



**PREVENT**

PROCUREMENTS OF  
INNOVATIVE, ADVANCED  
SYSTEMS TO SUPPORT  
SECURITY IN PUBLIC  
TRANSPORT

# PCP HANDBOOK

**BASED ON THE PREVENT  
PRE-COMMERCIAL PROCUREMENT**



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement number 833444

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	KENTRO MELETON ASFALIAS (KEMEA)	Greece
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	PKP SZYBKA KOLEJ MIEJSKA W TROJMIESCIE (PKP SKM)	Poland
	SOCIÉTÉ NATIONALE DES CHEMINS DE FER FRANÇAIS (SNCF)	France
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	UNION INTERNATIONALE DES TRANSPORTS PUBLICS (UITP)	Belgium
	AYUNTAMIENTO DE SEVILLA (SCC)	Spain
	HELLENIC POLICE (HPO)	Greece
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## ■ Région Provence-Alpes-Côte d'Azur

The French “Sud Provence-Alpes-Côte-d’Azur Region” is a local authority endowed with powers and competences mainly concerning regional planning, economic development, education, vocational training and transport. It consequently manages regional passenger transport, particularly rail (regional express train networks) and participates in financing infrastructures (such as railway lines) – alongside operators (the national railway society (SNCF) for railways, private companies for regional buses (Regional Express Lines: LER), interurban buses and regional school buses for instance).

In the context of the European project PREVENT, the institution is the Public Buyer group coordinator and mobilises its in-house expertise regarding the required transdisciplinary competence on transport and security, and in the field of innovation procurements and R&D.

## ■ CORVERS Commercial & Legal Affairs



CORVERS is a leading legal and economic consultancy firm in the Benelux area, specialized in European public procurement law, innovation and contracting. CORVERS acts as advisor and external expert for both governmental bodies and commercial businesses (on the national as well as European level), provides advice and guidance regarding public procurement strategies and methodologies to public procurers around Europe and conducts research in the field of public procurement (specifically in relation to innovation and sustainability). Expertise areas include pre-commercial procurement (PCP), public procurement of innovative solutions (PPI), ICT infrastructure, public-private partnerships (PPP), sustainable construction (public buildings, social housing, road infrastructure), public utilities (e.g., water) and R&D projects. CORVERS also advises clients on a wide range of ICT related issues including (but not limited to) open source strategy, IPR management and licensing agreements.

## ■ KEMEA - Center for Security Studies



The Center for Security Studies (KEMEA) is a think tank on homeland security policies and an established research center since 2005 (L. 3387/2005) within the Hellenic Ministry of Citizen Protection, aiming to support security policy implementations in Greece, at a strategic level. Specifically, the activities KEMEA is involved in include a). the certification of practitioners in private security professions at the national level, b). research and development in the context of National and European projects in close cooperation with LEAs, working under the auspices of the Ministry of Citizen Protection and c). training of practitioners in new systems and technologies. The Center also provides advisory and consulting services to the Ministry of Citizen Protection, as well as other Public and Private authorities, on safety and security issues. With regards to the institution’s experience in Innovation Procurement, KEMEA acts as the Lead Procurer in 2 Pre-Commercial Procurement projects funded by the EC and as a Public Buyer in another one.

## ■ Polish Platform for Homeland Security (PPBW)



The Polish Platform for Homeland Security (PPBW) was established in 2005 as a forum for dialogue between the end users (mainly Law Enforcement Agencies), the research and development organizations, and the administration responsible for financing of research. The mission of PPBW is to improve the level of public security by supporting agencies and institutions responsible for security and legal order in Poland in their work on dedicated innovative technological, organizational, and legal solutions. The Platform cooperates with around 250 consultants from security area: experienced officers (especially representing the Police, Border Guards, Internal Security Agency) prosecutors, judges and representatives of science experienced in cooperation with LEA. Moreover, PPBW is focused on defining and solving problems in the area of security, by preparing reports and other materials for policy makers like summary of workshops and conferences or research and development projects. Projects funded by the EC and as a Public Buyer in another one.

<sup>1</sup>The contents of this publication are the sole responsibility of PREVENT consortium and do not necessarily reflect the opinion of the European Union.

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# 1 EXECUTIVE SUMMARY



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement number 833444



# 1. EXECUTIVE SUMMARY

This Handbook is designed to address key aspects public authorities must consider at each step of a PCP and provides, in particular, recommendations for the transport and security sector. The PREVENT project, funded by the European Commission under the H2020 programme, is used as a case study for the first stage of the PCP. Moreover, this guide also sets forward the future steps that the PREVENT Consortium will undertake in order to move towards launch and completion of the PCP.



## 1.1 Background and general information

### **Pre-Commercial Procurement: a modern way to suit your needs for innovating products**

Pre-Commercial Procurement (PCP) is an approach for Public Buyers to acquire research and development services (and under certain conditions the related R&D results) that involves competitive development in phases, risk-benefit sharing under market conditions, and where there is a clear separation between the PCP and the deployment of commercial volumes of end-products.<sup>2</sup>

This Handbook is designed to address key aspects public authorities must consider at each step of a PCP and provides, in particular, recommendations for the transport and security sector. The PREVENT project, funded by the European Commission under the H2020 programme, is used as a case study for the first stage of the PCP. Moreover, this guide also sets forward the future steps that the PREVENT Consortium will undertake in order to move towards launch and completion of the PCP.

<sup>2</sup>EAFIP Toolkit Module 1

## A PCP brings a wide range of benefits to all participating stakeholders:

**For Procurement Organisations: Innovation procurement gives buyers a leverage to shape the R&D phase.**

Through the PCP process, the needs of procurers will be fully known to the industrial developers as early as the research stage. This ensures that the Public Buyers:

- Achieve desired degree of interoperability from the start.
- Reduce technology and vendor lock-in (when interoperability requirements and/or open standards are required).
- Gain increased end-user satisfaction and quality service delivery.

In a PCP procedure, suppliers carry out all R&D in a competitive playing-field. Thus, the procuring organisations:

- Obtain better quality products at lower price.
- Reduce the risk of investing high amounts of money in R&D to develop a product that doesn't become a reality
- The risk of potential legal claims is also diminished, as the R&D development phase (PCP) is clearly separated from the purchasing of commercial volumes
- Avoid recurring unforeseen customised development expenditures.

Finally, legal provisions in the PCP contracts guarantee:

- License free usage for procurers.
- The right of the Public Buyers to request licenses to third party suppliers under FRAND terms.<sup>3</sup>

In essence, PCP allows procurers to put the public needs at the centre of the development of innovative solutions and obtain the tailored solution at competitive prices.



<sup>3</sup>Refers to fair, reasonable, and non-discriminatory (FRAND) terms. It is a voluntary licensing commitment that standards organizations often request from the owner of an intellectual property right (usually a patent) that is, or may become, essential to practice a technical standard. Source: Layne-Farrar, Anne; Padilla, A. Jorge; Schmalensee, Richard (2007). «Pricing Patents for Licensing in Standard-Setting Organizations: Making Sense of FRAND Commitments». *Antitrust Law Journal*. 74: 671.

<sup>4</sup><https://www.investopedia.com/terms/d/death-valley-curve.asp>



**For Suppliers: Pre-commercial procurement provides early first-hand visibility into the users' needs. Hence, they are able to tailor solutions to the market's needs.**

Public Buyers select suppliers for the PCP, based mostly on their R&D competence. As a consequence, PCPs:

- Open a route-to-market for innovative SMEs.
- Support to start-ups in overcoming the 'Death Valley'.<sup>4</sup>
- Accelerate the process of bringing scientific results to market.
- Stimulate company growth and capacity building in several countries in the case of a cross-border joint-procurement.

PCP entails a needs-driven R&D approach. Accordingly, this type of procurement:

- Shortens time-to-market for innovative products and services.
- Guides suppliers into developing market-demanded products.
- Encourages commercialisation, helping participating SMEs to gain a competitive advantage.



**Socio-economic Benefits: Innovative products and services are made available faster and at better prices.**

Innovative procurement:

- Drives tax-payers money into innovative and highly effective products, meeting public's demand, through a more efficient use of public resources
- Helps tackle environmental and social challenges through new and innovative practices.
- Creates high added-value jobs in Europe and contributes to sustainable economic growth.

<sup>4</sup><https://www.investopedia.com/terms/d/death-valley-curve.asp>



## ■ 1.2 Glossary

Acronym	Full-form	Brief Description
-	<b>Market entities/economic operators/ supplier</b>	Any natural or legal person, or a group of such persons and/or entities which offers the execution of works and/or a work, supplies or services on the market.
<b>FA</b>	<b>Framework Agreement</b>	Agreement to be signed between the Lead Procurer and the successful tenderers.
<b>IPRs</b>	<b>Intellectual Property Rights</b>	Intellectual property rights include patents, copyright, industrial design rights, trademarks, plant variety rights, trade dress, geographical indications and in some jurisdictions trade secrets.
<b>JPA</b>	<b>Joint Procurement Agreement</b>	The agreement signed between the Public Buyers for implementing a joint PCP.
<b>LP</b>	<b>Lead Procurer</b>	The Lead contracting authority that acts on behalf of the PBG in joint PCP.
<b>OMC</b>	<b>Open Market Consultation</b>	Activities to interact with the industry before the publish of the tender.
<b>PB</b>	<b>Public Buyer(s)</b>	Public procurers are contracting authorities or contracting entities as defined by the EU public procurement directives.
<b>PBG</b>	<b>Public Buyers Group</b>	Procurers that provide the financial commitments for the PCP
<b>PCP</b>	<b>Pre-Commercial Procurement</b>	The public procurement of R&D services performed by the industry.
<b>R&amp;D</b>	<b>Research and Development</b>	The innovative activities undertaken by corporations or governments in developing new services or products, or improving existing services or products.
<b>SME</b>	<b>Small Medium Enterprise</b>	Small and medium-sized enterprises (SMEs) are defined in the EU recommendation 2003/361. The main factors determining whether an enterprise is an SME are: > staff headcount > either turnover or balance sheet total





# 2 WHY PRE-COMMERCIAL PROCUREMENT? THE REASONING BEHIND THE HANDBOOK



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## 2.WHY PRE-COMMERCIAL PROCUREMENT? THE REASONING BEHIND THE HANDBOOK

Representing around 19% of the EU's GDP, public procurement plays a pivotal role in public investment. While stimulating economic development across Europe, it also boosts the Single Market and plays an important role in channelling European Structural and Investment Funds. It is estimated that around 48% of the European Structural and Investment Funds is spent through public procurement.<sup>5</sup>



Promoted across Europe to encourage innovation, interoperability, cross-border cooperation and investment sustainability, a PCP is a procurement process which is, first and foremost, a demand-driven approach. This represents a strong asset for Public Buyers as it equates to efficiency and effectiveness for all stakeholders - from public administrations at national and regional level, to enterprises and citizens. It helps us all make the most out of public investment while guaranteeing maximum benefits for all actors.

