



EU-HYBNET

3RD REPORT ON THE PROCUREMENT ENVIRONMENT

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1. INTRODUCTION

1.1 OVERVIEW

This deliverable aims to present the work carried out in the frame of the activities of the H2020 EU-HYBNET Project. In more detail, D3.4 - *First Mid-Term Report on Improvements and Innovation* and D3.8 - *First Mid-Term Report on Innovation and Research Project Monitoring* deliverables have provided the innovations that address the short list of the gaps and needs for the EU-HYBNET practitioners, available from D2.9 – *Deeper Analysis, delivery of short list of Gaps and Needs*. Following the aforementioned activities, *WP3 Surveys to Technology, Research and Innovations* also established a concrete methodology for shortlisting these innovations coming up with the most promising ones. These innovations were then fed to *WP4 Recommendations for Innovations Uptake and Standardisation* in order to examine the procurement landscape on a European level and the sectors under discussion and build a roadmap for their uptake. All the aforementioned aspects are depicted in the image below:

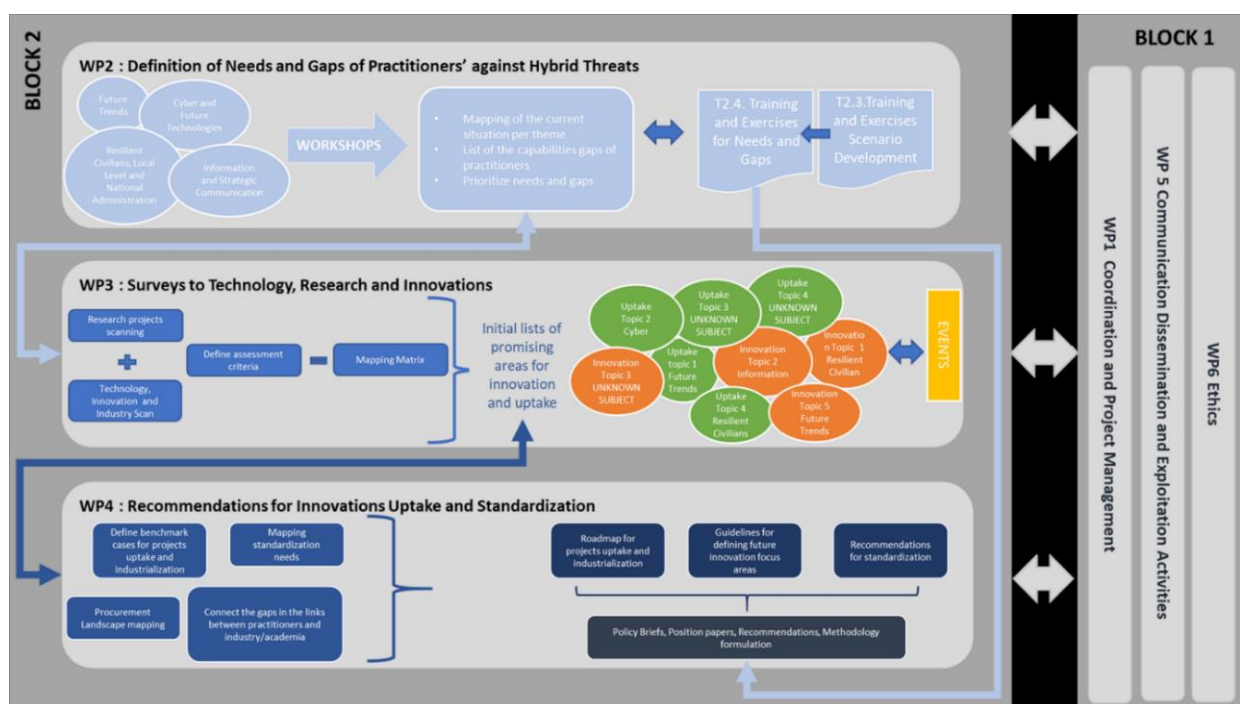


Figure 1 : EU-HYBNET structure of Work Packages and Main Activities

So, the aim of this task, namely 4.1 – *Mapping on EU Procurement Landscape* is to map the current processes in the European procurement landscape with special attention to innovation procurement - buying innovative products and services. More specifically, the main goal is to have a review of EU procurement environment followed by EU-HYBNET Consortium members and the Stakeholders Group members. Additionally, the analysis references to all available material were also included as well as the relevant legal documents, reports, guidelines, recommendation, procedures, standards and all other relevant data and literature dedicated to this topic. Based on the activities conducted, Task 4.1 will contribute to attaining OB4 Goal 4.1 and Goal 4.2. of the project.

The procurement analysis included in the current document was a collaborative effort between EU-HYBNET project and i-LEAD project¹. The aim of i-LEAD is to formulate a pan European network for Law Enforcement Agencies (LEAs) in order to express the common requirements that can fill capability and operational gaps. Having these in mind, the project will monitor research and innovation with the overall aim to indicate priorities for standardization and policy recommendations. In this context, the procurement landscape needs to be

¹ <https://i-lead.eu/>

examined in order to identify opportunities and threats especially in regard to the innovation procurement and joint procurement procedures.

1.2 DEFINITIONS

1.2.1. HYBRID THREATS

