Maritime Access. With this project the Department of Mobility and Public Works aims to guarantee a more efficient and cost effective service in a sector of importance for Flanders.
- Removal of dumped war ammunition in the North Sea**: Initiator: Flemish government, Department of Mobility and Public Works (MOM), Maritime Access division. The sandbank 'De Braadennant', located in the North Sea at about 1.5 kilometers from the coast of Knokke, contains dumped ammunition (mainly) from WWI. Maritime Access wants to test innovative methods for the safe disposal of this ammunition dump site.
- Quickscan Organisations**: Initiator: Department of Culture, Youth and Media (CYM). The proposal concerns the development of a digital tool 'Quickscan Organisations' and the underlying algorithm. The development of this tool will make it possible to automate the business maturity assessment and decision on eligibility, and reduce the time investment for the applicant and evaluators.
- Social Impact Bond**: Initiator: VDAB. VDAB wants to introduce the mechanism of a Social Impact Bond or SiB in Flanders and use it for an employment project stimulating 'lost' youth in Antwerp to search for and find a job.
- Speech technology for reporting in the Flemish Parliament**: Initiator: Flemish Parliament. Written reporting is a very labour-intensive process. In order to improve working conditions and make reporting faster, more efficient and more accurate, the Flemish Parliament wants to explore the possibilities of speech technology and automatic transcription (from speech to text).
- Sustainable Healthy Schools**: Initiator: Flemish Energy Company. With the project proposal 'Sustainable Healthy Schools' (DSG), the Flemish Energy Company (EIB) aims to develop and test performance-based contracting of comfort and energy renovations in schools.

CATE - Continuous Auditing based on Technological Evolution and Data Mining



Initiator(s):
The Flemish Audit Authority

Theme:
Digitalisation

Domain:
Economy

Active state:
[In preparation](#)

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Challenge Preparation Procurement Execution

The Flemish Audit Authority is responsible for auditing (financially and operationally) projects that are funded through European structural funds and Flemish co-funding. The following points are particularly notable during these audits:

- The audits are carried out two years after the actual expenditure, which usually does not allow recovery of rejected expenditures. Earlier, faster and continuous monitoring / auditing allows a shorter response time, which means that in some cases the rejected expenses could still be recovered;
- An operational / financial audit includes partly an editorial component, partly an executive and partly an interpretative component. There is a certain recurring system for the first two components, with little added value. Only the third component has a cognitive aspect. The entirety therefore has a certain "tick-off content", which on the one hand poses a risk, and on the other hand is not very cost effective;
- All audit work must be done between +/- April and November (incl. two leave months within which the audit work must be carried out on a strongly reduced regime), as a result of which not all audits can be carried out with the available auditors. A significant proportion of audits therefore need to be outsourced. This outsourcing is done at a relatively high cost, for not always a significant added value;
- When outsourcing, it is often noted that the performers of these assignments are often young auditors who have little or no knowledge of public procurement and state aid, which makes quality reviews by the Flemish Audit Authority very intensively and time-consuming, which is not the purpose of outsourcing.

In view of the above challenges, the aim of this project is - within the framework of the European regulations regarding audits on structural fund - to audit projects on a technological as well as a conceptual level and to re-think (how it is being rolled out to achieve a required degree of assurance) in order to achieve

1. greater level of assurance,
2. at a lower cost,
3. within a smaller time-frame,
4. with greater reporting added value and
5. lower loss of (European) resources.

The project CATE therefore includes both a methodological and a technological aspect.

1700 supported by Artificial Intelligence



Initiator(s):
Information Flanders

Theme:
Digitalisation

Domain:
Governance

Active state:
[In execution](#)

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Challenge Preparation Procurement Execution

Together with the Agency for Information Flanders (AVI) and under the guidance of the consulting company Verhaert, the need was sharpened between February and May 2019: during one to one conversations with AVI employees and through several workshops, the needs were translated into multiple use cases, which were then also prioritised. The overview and outcome of this preparatory work is available as an annex below:

[informatievaardens-artificial-intelligence.pdf](#)

[report_qla-1700al-desk-1.pdf](#)

On June 12th, a market consultation was organised in which more than 30 companies participated. It has been tested how the use cases can now be further developed using state-of-the-art technology.