### 2.1 What is Pre-Commercial Procurement?



Introduced in the Communication from the Commission: Pre-commercial Procurement: Driving innovation to ensure sustainable high quality public services in Europe, Pre-Commercial Procurement (PCP) is an approach for contracting authorities to acquire research and development services (and under certain conditions related R&D results), with the purpose of steering the development of new innovations towards public sector needs, without committing to engage in a follow-up Public Procurement of the Innovative solutions (PPI) emerging from the PCP.<sup>7</sup>

Over the years, the European Commission has increasingly been supporting R&D through PCP with a dual objective:

- To allow the public sector to effectively face the important societal challenges. Addressing these, often requires public sector transformations.
- To encourage socio-economic growth through demand -driven innovation which opens markets for industry/ researchers thus creating growth and jobs across Europe.

<sup>5</sup> European Commission. Public Procurement Indicators 2017, DG GROW, G - Single Market for Public Administration G4.

<sup>6</sup> COM(2007) 799 final. See <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2007:0799:FIN:EN:PDF>

<sup>7</sup> See article 14(f) of Directive 2004/18/EC (no longer in force). Currently PCP is excluded from the scope of the public procurement directives in article 25 of Directive 2014/23/EU, article 14 of Directive 2014/24/EU and article 32 of Directive 2014/25/EU.

The public sector is compelled to purchase goods and services to ensure the well-being of their citizens. A PCP allows the public sector to do so while speeding up modernisation to improve quality and efficiency of public services with breakthrough solutions.

Moreover, PCPs facilitate the SMEs to access the procurement market by offering the possibility of gradually increasing contract sizes, tasks and required manpower, as well as stringent and stable financial incentives for the R&D process. The competitive phased approach of a PCP prompted in a PCP is increasingly important in bridging the knowledge gap between the public sector and suppliers.

In an ever-changing world where innovation is inherent to any good or service, interoperability and coherence of solutions across borders, pooling of resources and market defragmentation is a building block for both the public sector and suppliers. A PCP conducted jointly by several Public Buyers offers all parties the opportunity to address issues of common interest together.

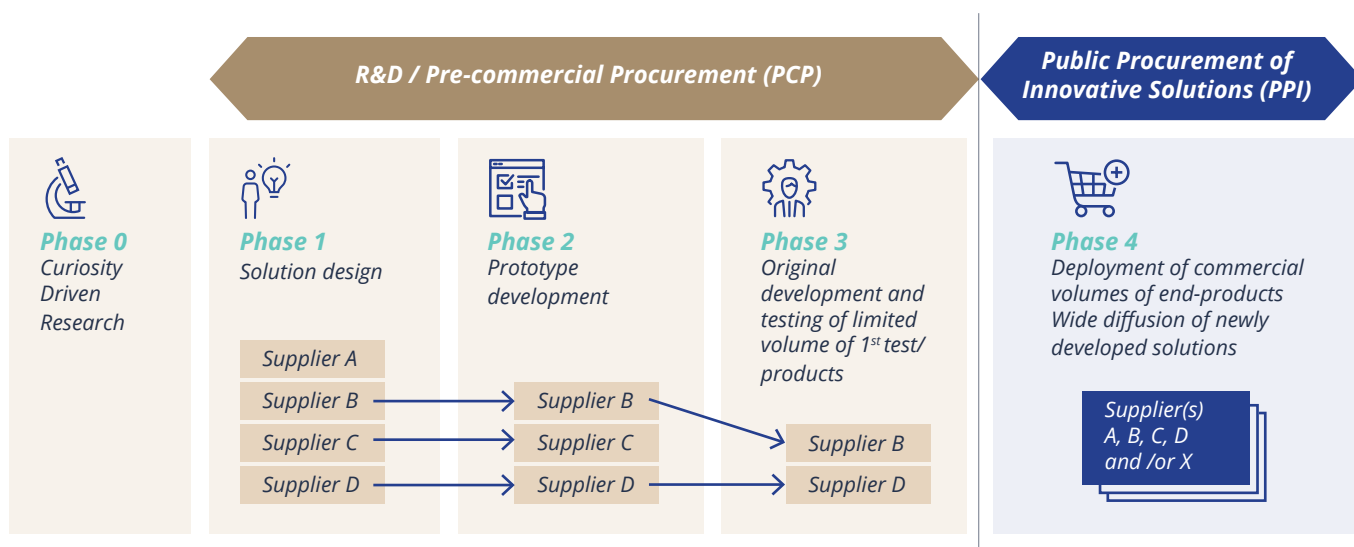


Figure 1. PCP and PPI process. Source: European Commission

A PCP is used when the Public Buyer's (PB) needs cannot be solved by Commercial Off the Shelf (COTS) or near-to-the-market products and therefore new R&D is needed to develop and test new solutions to address the procurement need. This instrument enables the comparison of the advantages and disadvantages of alternative solutions approaches. Also, it reduces the risk of the promised innovations step-by-step. This is achieved through its 3-phased approach consisting of: solution design, prototyping and operational testing.

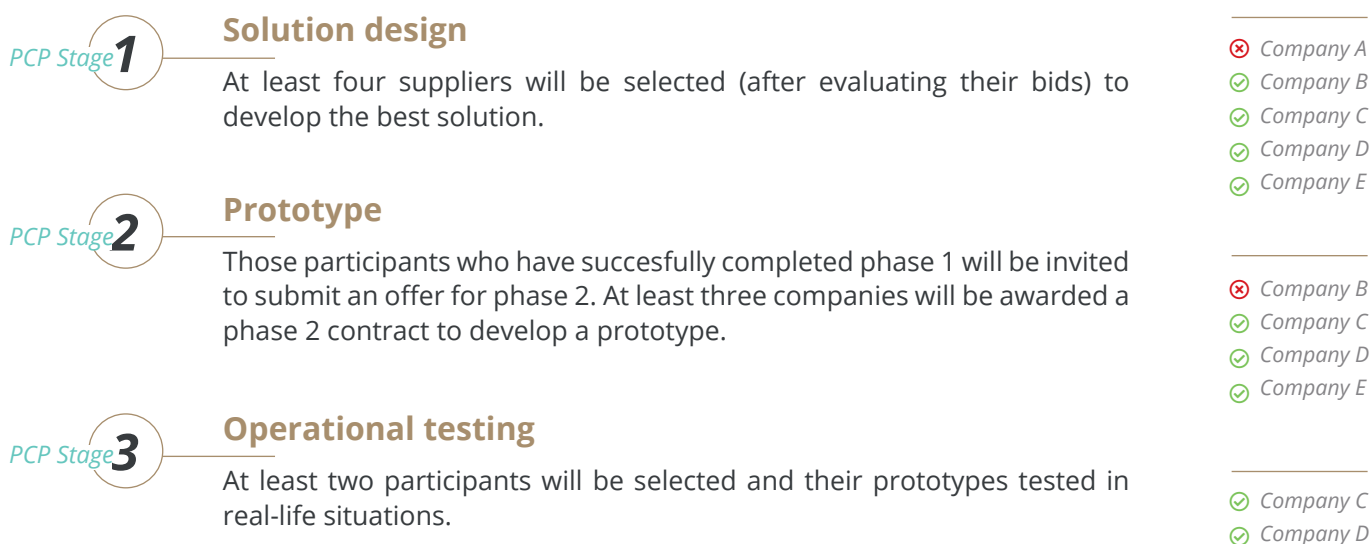


Figure 2. Pre-Commercial Procurement Stages



**PCP is a public procurement of R&D services that does not include the deployment of end-products at commercial volumes. When a need can be addressed via innovative solutions that are nearly or already in small quantities within the market, and just need minor R&D a Public Procurement of Innovative Solutions (PPI) can be applied. Hence, to procure the innovative solution and deploy it, Public Buyers must take on a PPI after a PCP. PPI falls under the scope of the European Public Procurement Directives.**



This handbook focusses on the PCP process and uses the PREVENT project as a case study. As the idea behind PREVENT project focuses around preparing a PCP and ultimately launching the process, PPI procedures do not fall under the scope of this Handbook.

A quick overview of the evident and key differences between a PCP and a regular public procurement procedure are summarized in the table below.

Key features of PCP	Key features of a purchase of COTS
Procure the R&D services to develop a solution tailored to your needs and your systems. In this kind of procurement, the benefits and risks are divided among the public procurer and the contractor and the R&D service provided is not wholly remunerated by the public procurer.	Procure a solution that is already on the market and can be installed promptly but might have short-comings when it comes to interoperability and adaptability.
The solution engineered during the PCP phase through various phases is aligned with your needs.	The solution is a commercial off-the-shelf solution (COTS) and has been engineered according to requirements that might be different from yours.
Public Buyers represent the demand side (responsible for acquisition and/or regulatory strategy or having a mandate from one of more of such PBs to act on their behalf in the procurement e.g. central purchasing bodies) and can seek ambitious quality and/or efficiency improvements in services of public interest and prevent "lock ins".	Public Buyers can only choose from what is on offer and this limits the competition on the suppliers' side and can encourage business monopoly.
To procure the solution once it has been developed and tested, a second step named Public Procurement of Innovative solutions (PPI) must be undertaken. This implies that at least 3 years are necessary for the development and acquisition.	The solution can be acquired quite promptly as no research and development is necessary.
Even if the Intellectual property of the solution is always attached to the supplier, free royalties and license-free use can be obtained, thus enabling the Public Buyers to reap the financial benefits of having undertaken the PCP.	The licenses must be procured and there are no particular advantages in terms of royalties for COTS.
There is a real market analysis and consultation prior to the PCP, whereby suppliers are made aware of the needs of buyers. Moreover, during each of the phases, there will be an interaction between the suppliers and the public buyer (interim reports, meetings, end of phase reports). These interactions will allow the public buyer to provide with feedback in order to develop for fit-to-purpose innovations.	While market consultation is encouraged and practiced, there is very little room for fit-to-purpose innovation as COTS are readily available products and suppliers have no real incentives to propose tailor-made alternatives.