Hybrid threats aim to exploit a country's vulnerabilities and often seek to undermine fundamental democratic values and liberties. Hybrid threats can be characterised as a coordinated and synchronised action that deliberately targets democratic vulnerabilities of states and institutions through a wide range of means. The aim is to influence different forms of decision making at institutional, local, regional, and state levels to favour and/or achieve strategic goals while undermining and/or hurting the target. To effectively respond to hybrid threats, improvements in information exchange, along with breakthroughs in relevant research, and promotion of intelligence-sharing across sectors, and between the EU and its Member States (MS) and partners, are crucial.

According to the Joint Framework on Countering Hybrid Threats², while definitions of hybrid threats vary and need to remain flexible to respond to their evolving nature, the concept of the Framework aims to capture the mixture of coercive and subversive activity, conventional and unconventional methods (i.e. diplomatic, military, economic, technological), which can be used in a coordinated manner by state or non-state actors to achieve specific objectives while remaining below the threshold of formally declared warfare. There is usually an emphasis on exploiting the vulnerabilities of the target and on generating ambiguity to hinder decision-making processes. Massive disinformation campaigns, using social media to control the political narrative or to radicalise, recruit and direct proxy actors can be vehicles for hybrid threats.

1.2.2. PRACTITIONERS AT DIFFERENT LEVELS

The EU-HYBNET H2020 project³ follows the European Commission definition of practitioners which states that "A practitioner is someone who is qualified or registered to practice a particular occupation, profession in the field of security or civil protection." In addition, practitioners in the hybrid threat context are expected to have a legal mandate to plan and take measures, or to provide support to authorities countering hybrid threats.

Therefore, EU-HYBNET practitioners are categorised as follows:

- ministry level (administration),
- local level (cities and regions) and
- support functions to ministry and local levels (incl. Europe's third sector).

EU-HYBNET includes practitioner partners from all these levels and its primary focus is on civilian security issues. It should be emphasized that the third category includes researchers and academics, as well as the Centres of Excellence for Hybrid Threats.

In respect to the i-LEAD project, the term *practitioner* refers to Law Enforcement Agencies. Law enforcement agencies are organisations who respond to, detect, and prevent crime. Within this perspective, it is recognized that police officers play a significant role in adapting and responding to unexpected or unknown situations, as well as recognized situations, such as theft or domestic dispute.