The final report on the preparation process and the market consultation and the technology scouting can be downloaded here:

[report_qla-1700al-publtek-finale-v2-dec20190814.pdf](#)

[tech-scouting_cards-1700al-0.pdf](#)

The presentations, incl. the pitches given at the market consultation can be found here:

[1700al-introductie-usecases-verhaert.pdf](#)

[1700al-marktconsultatie-alexandriaworks-pitch.pdf](#)

[1700al-marktconsultatie-apollo8-qla.pdf](#)

[1700al-marktconsultatie-arni-myforce-qla.pdf](#)

[1700al-marktconsultatie-artificial-intelligence-impactassessment.pdf](#)

[1700al-marktconsultatie-chaplayer-qla.pdf](#)

[1700al-marktconsultatie-clever-qla.pdf](#)

Digital Elevation Models of Coastal Areas (DEMCA)



Initiator(s):
Department Mobility and Public Works (MOW) – Maritime Access

Theme:
Digitalisation

Domain:
Mobility

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Challenge

Preparation

Hydrographic surveys are three-dimensional surveys allowing the topography of the ocean floor and riverbeds to be mapped. The Government of Flanders annually spends several million euros on hydrographic surveying of the Belgian part of the North Sea and the Scheldt estuary.

Executing these hydrographic surveys faces **some important limitations**:

- Survey areas are limited by what is feasible within a single survey day. Consequently, large areas need multiple survey days (up to weeks) with eventually multiple survey vessels, while certain areas have a low revisit frequency (up to multiple years). It is clear that data acquisition and processing are costly and labour intensive.
- Even more efforts are needed to adequately cover the intertidal part of coastal areas. Bathymetric surveys need to be scheduled at high water, resulting in slower acquisition rates. Laser scanning surveys need optimal weather conditions and need to be scheduled at low water. Combining both survey results into a single map covering the area of interest is complex and adds to the costs of data acquisition.

To deal with challenges, the Department of Mobility and Public Works – in cooperation with PIP (the Programme for Innovation Procurement) seeks an **innovative solution** to survey the depth of coastal areas:

- Over a large spatial extent (f.i. the whole Western Scheldt)
- Instantaneous, meaning within the same survey effort (f.i. on 1 day)
- Both in shallow turbid water and on adjacent intertidal and supratidal areas
- with a similar spatial resolution of actual hydrographic and topographic survey methods

With this project the Department of Mobility and Public Works aims to guarantee a **more efficient and cost-effective service** in a sector of importance for Flanders.

Development of an Optimo garbage truck



Theme:
Circular economy

Domain:
Environment and spatial development

Active state:
[Realised](#)

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Challenge

Results

Limburg.net is looking for the waste collection system of the future. The objectives are to develop a system that allows (1) more fractions to be collected separately, (2) at the same or lower cost price, (3) with less transport kilometres and (4) high customer friendliness.

Optimo is a project that assesses whether the simultaneous collection of the various separated waste fractions in one single transport meets these requirements.

In Flanders citizens sort by type of waste into bags of different colours, but all bags are collected with the same garbage truck. In a sorting centre, the bags are then optically sorted.

Based on the results of an ongoing pilot project, we can simulate that the Optimo system is more sustainable (fewer kilometres) and financially more interesting. The first reports on customer-friendliness (surveys) and participation/sorting discipline (sorting analyses) are also positive.

But technically there remains a problem: in the traditional press crackers, household waste is compressed as much as possible and a large loading capacity is achieved. The Optimo garbage trucks can only press limitedly, as the bags should not tear. Research is needed on the design of loading systems (or logistical alternatives).

If the project is successful, there is great potential in Flanders and beyond for multi-fraction garbage collection in urban (less mobility problems and less fine particles) and rural areas (more efficient).