Key features of PCP	Key features a procurement without the support of the European Commission
<p>The PCP in PREVENT is co-financed by the EU commission and supported by its frameworks and recommendations. For the Public Buyers there is the opportunity to network and capacity build without incurring high costs.</p>	<p>In this case, the relevant Public Buyer will have to the process totally. There is no contribution from the European Commission.</p>
<p>PREVENT is a cross-border joint procurement which implies that the costs of the PCP are shared between members of the buyers group hence decreasing the share of investment required from each buyer. Risks are also shared by all parties. Which means that the total risk undertaken by a Public Buyer is diminished.</p>	<p>Cross-border joint procurements may be initiated by public procurers outside the funding programs of the EU. However, they form the exception rather than the norm. This limits knowledge sharing and interoperability of solutions and techniques within the EU. There is no sharing of risks or costs.</p>
<p>PREVENT focuses on selecting the set of innovations with highest priority from the roadmap of innovation needs and preparing one shared risk pre-commercial procurement (PCP) linked to a fully defined Common Challenge.</p>	<p>A regular procurement is usually based on the needs of Public Buyers but, too often, not enough time is allocated to the analysis of their needs and requirements with bottom-up measures.</p>



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## ■ 2.2 Understanding PCP Step-by-step with this Handbook

Regardless of the incentives it creates, PCPs are currently underutilised in the EU, often because of the:

- Low level of awareness in the public sector. Thus, the PCP process is still perceived as a risky practice;
- Limited shared experience on practical PCP implementation;
- Lack of knowledge and practical examples on the PCP scheme and its application.

Designed to bridge this apparent knowledge gap, this handbook presents the main steps in a PCP process in a user-friendly way. It addresses key aspects public authorities must consider at each step and provides evidence-based recommendations. The PREVENT project is used as a case study for the first stage of the PCP. Moreover, this guide also sets forward the future steps that the PREVENT Consortium will undertake in order to move towards launch and completion of the PCP.

While this guide is primarily targeted at public authorities looking for more practical guidelines before setting up a PCP process for security transport systems, it also represents a resource for suppliers and start-ups willing to understand the PCP process before participating in one. Each section of the document provides an interactive 'Test yourself' box that allows readers to answer short questions which can broaden their understanding of the subject.

This introductory guide provides the basic building blocks for a PCP and hence, does not replace the official guidelines provided by the European Commission and does not constitute a legal framework. All public authorities are strongly encouraged to follow updates published by the European Commission in this rapidly changing field. The core analysis should also be undertaken by an experienced procurer before the implementation of a PCP.

### TEST YOURSELF! QUESTION 1.

**What is the difference/link between PCP and PPI (public procurement of innovative solutions)? What is procured in a PCP versus a PPI?**

**Answer:**

**PCP and PPI are separate but complementary procurements:**

- PCP is a specific approach to procure R&D services that involves competitive development in phases, risk-benefit sharing under market conditions, and where there is a clear separation between the PCP and the deployment of commercial volumes of end-products (potential follow-up PPI).
- Public procurement of innovative solutions (PPI) refers to procurement where contracting authorities act as a launch customer of innovative goods or services which are not yet available on a large-scale commercial basis and may include conformance testing. PPI focuses on innovative solutions which are not yet available on a large-scale commercial basis. This also includes solutions based on existing technologies that are used in a new, innovative way.
- In many cases, solutions are near the market and would be provided if clear requirements/ were expressed by the demand side of the market or if there was sufficient demand (PPI).
- In other cases, further R&D is required to de-risk technology. Still competing solution approaches should be compared before committing to large scale deployment (PCP).





# 3 PCP STEP 1: PREPARATORY PHASE



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## 3.PCP STEP 1: PREPARATORY PHASE

The preparatory phase of a PCP is of paramount importance since it sets out the rules, principles and procedures for the overall PCP implementation.



### 3.1 Identify the needs and challenges

A well identified need is at the core of an effective PCP conduction. It is on this basis that the future subject of research and development will be formulated, with prototypes and short production series in mind. The right need/challenge should:

- Respond to the important unmet needs of the Public Buyer;
- Be consistent with the long-term strategy and objectives of the Public Buyer;
- Relate to the sought solutions that can be implemented in several years, and therefore should in principle include a forward-looking assessment of the future needs and problems of the Public Buyers and other potential beneficiaries;
- Be defined in terms of functionalities and performance levels. Focusing on a specific technology would be counterproductive as it would narrow down the possible range of solutions and limit the scope for innovation. The essence of a PCP is that potential proposals can arise from unexpected sectors and unconventional pathways;
- Be formulated broadly enough to give potential suppliers the opportunity to assess whether their research directions are able to respond to them. This also fosters innovation, cross-disciplinary collaboration and interoperability measures.<sup>8</sup>

### 3.2 Identify the high-level market landscape

Once the need is identified, it is essential to determine the innovations currently available and in place in the market. This market analysis is considered necessary to further cover aspects regarding Intellectual Property Rights (IPRs), standardisation and certification aspects that would enable the Public Buyers to assess the feasibility and viability of the envisaged procurement. This process is also known as prior art analysis and IPR search.

<sup>8</sup> Sawin S., Bereszko W., (2012), *Innovative and pre-commercial public procurement*, Polish Agency for Enterprise Development, Warsaw, pp. 13-14.



In the PREVENT project, a task was dedicated for the gathering of information on potential technological solutions. These solutions were subsequently assessed and compared. In addition, the IPR search indicated whether market entities/economic operators already possess the IPR that is needed to develop the desired innovative solution. This was done through an analysis of relevant patents, literature and standards.

### ■ 3.3 Identify the gap

The outputs of the market and needs and challenges will lead to the definition of the missing link or gap in the sector under study (and the prioritisation of the challenges). This gap(s) will be specifically targeted in the PCP process.

**As a general guideline for the outputs of such analyses, it should be kept in mind that whenever the analyses indicate that desired solutions are still at the R&D stage (TRL3-8), a PCP can be a good approach. When relevant solutions have progressed beyond R&D but are not widely commercialized and may require conformance testing (TRL8-9), the Public Buyers might consider engaging in a PPI. Finally, whenever the prior art analysis and IPR search reveals that the desired solution is already available in the market the Public Buyer needs to proceed with a normal procurement process.**



While the first three activities detailed above have been finalised during the first year of the PREVENT project, the remaining activities will be undertaken during the second stage of the project under the name “PREVENT 2”, provided that the consortium of partners will be awarded the follow-up funding by the European Commission.

### ■ 3.4 A shared challenge: a joint PCP action

The identified challenge can be shared by similar public bodies across Europe. To boost research and innovation across Europe, the European Commission co-funds tenders for a group of PB ('Public Buyers Group') so they can undertake together one joint PCP. This implies that there is one joint call for tender, one joint evaluation of offers, and a Lead Procurer awarding the R&D service contracts in the name and on behalf of the Public Buyers Group.



At the time this handbook was written, KEMEA, a think-tank based in Greece was selected as the Lead Procurer for the next phases of the PREVENT project. The decision was made based on the concrete and robust experience the institution has in the PCP field complemented by a certain level of flexibility provided by the public procurement Greek legislation.

Each procurer in the Public Buyers Group provides its individual financial contribution to the total budget necessary to jointly finance the PCP, enabling the Public Buyers to share the costs of procuring R&D services from a number of providers and comparing together the merits of alternative solutions paths to address the common challenge.

The Public Buyers, that decide to jointly procure R&D services represent the demand side of the PCP, play pivotal roles in the procurement approach / strategy and ultimately, the final solutions' use.



In the case of PREVENT, which acts in the field of public transport and security, these Public Buyers oversee key regulatory norms for prevention strategies in case of terrorist attacks in public transports, mitigation measures linked to these dangerous situations and management procedures following and during such crisis. They hence have the proper experience and expertise to guide the demand-driven approaches of a PCP.

While seeking ambitious quality and efficiency improvements in services of public interest during all stages of the PCP, Public Buyers are also present to take into account specific national legal, logistical and technical constraints of their country. Moreover, they must not only ensure that the solutions developed by the suppliers are tailored to their needs, but also guarantee a swift and prompt deployment once the solution has reached its required maturity.

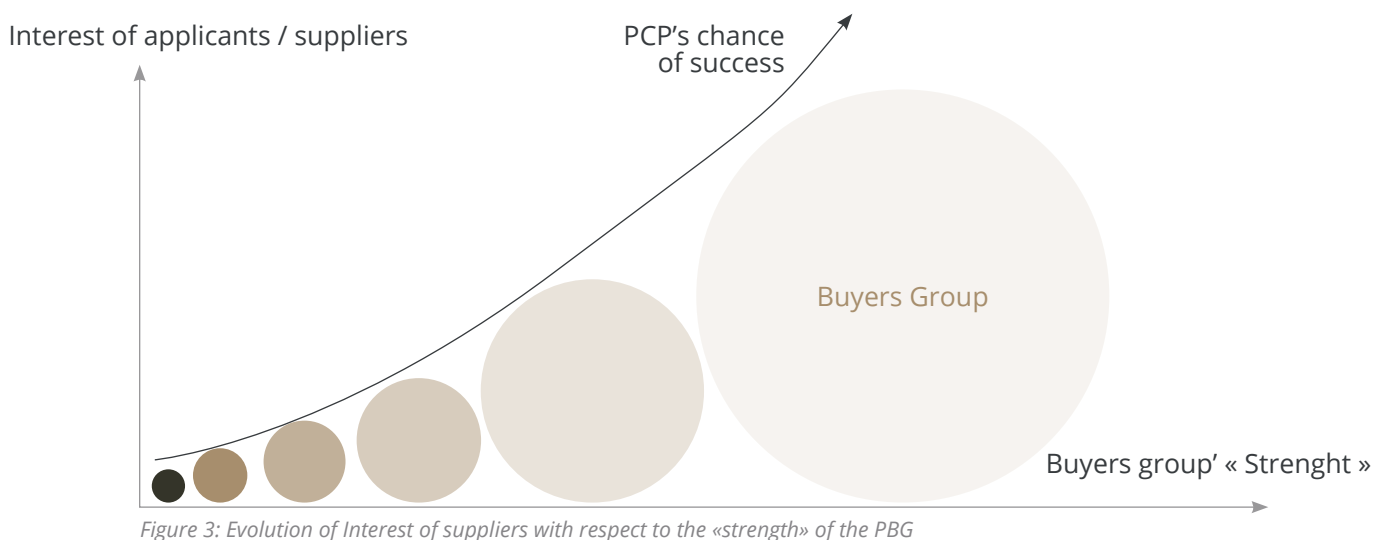
Whilst comparing and validating alternative solution approaches from various vendors, Public Buyers can also emphasise the aspects that are important to their specific needs.