1.2.3. DEFINITION OF GAPS AND NEEDS

² <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52016JC0018>

³ EU-HYBNET Description of Action, Coordination and Support Action, Grant Agreement No 883054

The *Gaps and Needs analysis* that has been completed in the frame of this project under the scope of T2.1 – *Needs and Gaps Analysis in Capability and Knowledge* aimed to identify, record, and understand the nature of practitioners and other relevant European actors countering hybrid threats' gaps and needs, and the obstacles of developing, maintaining, or improving their resilience in the landscape of hybrid threats.

1.2.4. PUBLIC PROCUREMENT

Public procurement is the process by which public authorities, such as government departments or local authorities, purchase work, goods, or services from companies. It is regulated by law to maximise value for money for the public sector and ensure compliance with three key principles:

- equal treatment
- non-discrimination
- transparency

To create a level playing field for businesses across Europe, EU law sets out minimum harmonized public procurement rules. These rules govern the way public authorities and certain public utility operators purchase goods, works and services. They are transposed into national legislation and apply to tenders whose monetary value exceeds a certain amount. For tenders of lower value, national rules apply which will still have to respect the general principles of EU law.

Every year, over 250.000 public authorities in the EU spend around 14% of Gross Domestic Product – GDP (around €2 trillion per year) on the purchase of services, works and supplies. Moreover, in many sectors (such as energy, transport, waste management, social protection and the provision of health or education services) public authorities are the principal buyers.⁴

The social gains of the public procurement come from the fact that by the public sector uses this mechanism in order to boost jobs, growth and investment, and to create an economy that is more innovative, resource and energy efficient, and socially inclusive.

Moreover, high quality public services depend on modern, well-managed and efficient procurement. Last but not least it should be mentioned that by improving public procurement big savings can be yield, even a 1% efficiency gain could save €20 billion per year.⁵

1.2.5. INNOVATION PROCUREMENT

According to the European Commission's *Guidance on Innovation Procurement*⁶ such procurement is any procurement involving:

- buying the process of innovation – research and development services – with (partial) outcomes; and / or
- buying the outcomes of innovation created by others.

Innovation procurement is a policy instrument whereby policymakers can use the procurement process to foster innovation for the benefit of public authorities, the private sector as well as society at large. Indeed, with innovation procurement public expenditure is used more effectively, as it can harness the private sector's innovation capacity for a number of purposes. Notably, innovation procurement may be used to improve the quality of public services in those areas where the public buyer has a large market share, e.g., healthcare, transport, defence. The increased demand coming from the public sector boosts the private sector's innovative

⁴ https://ec.europa.eu/growth/single-market/public-procurement_en

⁵ https://ec.europa.eu/growth/single-market/public-procurement_en

⁶ [https://ec.europa.eu/transparency/documents-register/detail?ref=C\(2018\)3051&lang=en](https://ec.europa.eu/transparency/documents-register/detail?ref=C(2018)3051&lang=en)

performance, thus increasing overall competitiveness. Not least, societal challenges may be tackled through solutions generated via innovation procurement⁷.

Public procurement's primary target is the acquisition of products and services economically. As such, innovation procurement can enhance cost-efficiency by considering life-cycle costs over the long-term and boost performance, thereby producing significant cost savings.

In addition to actual economic demand, innovative products and the provision of services often bestow concrete improvements in administrative procedures and the concomitant enhancement of service quality and user-friendliness. Finally, the government's demand for new products and services stimulates innovative activity in the economy and bolsters the rapid introduction of newer technologies in the market. Small and medium-sized enterprises (SMEs) profit especially, as they require reference projects for their innovative technologies to potential (private) clients and positively influence their purchasing decisions.⁸

1.2.6. JOINT PROCUREMENT

Joint procurement means combining the procurement actions of two or more contracting authorities. The key defining characteristic is that there should be only one tender published on behalf of all participating authorities.