<https://www.innovatieoverheidsopdrachten.be/en/projects/digital-elevation-models-coastal-areas-demca>

<https://www.innovatieoverheidsopdrachten.be/en/projects/development-optimo-garbage-truck>

Social Impact Bond



Initiator(s):
VDAB

Thema:
Social Innovation

Domain:
Work

Active state:
[In execution](#)

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Challenge Preparation Procurement Execution Results

VDAB wants to introduce the mechanism of a Social-Impact-bond or SIB in Flanders and use it for an employment project stimulating 'lost youths' in Antwerp to search for and find a job.

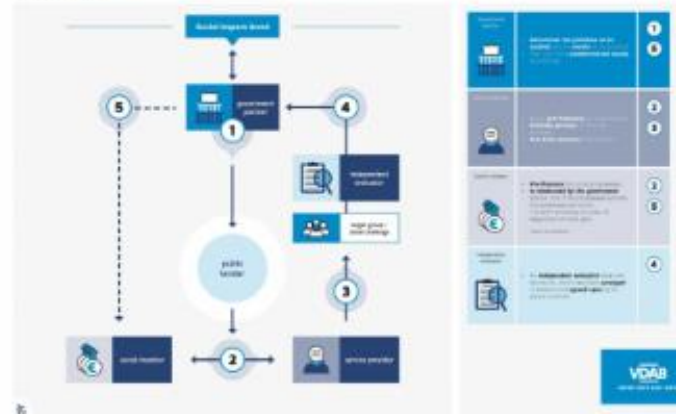
With a SIB, a government organisation concludes a contract with an external contractor or social service supplier and a private investor or financier to tackle a complex social problem. In the event of success (actually solving the problem) the government organisation pays the investment back to the financier with a return (or bonus) resulting from the savings that solving the problem has yielded to the government organisation.

In order to explore and test the value of the SIB construction for use in the labour market, the VDAB uses the Antwerp NEET youth as a pilot project. NEET stands for Non-In-Education-Employment-or-Training. These are young people who have sort of 'disappeared from the radar', and who are extremely difficult to stimulate to employment.

The VDAB attaches three objectives to this project:

- Examine whether a SIB as an instrument for public-private partnership makes sense for use in the labour market;
- Guiding the Antwerp NEET youths to employment;
- In case of success, develop a platform so that Flemish public authorities can use SIBs more easily in the future, not only in the labour market but also in other policy areas.

Social Impact Bond VDAB structure



[Social Impact Bond | Departement EWI
\(innovatieveoverheidsopdrachten.be\)](https://www.innovatieveoverheidsopdrachten.be)



PIP-portfolio and results

► Examples of innovative solutions cofinanced by PIP:

- Cold2Gold, Optimo garbage truck, Incontinence Care 2.0,
- Sustainable streetlights....
- Bookaplace, Language City app, BuyITPublic, Socrates, LV- AgriLens app, ...
- Healthy Diet app, Digital City voucher,
- Planningtool for schools & teachers,
- Framework for fire safety in healthcare infrastructure, ...
- Fire Safety Information Center, Social Impact Bond, ...



Challenges ahead

- ▶ **Improving knowledge dissemination and knowledge transfer regarding innovation procurement**
 - in a pro-active and easy-to-grasp manner
 - in partnership with other stakeholders
- ▶ **Implementation and scaling of results**
 - Role of public and private sector?
 - Dealing with IPR rights & competition rules in practice?
- ▶ **Integration of innovation procurement as ‘innovation policy instrument’ within the Flemish public administration**
- ▶ **Enhancing innovation maturity level of public sector**
 - Importance of public sector innovation
 - Importance of the strategic use of procurement as a catalysist of innovation, sustainability, social responsibility, ...

PIP - ultimate goal

“PIP will have achieved its goal when policymakers and government managers are not only convinced of the added value of innovation procurement, but also use innovation procurement in a structural manner as an essential policy instrument in achieving future-oriented policy objectives and optimizing public services.”



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www.innovatieveoverheidsopdrachten.be

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