For instance, in the case of PREVENT while a Public Buyer in France might be more interested in a fast-detection measure for an abandoned luggage, another Public Buyer in Greece might assert that their systems require full interoperability. These requirements will all be considered when drafting the tendering criteria and will help to develop a solution that addresses the common requirements as well as any specific requirements of each Public Buyer.

To achieve optimal results, the PBG needs to demonstrate to the suppliers through a clear overview of the size of the need, that there is a real and a substantial new economic market for the given solution being required from them. It goes without saying that if a PBG demonstrates, amongst many other aptitudes, the purchasing power, worldwide recognition, and credibility of the members of the PBG, the higher the interest of the potential suppliers.

Based on the experience of PREVENT partners, has been demonstrated that as the “strength” and “robustness” of the PBG increases, the interest of applicants is bound to increase. This is illustrated in Figure 3 below.



It is, therefore, in the best interest of all stakeholders that a high number of Public Buyers join this PBG as this will prompt an increase in the interest of suppliers, which in turn leads to a wide variety of solutions being proposed after the PCP call for tender. When a wide range of solutions are available to the Public Buyers, there is room for more competition which eliminates the risk of lock-in situations. Furthermore, the more suppliers, the greater the chances of obtaining a creative, pioneering and innovative solution.



## ■ 3.5 The letter of intent

**The letter of intent is a core document underpinning the PBG consolidation. Its aim is to:**

- Allow Public Buyers to have a common understanding of the scope of the project and the common challenge selected.
- Allow Public Buyers to assert their intention to commit to the given project and emphasise legal and budgetary demands that they are willing to meet.

Signed letters of intent are part of a separate deliverable of the PREVENT project (D6.4 – PREVENT Buyers Group). In this deliverable, the letters of intent signed by each and every Public Buyer willing to act as a Public Buyer in the second stage of the PREVENT project, shall be included.

A template and relevant instructions are included in the annexes of this handbook. In the context of the PREVENT project, this template shall be sent to all members of the PREVENT consortium and members of the User Observatory Group (UOG). Public Buyers external to both of the aforementioned categories shall also be encouraged to join the consortium during dissemination and communication activities.

**Signing the letter of intent implies that PBs agree to the following key terms and conditions:**

- ❶ The Common Challenge elaborated by the PREVENT consortium, with the concrete participation of UoG members. The Common Challenge has been phrased as such: “Enhanced security situational awareness through i) timely automatic detection of unattended items in Public Transport Infrastructure and, in public areas in the vicinity ii) identification and tracking of perpetrators, and iii) advanced crisis management system.”
- ❷ Being part of the Public Buyers Group (PBG) of the present PREVENT project (H2020 Consolidation and Support Action);
- ❸ Participating, as a Public Buyer- and hence as a consortium partner- in the future PREVENT PCP, should 90% of the required funding for the completion of the project be granted by the European Commission through the next call **SU-GM02-2020** entitled “**Strategic pre-commercial procurements of innovative, advanced systems to support security**”<sup>9</sup>, Sub topic 2: Procurement of prototype systems among those specified as a result of Sub-topic 1 (PCP);

The expected contribution of Public Buyers during a PCP implementation is the following:

- Formulation of the user requirements and specifications during the preparatory phase of the PCP
- Participation in the preparation of the tender documents
- Dissemination of the tender during the tendering and Open Market Consultation activities
- Evaluation of the bids received
- Participation in evaluation activities of the developed solutions
- Participation in the monitoring activities of the contractors.

The expected contributions listed above are only a sample of what can be expected. The list is hence indicative and non-exhaustive.

The members of the Buyers Group also need to commit financial resources for the implementation of the PCP. In case the PCP is funded as a Horizon 2020 project, the EC offers a funding rate of 90% for the procurement budget. In this regard, the members of the PBG need to invest only 10% of the total value of the procurement. This implies that the PBs have a unique opportunity to acquire R&D services. The split of the 10% contribution is subject to the decision of the members of the PBG. The two most common ways are the proportional one and the equal distribution.

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<sup>9</sup> <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/su-gm02-2018-2020>

### ■ 3.6 Practical example – the common challenge elaboration in prevent project:



**The PREVENT project aimed at conducting a progressive iterative approach to identify the Common Challenge for subsequent PCP through four fundamental steps:**

- Identifying the practitioners' needs and consolidating them into 6 Common Security Scenarios;
- Analysing the practitioners' economic capabilities and experience in procurement approaches;
- Conducting a profound analysis of legal context and the regulatory environment, including the GDPR;
- Preparing a roadmap of innovations and solutions and selecting the highest priority innovation and technologies.

The elaboration of 6 Common Security Scenarios was divided into logical steps. Work started, starting in with capturing and creating a taxonomy of common threats and vulnerabilities, resulting from the public transport operators' security processes and practices analysis. The report allowed for the preparation preparing of an initial framework detailing of a scenario attack, allowing the elaboration of a certain storyline, while addressing three types of security gaps:

- ① Detection gaps – related to technologies that allow the detection of a potential threat in a PTO environment;
- ② Tracking gaps - focused on technologies that allow the tracking of a person responsible for a threat or an attack that has occurred;
- ③ Protection gaps – related technologies that allow a protection of strategic places in PTO areas. They are in the scope of this benchmark.

The collaborative work resulted in creating the 12 initial scenarios, which were then analysed in the scope of available solutions, existing standards and on-going research. The analytic examination was strengthened with the legal and economic study of shared innovation needs and future procurement possibilities (i.e. a search for the most efficient procurement environment and limitations stemming out of privacy legislation). On the basis of this exhaustive analytical work and with the continuous engagement of the practitioners, the initial scenarios were refined and adapted into final 6 scenarios. Each addressed shared technological anti-terrorist needs in public transport operators' environment, while simultaneously elaborating a multi-dimensional roadmap of innovations and solutions, providing different target audiences with information about how the operational and technical challenges of the common security scenarios can be addressed from a technological point of view, taking into account the regulatory and economic capabilities.

### The final set of 6 Common Security Scenarios was based on three pillars:

- 1 Public Transport Operators' and security services' needs and expectations in the field of pre-empting terrorist attacks;
- 2 Technological readiness and innovation level of the identified available solutions (bearing in mind the definition of the state of the art of COTS technologies, related suppliers, patents and IPRs, as well as interoperability needs, benefits and risks);
- 3 Legal and economic limitations that may occur in the industrialization phase.

6 scenarios and gap's matrix

	Detection				Tracking	Protection	Out of scope Collaboration
	Technology innovation 1	Technology innovation 2	Technology innovation 3	Technology innovation 4	Technology innovation 5	Technology innovation 6	Technology innovation 57
SECURITY THREAT 1			✓	✓	✓		
SECURITY THREAT 2	✓	✓			✓		
SECURITY THREAT 3		✓	✓		✓		
SECURITY THREAT 4			✓	✓			
SECURITY THREAT 5	✓	✓			✓		
SECURITY THREAT 6			✓				

✓ Main gap    ✓ Secondary gaps

The outcomes of the research – the final scenarios and the gaps they address – present as follows:

Based on the defined scenarios and addressed gaps, PREVENT Practitioners and Public Buyers have identified and agreed on the following Common Challenge for Public Transport Operators in Europe:

#### Enhancing security situational awareness through:

- 1 timely automatic detection of unattended items in Public Transport Infrastructure and, in public areas in the vicinity
- 2 identification and tracking of perpetrators, and
- 3 advanced crisis management system.

The Common Challenge is targeting 9 technological areas, which have been proposed in order to resolve major issues of security threats in public transport defined in the process:

The multi-dimensional roadmap of innovations allowed creating a summary analysis panorama of identified Technology Innovations (TI) that includes: general information about the TIs, their technical requirements, connected intellectual property rights, evaluation of the Technology Readiness Level (TRL), the market availability and key market solution providers, and their related interoperability dimensions.



## ■ 3.7 Practical example – setting up the public buyers group in prevent

As with any European project supported by the European Commission, PREVENT includes partners stemming from countries across Europe. Hence, the PBG evidently includes public bodies across at least 3 European countries ensuring a cross-border collaboration.



**In broad terms, a Public Buyer can be:**

- ❶ a government department,
- ❷ a public authority or agency,
- ❸ and/or an organization where the national government or state participates (directly or indirectly) in its financial and/or administrative management.

**In the scope of the PREVENT preparation stage, spanning from 2019 to 2020, it is important to distinguish two categories of stakeholders:**

- ❶ The PREVENT consortium partners;
- ❷ The User Observatory Group (UOG).

Both categories comprise of a wide range of actors from the transport sector – ranging from Law Enforcement Agencies (LEAs) to Public Transport Operators (PTOs), but also international organisations, that can act as Public Buyers or contribute to the project by providing specialised expertise. The prime distinguishing aspect is that PREVENT consortium partners have been directly implicated in the call for proposal and the project, since the very beginning.

Having received direct funding from the European Commission, the consortium partners aimed to build the network of stakeholders further during the preparatory stage of the PCP so as to consolidate a robust group of genuinely interested actors for the PCP launch. To do so, a User Observatory Group was set up. The UOG is a working group composing of members external to the PREVENT consortium which provides a broad basis of support for the on-going developments and achievements of the project. Members are encouraged to give expert advice and recommendations to the project partners on specific issues.