1.3 STRUCTURE OF THE DELIVERABLE

This document is comprised of six (6) sections, the first being the current introductory section. The rest of the deliverable is structured as follows:

Section 2 shows a detailed description of the procurement environment at the EU level, focusing also on innovation procurement that EU-HYBNET project activities are mainly concerned with. In the said section, procurement legislative background is analysed at a national and European level. Moreover, the different innovation friendly procurement types as well as the financial tools to support innovation procurement are described.

Section 3 provides detailed recommendations for a procurement procedure, that derive from the answers received and the literature review conducted by the task participants.

Section 4 includes the specific recommendations for the procurement of the solutions identified as priorities by WP3.

Section 5 provides the conclusion of the current document

Section 6 recommends the future work that needs to be done until the delivery of the uptake strategy.

1.4 METHODOLOGY

Given that the ultimate goal set for Task 4.2 (Strategy of Innovation Uptake and Industrialization) is to suggest the uptake strategy of the most promising solutions, the partners focused on reviewing the practices used by EU Member States in the framework of innovation in public procurements. In D4.1, the review was focused specifically on the countries represented in the EU-HYBNET and ILEAD consortia. The present deliverable has supplemented that review with the procurement landscape of the remaining EU Member States. In both cases, a questionnaire was prepared which ran in parallel with the literature review of all related available material. The analysis outcome was mainly based on the partners' expertise and previous experience, the review of

⁷ https://ec.europa.eu/regional_policy/sources/good_practices/GP_fiche_30.pdf

⁸ https://procure2innovate.eu/fileadmin/user_upload/Documents/KOINNO_PublicProcurementofInnovation.pdf

relevant documentation (laws, guidelines, presentations, articles, studies, reports, etc.) and interviews with end users trying to cover aspects of national public procurement.

The aim of the questionnaire is convergent with the reasoning behind T4.1, which is to prepare a review of EU procurement environment, including gathering benchmark cases on innovative or regular procurement among EU countries, to understand the national funding schemes across EU, as well as to gather recommendations for T4.2. The objective was to analyse the degree of innovation procurement integration in the national legislation, identify the key actors and tools for the implementation of, and support of, the public procurers to implement such procedures (via training and individual guidance, the elaboration of explanatory notes, presentations, case studies, financial support, etc.).

It is important to highlight that the aim of EU-HYBNET is not to perform an exhaustive and thorough analysis of the national innovation procurement landscape but rather to collect the insights on the challenges for the design and implementation of such procedures. Therefore, the foreseen number of interviews was not envisioned to be large.

The data gathered for the purpose of this Deliverable were collected with the use of an on-line questionnaire that consisted of seventeen (17) open questions and two (2) charts, allowing the respondents to present benchmarking examples of good practices or pitfalls related to their experience in conducting (joint cross-border or national) public procurement.

The open questions were divided into sections devoted to:

- Current procurement processes mapping,
- Policies relevant to the innovation procurement field,
- Joint cross-border procurement provisions in respondents' countries,
- Rules related to procurement under defence and security field,
- Incentives and barriers in the economic aspect of procurement.

The answers and experiences could be deepened and expanded in the aforementioned good practices/pitfalls charts, where specific questions related to the specific procurement experiences (e.g., duration, type of procurement, involved entities, applicable law, value of the tender) were asked. The questionnaire template can be found in Annex III.

The survey for D4.1, that focused specifically on the countries represented in the EU-HYBNET and ILEAD consortia, was held between 02/04/2021 and 07/05/2021 among practitioners in the field of procurement gathered around the EU-HYBNET and i-LEAD projects. For the present deliverable, that supplemented the previous review with the procurement landscape of the remaining EU Member States, the survey was carried out between 10/09/2022 and 30/09/2022. In both cases of the survey, the on-line form was prepared and distributed with the use of the EU Survey tool, which is an online survey management system for creating and publishing forms available to the public. It is the European Commission's official survey management tool, which has as its main purpose to create official surveys of public opinion and forms for internal communication and staff management.

As mentioned above, the task participants also conducted a literature review of the online available material in order to deepen more into the national procurement procedures as well as identified the procurement requirements of the most promising solutions described under the activities WP3 and more specifically Task 3.1 – *Definition of Target Areas for Improvement and Innovation*. All the material collected and reviewed is listed on the reference section of the current document.

The abovementioned methodology enabled the Consortium to:

- engage actively with the interested stakeholders,

- identify the types of procurement and corresponding assets with relevance to the end users' objectives,
- identify possible threats, risks and challenges related to innovation and regular procurement,
- list good practices related to procurement in order to meet objectives,
- map the success factors and problematic areas, and
- provide recommendations for the procurement procedure of the most promising innovations.

2. PROCUREMENT OVERVIEW

2.1. PROCUREMENT LEGISLATION AT THE NATIONAL LEVEL

The procurement dimension can be considered as the implementation vehicle of the innovation uptake procedure. Policymakers have recognised public procurement as one of the most important policy instruments that stimulate innovation and generate the ground rules for innovation uptake.

Legislation is a key aspect in the requirements' construing, that should be analysed in the technical specifications during services and products procurement. The 'Treaty on the Functioning of the European Union (TFEU)⁹ and the Directive 2014/24/EU¹⁰ of the European Parliament and of the Council (Dir/2014/24/EU), have settled the prevailing legal framework for the procurement of public administration tenders above EU threshold values.

Therefore, the analysis of the incorporation of the abovementioned framework in the national legislation is a prerequisite for someone to identify potential challenges as well as to set the scheme for the analysis of the procurement environment. This current section contributes to these directions.

2.1.1. PROCUREMENT LEGISLATION AT THE NATIONAL LEVEL FOR COUNTRIES REPRESENTED IN THE EU-HYBNET AND ILEAD CONSORTIA

Following is the review which was carried out in D4.1, focusing specifically on the countries represented in the EU-HYBNET and ILEAD consortia.

SWEDEN

Public procurement in Sweden is regulated by the Law of Public Procurement. The Public Procurement Act (SFS 2016:1145), the Utilities Procurement Act (SFS 2016:1146) and the Concessions Procurement Act (SFS 2016:1147) which are the three constitutional acts, administrating public procurement in Sweden.

For the aforementioned acts, the first one applies to the public sector, and the second one manages the utility sectors of essential services such as water, transport, energy and postal services. The last act, the Concessions Procurement Act is applicable to work and service concessions. These acts convert the EU Directives 2014/23/EU, 2014/24/EU and 2014/25/EU towards national legislation. Law (2011: 1029) on defence and security procurement conveyed the EU directive 2009/81/EC.

The National Public Procurement Strategy in Sweden supports the public procurement sector which was adopted by the Government in 2016 and provides a substantial aspect to "Public procurement that enhances innovations and alternative solutions" (Regeringskansliet 2016).

The National Government and the Agency for Public Procurement (Upphandlingsmyndigheten, UHM) play a crucial role in the Swedish innovation procurement framework, where the first is driving the political commitment and the second is the national competence centre for innovation procurement and is in charge for the application of the procurement plan at national level.

The State Purchasing Centre at the Legal, Financial and Administrative Services Agency is the central purchasing body which creates framework agreements for government agencies to use as a basis for making a call. The centre is also responsible for creating acts and regulations. Needs analysis, market analysis, procurement strategy and announcement of tender documents are made via Procurement tools Commerce (Upphandlingsverktyg Kommers). The national legislation does not regulate deployment of market consultations. Any company from countries affiliated to the WTO Government Procurement Agreement may freely participate

⁹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A12012E%2FTXT>

¹⁰ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014L0024>

in a tender. The procurement process can be prolonged when one of the bidding companies decides to challenge the award decision in court.