In the context of PREVENT, the UOG represents an external consultative body made of potential Public Buyers with different backgrounds which will enlarge the assessment and validation of the project's outcomes. In addition to providing technical guidance and support for the project's activities, UOG members ensure that the results of the PCP preparation stage are in line with the needs of all the stakeholders involved to ultimately ensure homogeneity across European countries.

The functioning of the UOG allowed broadening the list of potential Public Buyers sharing the common challenge. Thus, the UOG Members are welcomed to be integral partners of PREVENT 2, during which the PCP will be launched. In PREVENT 2, former UOG members who fulfil all the prescribed requirements (detailed in the sections below) can act as Public Buyers and benefit from the full-fledge benefits of this EU-funded project.

## TEST YOURSELF! QUESTION 2.

Please choose the correct answer or answers.

**A cross-border joint PCP:**

- A)** Involves a bigger share of investment for each member of the Public Buyer group (compared with the investment in a PCP should each member launch it separately).
- B)** Allows Public Buyers to share costs, knowledge and risks involved in the PCP process.
- C)** Can be conducted with up to 5 Public Buyers only.
- D)** Requires a solution with a TRL between 3 to 8.

Answer: B, D



## ■ 3.8 Dissemination Tools designed in the context of PREVENT.

To better engage with Public Buyers both within the UOG and outside the UOG, 3 key materials were designed. Each of those publications aimed to present the PREVENT project to a wide range of stakeholders.

### PREVENT PCP Brochure.

The first material designed and published as part of the deliverable 6.3, “PCP Toolkit”, is a 3-fold brochure. It was distributed to as many Public Buyers in the transport sector as possible. The aim was to help Public Buyers to understand the PREVENT PCP concept in broad terms, instigate them to participate in the forthcoming meetings and foster more discussion around the PREVENT PCP and Buyers Group Creation (cf. subchapter PREVENT PCP Brochure).





## PREVENT 2 Flyer.

The second important dissemination material was the PREVENT 2 flyer. Designed to present the PCP call and the advantages for Public Buyers, this flyer particularly designed for members of the UOG who were already quite familiar with the PREVENT project. In fact, many UOG members requested this flyer as they deemed that, along with the PCP 3-Fold Brochure, it would help them present the PREVENT project to their managing directors more efficiently (cf. subchapter PREVENT 2 Flyer).



## PREVENT 1 & PREVENT 2 Presentation leaflet.

Thirdly, a presentation leaflet was designed to better illustrate the link between PREVENT 1 and PREVENT 2 to all involved parties – members of the UOG but also partners. All stakeholders were invited to use this leaflet as presentation aid when outlining the PREVENT 2 projects to their respective managers and/or directors and/or CEOs. This leaflet aimed to present all key aspects of the PREVENT 2 project proposal. This in turn allowed the responsible parties to make an informed decision as to whether they would like their organisation to participate in PREVENT 2 and what budgetary and administrative requirements they would have to comply with (cf. subchapter PREVENT 1 & PREVENT 2 Presentation leaflet).





# **4 PCP STEP 2: PRE-TENDERING PHASE**



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement number 833444

## 4.PCP STEP 2: PRE-TENDERING PHASE

The pre-tendering phase represents one of the core building blocks in the acquisition of a solution through R&D. This chapter showcases in a stepwise approach the required actions, activities and projects to be undertaken during this pre-tendering phase.



The results of the pre-tendering phase shall lead to the call for tenders, proposal submissions from the bidders, evaluation of proposals and finally the selection of a group of bidders to be contracted to participate in the subsequent phases of a PCP. These steps are detailed in the following chapters and subchapters of this guide. The following 6 subchapters shall guide the readers through the steps chronologically while also highlighting vital checkpoints and key considerations required.

At the time of the writing of this Handbook, the PREVENT project was still in the preparatory phase, with only a fraction of the preparation for the pre-tendering phase having been undertaken. In case the project is awarded a PCP grant by the European Commission the following steps will be undertaken. Hence, we do not provide with concrete examples for the steps described in this section.

### 4.1 Validate the need and build a business case

Following the completion of the activities under Step 1, the participating PB will engage in a set of actions towards identifying and agreeing on the set of requirements and their related key performance levels. In the case of PREVENT, these will build upon the activities already employed.

Other areas of assessment in this step include the identification of the estimated costs and the envisaged savings that derive from the solution to be procured as well as the underlying risks (EC, 2014b)<sup>10</sup> such as the estimated risk of failure of the upcoming R&D and subsequent contract implementation. One important aspect to be taken into account is also the available budget which will also determine the modalities of the procured solution.

In case of budget constraints and depending on the particular situation, the PB may be interested in selecting a particular topic or technological area in which a PCP has the greatest chances in wider market uptake while simultaneously inducing the lowest implementation risks.

The outcome of the said stage (validated needs / business case) will form the basis for starting the discussion with the industry during the Open Market Consultation (OMC) period aiming at receiving valuable input.

<sup>10</sup> European Union (2014), Directive 2014/24/EU of the European Parliament and the Council, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0024&from=EN> (accessed on 9 April 2020).



## ■ 4.2 The Open Market Consultation (OMC)



### What is the OMC?

Having defined the scope of the procurement, the next step is to communicate with the market in an open, transparent and efficient manner. The PBG should organize an Open Market Consultation (OMC), in order to:

- Receive feedback from the suppliers active in the relevant domain
- Collect insights on industry skills which can be used to finetune the tender specifications well in advance of the release of the tender.
- Collect the necessary information to justify the need to plan lots or not, and to carry out a first estimation of your budget for the project.

The activities organised in an OMC also constitute a unique opportunity for networking and cross-disciplinary collaboration between companies and research institutions. Through the OMC, the most relevant suppliers, emerging SME's and start-ups across Europe are invited to get informed about specific aspects of the project and the procurement.

### Why carry out an OMC in a PCP?

The OMC allows the PBG to obtain an in-depth knowledge of the market structure, its players as well as of the technical and feasibility aspects of the procurement in order to design and implement an efficient procurement procedure and, in this way, achieve better results.

A well-designed procedure and an early involvement of a wide spectrum of potential technology providers will ensure a clear market insight on the state of the art and on the future developments in the market field under study. Furthermore, during the said period, the PBG will also be engaged in defining the verification and validation strategy for the evaluation of the R&D results achieved by each supplier in the subsequent PCP phases.

The main goals of these activities are to:

- Inform all interested parties thoroughly about the project scope and the common unmet challenge.
- Acquire feedback from the industry regarding their capabilities.
- Introduce the concept of PCP and its implementation aspects.
- Receive feedback about the validity of the assumptions made during the design of the business case.
- Enhance interaction among stakeholders for new ideas regarding the desired solution.
- Clarify and discuss a) any grey areas between the state of the art analysis (SOTA) and the needs as described in the common challenge, b) confidentiality and IPR issues.

**Open Market Consultation activities are explicitly regulated by the public procurement directives and as such, compliance with the TFEU principles on equal treatment, transparency, non-discrimination and proportionality needs to be ensured during their implementation.**

## **Guidelines and recommendations**

The intention of the PBG to actively engage in discussions with the industry needs to be made broadly known to the public. One way to ensure sufficient communication is to publish in the Official Journal of the European Union a 'prior information notice' (PIN) in English (in order to reach companies from various states) and any additional language(s) chosen by the PBG two months in advance. This will develop awareness about the awarding of the project within the targeted industry.

Guidelines for the implementation of the OMC are included below.

On the other hand, suppliers should also be aware of the following conditions and aspects:

- OMC held in a language understood by the stakeholders.
- The participation of any supplier in the OMC does not imply any commitment regarding participation in the tendering process.
- The OMC does not constitute part of any pre-qualification or selection for participation in a PCP.
- Participation in the OMC does not ensure any additional rights to a contract award.

## **Indicative activities under an OMC**

**Under the scope of this guide, proposed activities to be conducted by a PBG for a successful OMC are listed below.**

### **Commercially confidential meetings.**

In case the PBG considers that the open meetings will not allow the industry to share their capabilities because of confidentiality, separate meetings could be organised with interested parties. These meetings, however, should be carefully organised having a common protocol and agenda in order to ensure all discussions with potential respondents cover the same topics, and that all suppliers are treated equally. The PB will have to inform that these meetings were held and all the (non-confidential content) will have to be published in order not to distort competition.

### **Workshops/Webinars.**

It is highly advisable to conduct at least two events where all interested parties could be present in a single work environment so collaborative work can be easily fostered. In these events, it is vital to allocate enough time for questions and answers. Moreover, time should be given to participating companies in order to present their approach on the PCP common challenge. It is also worth mentioning to the participating economic operators, that they should not disclose confidential information.

### **Information collection via surveys.**

Designing a questionnaire could allow the industry to express their technical view on the project and on specific aspects of the PCP such as the process setup, especially the timeline. The participation would require minimal time and ensure clarity of the information communicated. This would ensure effective qualitative and quantitative analysis by the PBG where necessary.

### **Matchmaking activities, analysis and tools.**

This activity would help suppliers, who need support in a specific field to find other counterparts in order to address the requirements of the tender. Once the suppliers find other stakeholders and partners who can bring the expected added value to their R&D, a consortium can be established. The setting up of consortia is highly advisable in tenders where a single company cannot address the common challenge.

## Q&A and/or FAQ sections.

To ensure transparency and equal treatment of candidates, the same information must be made available to all interested parties. A well-designed and regularly updated project website could provide a simple way of efficiently doing so. The website should include a Q&A and FAQ section including an interface where interested parties can submit their questions. Answers to the questions received will then be published online and will thus be made available to the public.

After the OMC activities are completed, a report containing the results (anonymising the participants) shall be published and made broadly known.



In the pre-tendering phase that is performed as part of the PREVENT project, the project website (<https://prevent.eng.it/>) was set-up. Additional categories and information shall be added as the project develops further.

Through a successful OMC in the PREVENT 2, the PBG will be better equipped to prepare the tender documents, evaluation procedures and criteria towards initiating a successful PCP procurement process.

## Preparation of the Request for Tenders

### PREVENT PCP documents

An indicative list of documents and forms to be provided to suppliers is included below. Those interested in preparing these documents are encouraged to consult the EAFIP Toolkit. The latter contains key recommendations and templates.<sup>11</sup>

- 1 Call for Tender document including all the necessary information regarding the tender, such as:
  - a) PCP details (budget and budget distribution between phases, common challenge, time schedule, etc.)
  - b) Submission procedure (tender closing time, content and format of the submitted tenders, detailed submission instructions, etc.)
  - c) Evaluation Procedure and Scoring (Selection criteria, award criteria and relative scores, who will do the evaluation, which mathematical formulas will be used)
  - d) PCP procedure (expected outcomes per Phase, deliverables per phase, contract implementation, payments schedule, satisfactory and successful completion, etc.)
  - e) IPRs provisions (background, foreground, side ground etc.)
- 2 Document with the Background IPRs of the PB
- 3 Document with the detailed specifications/requirements
- 4 Framework Agreement and Phase Contracts to be signed by the winning suppliers
- 5 Tender Forms for technical and, financial offer and other declarations, such as the European Single Procurement Document (ESPD).

In case sensitive information are included in the tender documents, a Non-Disclosure Agreement needs to be included in the above-mentioned documentation and needs to be signed by the economic operators before receiving such information.

<sup>11</sup> <https://eafip.eu/toolkit/>



## Joint Procurement Agreement

In the frame of a joint PCP, the parties involved in the joint PCP are invited to sign an agreement, named the Joint Procurement Agreement (JPA). A JPA provides the ability to parties to jointly procure and award the contracts for the PCP research and development services necessary to address the 'common challenge'.

### The scope of this agreement is generally twofold:

- First to lay down the principles and rules to govern the joint PCP
- Secondly, to regulate the conditions under which the Lead Procurer can represent the rest of the parties in the joint PCP.

### In addition to the above, the JPA also covers additional matters such as:

- a) The management of framework contracts;
- b) The conduct of any legal proceedings arising from the JPP or the framework contracts, or from a failure to comply with this agreement;
- c) The amicable settlement of any disagreements between parties with respect to this agreement;

### Under the aforementioned terms, the following topics are included in the JPA:

#### ➤ Basic principles and conditions governing the joint PCP

Applicable rules, regulations and principles of the JPP shall be specified. In these terms, no State aid shall be included, the procedure has to be set up in accordance with the provisions of the Communication from the Commission: Framework for State aid for research and development and innovation, especially article 33<sup>12</sup>. The provisions of the Communication from the Commission: Pre-commercial Procurement: Driving innovation to ensure sustainable high quality public services in Europe and the specific requirements for innovation procurement (PCP/PPI) being funded under Horizon 2020 shall be observed.<sup>13</sup> Moreover, the EU Treaty Principles in conducting procurement for a public contract will be respected: non-discrimination, equal treatment, transparency, proportionality, freedom to provide service and freedom of establishment for potential tenderers.

#### ➤ Specific Provisions.

The applicable law governing the JPA. Provisions on the court jurisdiction for any claims, controversies or disputes arising out of, or in connection with the JPA, which cannot be amicably settled between the Public Buyers, shall also be included.

#### ➤ The Lead Procurer's role in the joint PCP.

The responsibilities of the Lead Procurer are specified. The latter is the sole representative of the other parties involved in the joint PCP. In terms of the award decision, the Lead Procurer shall notify the award decision to all tenders, whether successful or unsuccessful, pursuant to the applicable law.

#### ➤ Boards and duties.

The decision-making bodies should be specified along with their responsibilities and membership rules. More information regarding the boards can be found in chapter 3.6.

#### ➤ Procurement procedure, content of tender documents.

The responsibility of the Lead Procurer is to coordinate the preparation and then launching of the call for tender in accordance with the provisions of the JPA and the Grant Agreement<sup>14</sup>, including the PCP request for tender document, the exclusion, selection and award criteria, the functional requirements and the call for tender documents.

#### ➤ Evaluation Procedure.

The responsible procurement body/ies and the modalities of the procedure for the procurement decision-making mechanism for the tendering process and the contract execution.

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<sup>12</sup> "In all other cases, including pre-commercial procurement, the Commission will consider that no state aid is awarded to undertakings where the price paid for the relevant services fully reflects the market value of the benefits received by the public purchaser and the risks taken by the participating providers, where the relevant procurement procedures are held" C (2014 3282).  
See: [https://ec.europa.eu/competition/state\\_aid/modernisation/rdi\\_framework\\_en.pdf](https://ec.europa.eu/competition/state_aid/modernisation/rdi_framework_en.pdf)

<sup>13</sup> COM (2007) 799 final. See <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2007:0799:FIN:EN:PDF>

<sup>14</sup> In case of EU funded projects, Grant Agreement is the contract signed between the EC and the Consortium that sets forth the terms, conditions and limitations applicable to that grant.

➤ **Financial provisions.**

The members of the Buyers Group and the Lead Procurer shall follow the general and mutual obligations of financially sustaining the procurement process.

➤ **Award decision and signature of the framework agreement.**

The modalities on how the award decision of the winning suppliers should also be specified in the JPA along with the responsibility of the Lead Procurer to sign the framework contracts with the successful contractors on behalf of the members of the Public Buyers Group.

**Additionally, other topics that can be included are:**

- The confidential basis in order to ensure that parties exchange the necessary information to execute the procurement procedure.
- The responsibility for publication and dissemination activities from all parties regarding the nature, subject matter and result of the work that has been carried out under the procurement.

**The JPA also describes the integration procedure for a new party's participation, as well as the terms for the termination of a party's participation in the PCP. Moreover, the process for the amendment of the JPA as a result of these actions shall be specified.**

## Framework Agreement

The Framework Agreements (FA) to be signed between the successful tenderers and the Lead Procurer (LP) should be included in the Call for Tender documents (as mentioned in section 3.3.1 above). The following topics should be included in the FA:

❶ **Sharing the IPR.**

In this section it is specified how much of the IPR will remain with the suppliers once the PCP is completed. This information shall be included following discussion and decisions taken in collaboration with the suppliers during the OMC. For your process to be legally valid, it is mandatory to share the IPR at market terms. To ensure that the risk-benefit sharing is done according to market conditions any R&D benefit shared by the public purchaser with a company participating in the pre-commercial procurement should be compensated by the company to the public purchaser at market price. This can be done through, for example, a price reduction compared to exclusive development costs that reflects the market value of the benefits received and the risks assumed by the company.

❷ **Requesting a right of use**

To ensure IPR rights are handled under market conditions (by the PB) a simple approach is for the PB to request free licensing rights at the end of the contract.

## Definition of Criteria

One important step is the definition of award criteria. These award criteria are identical for each bidder and equally applied by the PBG.

In the present guide indicative criteria groups are described. These criteria will be decided by the PBG in line with the subject matter of the PCP.



The following subchapters include indicative award criteria which can be used in the context of a PCP in the public transport security sector such as PREVENT. However, it should be duly noted that the list proposed is non-exhaustive and shall be gradually tailored as further analysis is undertaken by the PREVENT partners.

**All criteria remain unchanged for the entire duration of the PCP, thus also applying for the call-offs for the Phases 2 and 3.**

The section of the criteria as included in the tender documents should also be written in such a way that the indications and terms are precise enough to avoid any misunderstandings.<sup>15</sup>

<sup>15</sup> <https://www.kowi.de/Portaldata/2/Resources/fp/fp-pcp-brochure.pdf>

<sup>16</sup> Misunderstandings, confusing rules and ambiguous criteria could prolong or even pause the procurement process due to possible objections and/or other type of legal actions such as complaints filed by suppliers due to perceived unequal treatment through discriminatory criteria.

## Selection Criteria

The first set of the criteria to be defined are the ones that would guarantee the participation of viable and economically sustainable suppliers who have the necessary technical and organisational capacity to take part in the procurement process.

The assessment of the financial standing and experience of the candidates (tenderers) has to be made. During the drafting of criteria, Public Buyers choose a set of criteria that are not unnecessarily strict. Some criteria may impose unjustifiable limits to the participation of perfectly competent suppliers. It is hence essential to strike the right balance between the “strictness” of the criteria (the excellence asked on a specific theme) and the “flexibility” of those criteria in order to allow qualification of suitable suppliers.

It is highly advisable that PBs avoid including selection criteria that are based on disproportionate qualification and financial guarantee requirements (e.g. with regards to prior project and minimum annual turnover). In this regard, the PBs need to ensure that the selection criteria of the procurement do not prevent innovative SMEs from participating in the PCP (e.g. due to a limited number of prior reference projects).

Finally, additional selection criteria may be imposed by the Request for Tender documentation, such as the location of the research work that has to be undertaken.

Given the above, a brief list of **indicative** selection criteria fitting for the purposes of a potential procurement is presented below:

- ① Be active in the domain of Information and Communication Technology regarding services on the design, development and implementation of ICT solutions.
- ② Have successfully completed or participated in a relevant reference and /or previous projects during the last five (5) years with at least one contract in the field of Common Situational Awareness, Information Exchange and Operation Control.
- ③ Demonstrate the expertise and working experience required to undertake an innovative R&D project by providing several CVs of key personnel and competences, which they consider necessary to complete the project.
- ④ Possess a security clearance to handle EU Classified Information or have applied for such clearance.
- ⑤ Fluency in spoken and written communication in English.

**The above-mentioned criteria are merely indicative and are subject to the specific procurement (taking into consideration the underlying national legislative framework of the Lead Procurer) to better reflect the particular needs in the context of EU's principles on transparency and equal treatment while avoiding the imposition of unnecessary limitations.**

In the case of consortia, all members should possess the above specific requirements.





## Exclusion criteria

Exclusion criteria are those used to determine which suppliers are not deemed suitable or not trustworthy and therefore, must be excluded from the PCP process. These criteria are primarily based on their past professional behaviour. They also apply to subcontractors of the tenderers. A tenderer will be excluded from further participation in the procurement in a case where the exclusion criteria are not met.

Even if the Directives do not apply a good set of examples regarding exclusion criteria can be found in article 57 of Directive 24/2014/EU. It is good practice to refer to this exclusion grounds.

Exclusion criteria may include but are not limited to the following:

Exclusion Criteria	Comments
<b>Conflict of Interest<sup>17</sup></b>	Tenderers that are subject to a conflict of interest may be excluded. If there is a potential conflict of interest, tenderers must immediately notify the Lead Procurer in writing.
<b>Bankruptcy or professional misconduct</b>	Investigation/confirmation whether the tenderer is (not) bankrupt or is being wound up. Tenderers should also provide evidence or confirm that the latter has not been guilty of grave professional misconduct.
<b>Criminal Offences</b>	Investigation/confirmation whether the tenderer has (not) been convicted by a judgment which has the force of res judicata <sup>18</sup> for an offence relating to professional practice.
<b>Failure in providing necessary material.</b>	This applies if the tenderer has failed to provide some of the information requested.



<sup>17</sup> See article 24: Conflicts of interests of Directive 2014/24/EU: "Member States shall ensure that contracting authorities take appropriate measures to effectively prevent, identify and remedy conflicts of interest arising in the conduct of procurement procedures so as to avoid any distortion of competition and to ensure equal treatment of all economic operators. The concept of conflicts of interest shall at least cover any situation where staff members of the contracting authority or of a procurement service provider acting on behalf of the contracting authority who are involved in the conduct of the procurement procedure or may influence the outcome of that procedure have, directly or indirectly, a financial, economic or other personal interest which might be perceived to compromise their impartiality and independence in the context of the procurement"

<sup>18</sup> See article 57. Exclusion grounds of Directive 2014/24/EU: "It has been established by a judicial or administrative decision having final and binding effect in accordance with the legal provisions of the country in which it is established."

## Award criteria

In this section, specific reference is made to the criteria that will contribute to the contract award from a technical perspective. There are two types of award criteria

- 1 On/off criteria with a pass/fail result
- 2 Weighted award criteria which will define the final ranking of the submitted tenders

### Pass/Fail criteria

These may include but are not limited to:

- Compliance with the definition of R&D services
- Compatibility with other public financing
- Compliance with the requirements regarding the place of performance of the contract
- Compliance with ethics requirements
- Compliance with security requirements

### Weighted award criteria

These award criteria shall define the final ranking of the submitted tenders. Examples of such criteria are listed in the table below:

Technical Sustainability of Solution	The potential future sustainability of the proposed solution from a technical / point of view is a criterion to be addressed by the tenderers.
Project Management	The tenderer needs to demonstrate his capacity and capability to coordinate the activities of the contract.
Commercial Potential of the Technical Solution	To what extent the approach demonstrates commercial feasibility.
Functional Criteria	The tenderer needs to detail their specific approach on how to fulfil the functional requirements of the solution as included in the procurement documentation
Non-Functional Criteria	The tenderer needs to detail their specific approach on how to address the non-functional parts of the solution as included in the requirements



## Evaluation Committees and preparatory actions

The evaluation committee's duty is to act as the decision-making body for the evaluation of the proposals submitted as well as for the assessment of the activities of the contractors during the contract implementation i.e. decisions regarding payments purposes and satisfactory and successful completion of each Phase. In this regard, the members of this committee must be well-balanced in terms of relevant experience and expertise. Hence, members who have the skills required to assess early stage product development as well as the innovation process are recommended.



Given the PREVENT project involved the transport security landscape an advisory committee of technical and security nature shall be created. This committee will undertake the evaluation of the criteria with technical and security nature and pass its opinion to the decision body for final evaluation.

One important note here is that the work of these committees can be assisted by external experts, such as:

- Technical experts and R&D domain experts on the subject.
- Financial experts for evaluating the commercial viability of the solutions proposed.
- Ethical or security experts.
- Legal experts.

The particular synthesis of the evaluation committee accompanied with the assignment of the corresponding responsibilities need to be clarified upon the selection of the members in order to inform them well in advance regarding the whole evaluation mechanism, for purposes of transparency. A declaration of non-conflict of interest is also advisable to be signed by such members. The committee(s) involved in the tender procedure along with their duties should also be clearly stipulated within the Request for Tenders.

In the case of the joint PCP, the Lead Procurer may be responsible to request each participating buyer to nominate candidates with specific background or expertise for the aforementioned committee(s).

### TEST YOURSELF! QUESTION 3.

Please choose the correct answer or answers.

An OMC is deployed by PB to:

- A) Validate the business case.
- B) Require suppliers to write the tender documents and chose specific award criteria for their potential solutions.
- C) Gather relevant information to ensure all tender documents are tailored to the capacities of the sector.
- D) Allow suppliers to interact with each other in order to form consortia and propose innovative solutions resulting from a collaborative work.

Answer: A, C, D







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# 5 PCP STEP 3: PUBLISHING THE TENDER



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## ■ 5.PCP STEP 3: PUBLISHING THE TENDER



### ■ 5.1 Publication of contract notice

The next step involves the publication of a contract notice in the Official Journal of the European Union including a preliminary outline of the scope of the future procurement procedure. The goal of this step is to ensure transparency and to attract sufficient offers. To this end, the PCP notice should also be advertised through additional channels available to the PBG (e.g. website of the PB).

Once the Contract Notice is published, it is also important for the PBG to undertake a set of dissemination activities and publish free of charge all the documents that needed for the tender in the project website or any other platform selected by the PB, as to be easily available.

In this regard, they could structure the project's website in a way that could provide all the potential tenderers with the necessary information for the tender procedure. Other alternatives to raise the appropriate awareness could also be the publication of articles for the potential tenderers as well as for other interested entities.

**The PBG need to find several means to advertise widely the contract in the most effective way. It is important to keep in mind that the success of the PCP process will mainly lay on the innovation resulting from the participation of new players in the market.**

### ■ 5.2 Tender Participation and Submission Process

**Following the release of the Request for Tenders, a sufficient period of time should be given to potential tenderers in order to prepare and submit their proposal.**

Moreover, the submission process should explicitly be indicated in the Call for Tender documents. The most efficient way for the submission is through a dedicated electronic platform that would incorporate the overall process.

## ■ 5.3 Tenders Evaluation and Contract award

**Taking into account the tender's submission deadline as defined in the Call for Tender documents, the next step is the initiation of the evaluation process. All timely submitted bid documents are forwarded to the members of the evaluation committee(s) (see section 3.6 above) that will be responsible for assessing the bids and bidders against the pre-specified criteria.**

Tenderers that have not submitted the relevant documentation within the specified period are not taken into consideration and are thus excluded from the next steps.

The tenders submitted on time undergo a number of initial checks as to identify tenders with major issues that disqualify them from the next steps of the evaluation. These preliminary checks refer to the compliance against the exclusion, selection and pass/fail award criteria. For the tenders that have been found eligible against the aforementioned criteria, the weighted award criteria will be scored followed by the financial offers check. Both will be used in order to produce the final ranking of the submitted tenders.

Below we have an example of a general scoring approach that uses a scale from 0 to 10 with the following interpretation:

- **0- Insufficient** – The information provided fail to address the objectives
- **2- Fair** – The information provided address the objectives inadequately or there are serious inherent weaknesses
- **4- Good** – The information provided address the objectives, but there are significant weaknesses
- **6- Very good** – The information provided address the objectives well, but a number of shortcomings are present
- **8- Excellent** – The information provided address the objectives in an excellent way
- **10- Outstanding** – The information provided address the objectives as in an exceptional and above expectations manner

## ■ 5.4 Contract Implementation – PCP phases initiation

**The final step of the tenders' assessment is the decision towards the awarding of the framework agreement and phase contracts to the winning tenders. This is conducted on the basis of expert's scores and the subsequent ranking.**

Regarding the announcement of the award decision, this may take the form of a press release on contract winners taking into account a) names of contract winners, b) abstract of the winning projects and c) value of each contract. It is also recommended that a voluntary publication of the award decision will be made on TED, by clearly stating that the awarded contract by legislative point of view falls out of the scope of the EU directives.

At the end of each Phase, contractors are requested to submit an End of Phase report which is assessed among others for:

- ① Evidence that the work has been carried out in detail and completely,
- ② The results correspond to the original Tender,
- ③ There is a clear approach for further research and development as parts of the procurement procedure.

The aim of this evaluation is to decide if the Contractor has fulfilled his obligations as to receive the payment at the end of the respective Phase and whether the results are successful such as to qualify for an invitation to bid for the next phase.



In some cases, interim payments may be provided in order to assist the contractors during their R&D activities. These interim payments are linked with the successful evaluation of an intermediate progress report. In these terms, the evaluation of these reports could use the same evaluation criteria and will be evaluated by the Evaluation Committee.

Between Phases 1-2 and Phases 2-3, successful contractors are again invited to submit an offer for the upcoming Phase. The evaluation committee will then take into account the award criteria to score and rank the tenders received for the new phase. The outcome of this will be a decision regarding the Contractors that will be awarded a Phase Contract for the next Phase.

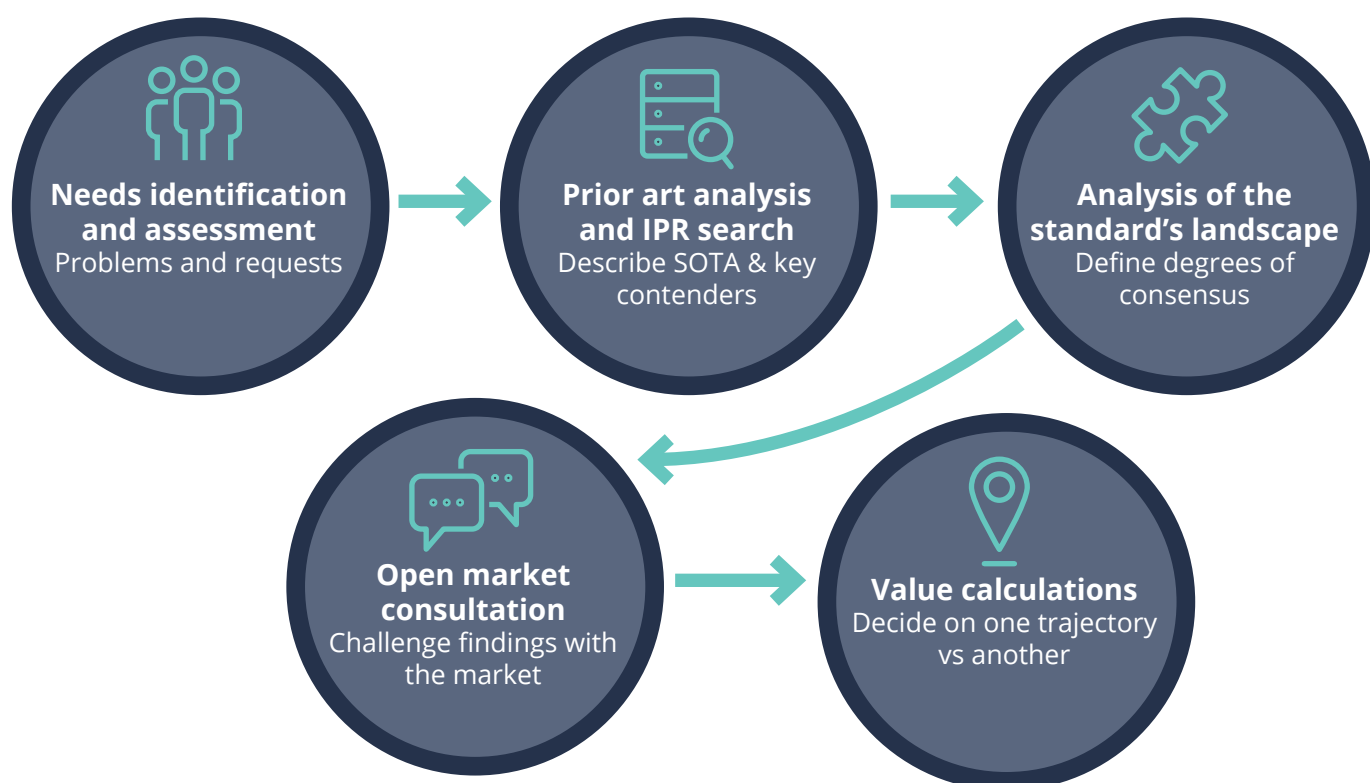


Figure 4: 5 steps in building a business case. Source: Corvers Commercial and Legal Affairs

#### TEST YOURSELF! QUESTION 4.

Can you list the different criteria allocated by the Evaluation Committee?



Answer: Exclusion Criteria, Selection Criteria, Award Criteria and Price are the main categories. Within each category specific criteria are listed. Examples are given in this guide in chapter 3.



# 6 ANNEXES



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement number 833444

## 6. ANNEXES

### ■ 6.1 Learn more about PCP: Other guides and tools

**The writers and collaborators would like to underline that part of the work was inspired from the publications below. Readers are encouraged to consult the following resources to gather more information on specific topics.**

- Cloud for Europe consortium. (2017). Pre-procurement process for Dummies. Lessons learnt during the cloud for Europe project.
- European Commission. (2016). Public Procurement indicators 2015: DG GROW G4- Innovative and e-Procurement. Brussels: European Commission
- European Commission. (2017). Directorate-General for Research & Innovation. Assistance for Innovation Procurement (eafip) Toolkit: <https://eafip.eu/toolkit/>
- European Commission. DG Connect (2017). Policy related Frequently Asked Questions on Pre-Commercial Procurement (PCP) and the link with Public Procurement of Innovative Solutions (PPI)
- European Commission. (2018). PUBLIC PROCUREMENT GUIDANCE FOR PRACTITIONERS on the avoidance of the most common errors in projects funded by the European Structural and Investment Funds.
- HEALTHCARE Supply Chain Network. (2019). Early Market Engagement Strategies Guide
- HEALTHCARE Supply Chain Network. (2020). Innovation Procurement Toolkit. <https://hscn.org/resources/innovation-toolkit/>
- Interreg Europe (2020). Policy learning platform. Pre-commercial procurement: developing innovation capacity.
- P3ITS Consortium. (2011). Pre-Commercial Procurement for Intelligent Transport Systems. The P3ITS Handbook.

**If you have any additional queries pertaining to any aspect of PCP or PPI, we invite you to contact:**

**Dr. Anabel Peiró Baquedano**

**Email : [info@corvers.com](mailto:info@corvers.com)**



## ■ 6.2 Letter of intent model

### Instructions for the letter of intent

Please note that the content denoted by the following format <format>, must be filled in accordingly by your organisation.

Once the template has been tailored to fit the purpose and objectives of your organisation, please make sure it is signed by a legal representative of your organisation, who is made aware of the PREVENT project and will be able to meaningfully collaborate in the second stage of the PREVENT project (PREVENT 2).

### The template for the letter of Intent

From:

<Name of the organisation>

<Name of Responsible person >

<Role/Position within the organisation>

<Legal/Official Address of organisation>

Contact persons email address

To:

Youssef Bouali

Engineering Ingegneria Informatica SpA

Coordinators of the proposal H2020- SU-

GM02-2020 Sub-Topic 2 to be submitted by the  
27th August 2020

Youssef.Bouali@eng.it

Subject: Letter of Intent

As <Official Name of Institution and acronym>, we officially confirm our interest in:

- 1 The Common Challenge elaborated by the PREVENT consortium, with the concrete participation of UoG members. The Common Challenge has been phrased as such: "Enhanced security situational awareness through i) timely automatic detection of unattended items in Public Transport Infrastructure and, in public areas in the vicinity ii) identification and tracking of perpetrators, and iii) advanced crisis management system."
- 2 Being part of the Public Buyers Group (PBG) of the present PREVENT project (H2020 Consolidation and Support Action);
- 3 Participating, as a Public Buyer- and hence as a consortium partner- in the future PREVENT PCP, should 90% of the required funding for the completion of the project be granted by the European Commission through the next call SU-GM02-2020 entitled "Strategic pre-commercial procurements of innovative, advanced systems to support security", Sub topic 2: Procurement of prototype systems among those specified as a result of Sub-topic 1 (PCP);

We also:

- 1 Provide the explicit consent to the coordinator Engineering Ingegneria Informatica SpA to submit the proposal;
- 2 State that we are fully eligible in accordance with the criteria set out in the specific call for proposals;
- 3 Have the financial and operational capacity to carry out the proposed action.

In addition to confirming our aforementioned interests, we, <Official Name of Institution and acronym>, also acknowledge that we have been made aware that the next call launched by the European Commission aims to fund the next phases of the PREVENT PCP only up to 90%. Hence, we understand that a 10% co-funding will be required from the members of the Public Buyers Group should the project be undertaken.

<Official Name of Institution and acronym> also acknowledges the importance of collaborative work which is expected from each and every member of the PBG during the consolidation of the H2020 proposal. This encompasses: If the proposal is successful, the signing future mandatory documents (including the Consortium Agreement and the Grant Agreement with the European Commission), participating in remote and physical meetings, contributing to the preparation of the PCP documents, contributing to the implementation of the PCP.

<Official Name of Organisation and acronym> operates as a <select role: public transport authority/operator/buyer> of <select: Metro/Bus/Railway/Tram>. With a network spanning across <name of country> and <number of station> stations in < number of cities> cities with <number of kilometres covered> kms, transporting over <number of customers> customers per day.

<Acronym of Organisation> acts as <mention role in the transport/security procurement sector. Example: public buyer to acquire solutions and technologies used to operate the metro network, like track, trains, design and constructions of stations, CCTV and others systems of the metro system>. <Acronym of Organisation> focuses on <mention focus areas such as, the security of the network and the customers>, namely against the <examples: treats of graffiti, fraud, pickpocketing, abandoned objects, terrorism and others security threats>.

<Official Name of Organisation > will provide its expertise in the following sectors <example: metro design and operations to the project> in the following stage of the PREVENT PCP.

Date: <Insert date DD/MM/YYYY>

First name and SURNAME of Legal Representative of the institution

Signature:

## ■ 6.3 Abbreviations and acronyms

<b>COTS</b>	Commercial off-the-shelf or commercially available off-the-shelf
<b>EC</b>	European Commission
<b>EU</b>	European Union
<b>FA</b>	Framework Agreement
<b>GDPR</b>	The General Data Protection Regulation (EU) 2016/679
<b>H2020</b>	Horizon 2020
<b>IPR</b>	Intellectual Property Rights
<b>JPA</b>	Joint Procurement Agreement
<b>LP</b>	Lead Procurer
<b>OMC</b>	Open Market Consultation
<b>PB</b>	Public Buyer(s)
<b>PBG</b>	Public Buyers Group
<b>PCP</b>	Pre-Commercial Procurement
<b>PPI</b>	Public Procurement of Innovative Solutions or Public Procurement of Innovation
<b>R&amp;D</b>	Research and Development
<b>SME</b>	Small Medium Enterprise
<b>TFEU</b>	The Treaty on the Functioning of the European Union
<b>TRL</b>	Technology Readiness Level
<b>UOG</b>	User Observatory Group
<b>WP</b>	Work Package



## PCP HANDBOOK

### Based on the PREVENT Pre-Commercial Procurement.

*This Handbook has been designed specifically for Public Procurers looking into designing a PCP. As a step-by-step user-friendly guide, it takes the reader through the main principles of the PCP while drawing from the experience gathered during the PREVENT project.*

*Pre-Commercial Procurement (PCP) is an approach for Public Buyers to acquire research and development services (and under certain conditions the related R&D results) that involves competitive development in phases, risk-benefit sharing under market conditions, and where there is a clear separation between the PCP and the deployment of commercial volumes of end-products.<sup>1</sup>*

*This Handbook is designed to address key aspects public authorities must consider at each step of a PCP and provides, in particular, recommendations for the transport and security sector. The PREVENT project, funded by the European Commission under the H2020 programme, is used as a case study for the first stage of the PCP. Moreover, this guide also sets forward the future steps that the PREVENT Consortium will undertake in order to move towards the launch and completion of the PCP.*

<sup>1</sup>EAFIP Toolkit Module 1



# PREVENT

PROCUREMENTS OF INNOVATIVE,  
ADVANCED SYSTEMS TO SUPPORT  
SECURITY IN PUBLIC TRANSPORT


For any additional information on the PREVENT PCP (e.g. integrating the Public Buyers Group, the ongoing projects), please contact:

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