Innovative procurement is regulated by the Law (2016: 1145) on public procurement. The performance of R&D contracts is mandated to take place in Sweden. Innovation procurement is simulated by several initiatives, namely Sweden's Municipalities and Regions, Teknikforetagen, Swedish Competition Authority and the National Agency for Public Procurement. In Sweden, the regulations of the principle of openness and public action are crucial. As for this the procurement of goods and services which are under development and require confidentiality may be problematic.

The innovation procurement in the security area is exempted from the scope of national legislation and it is regulated by the Act (2011: 1029) on procurement in the field of defence and security. Purchase of technologies in the security and defence fields owned by companies from other countries is restricted by the national law with the aim of protecting the information and activities that are important for Sweden's security against espionage, sabotage, terrorist crimes and certain other threats.

Joint cross-border procurement is allowed under the national legislation. Nonetheless, there are many practical challenges, as many results obtained from the differences in the decision-making process and content of proxies in each country. Another challenge is the contract interpretation in the administrative process under the case law of each country. Moreover, participation of contractors from other countries in procurement on security solutions significantly prolongs processing times. In those cases, consultation with the Security Protection Police is a mandatory part of the procurement process.

The National Agency for Public Procurement manages the national funding to support procurement in Sweden. It has been tasked by the Swedish government with providing guidance to municipalities and regions in matters of state aid and contributing to improving their ability to assess when and how to apply state aid rules. State aid may only be granted if it has been approved by the European Commission or been designed in accordance with certain exemptions. When state aid is allowed, it can further contribute to political goals such as sustainable development, finance important infrastructure, finance the provision of welfare services or to make European companies more competitive.

In economic transactions with suppliers located in countries other than Sweden the processing time is longer because of the VAT legislation¹¹, but it varies depending on the subject of procurement and delivery terms.

PORTUGAL

The procurement policy in Portugal is defined and developed by the Ministry of Economics, which in a collaboration with the Institute of Public Markets, Real Estate and Construction (IMPIC), administer and audit public procurement in the country. The Ministry of Finance also plays an important role in the procurement system since it is in charge of communication activities about the public procurement to civil society as well as data gathering and for relating activities to the EU.

The Public Contracts Code, consisted of a complicated normative corpus, and the Decree-Law 111-B/2017, coordinate the public procurement scheme in Portugal, which converts the EU Directives 2014/23/EU, 2014/24/EU, and 2014/25/EU. The Defence and Security Directive 2009/81/EC was converted by the Decree-Law 153/2012. The processes are operated by the centralised purchasing bodies and their frameworks. The Central Purchasing Bodies in Portugal are the Government Shared Services Entity (eSPap) and the Shared Services of the Ministry of Health (SPMS). The former is responsible for several substantial framework contracts through which central government entities have to acquire standardized goods and services (vehicle gasoline, office material, basic software licensing, hardware equipment) and it awards framework agreements. The eSPap provides multiple shared services to the governmental bodies and public procurement is one of those. The National

¹¹ <https://www4.skatteverket.se/rattsligvagledning/2777.html>

System of Public Procurement (NSPP) and all the entities who have joined it, containing regional and municipal contracting forces, could access the services supplied by the eSPap. SPMS is the purchasing body for the health sector, it prepares framework agreements, competitive dialogues, and aggregated procedures.

Furthermore, each ministry has a centralised purchasing procedure developed by purchase ministry units. Procurement starts with authorisation of expenditure. This phase may be complex as it is regulated by the budgetary rules to avoid debt. E-procurement is mandatory in procedures published under public notice and the contracting authorities have the authority freedom to use any of the procurement platforms run by private companies. The national legislation does not restrict the participation of companies from countries affiliated to the Government Procurement Agreement in the procurement process. Observance of the environmental, social and labour law provisions should be performed at the relevant stages of the procurement procedure. The Portuguese Public Contracting Code regulates market consultations in preparation of a procurement in the same way as the European legislation. Challenging the award decision in court by one of the bidding companies results in significant delays in the procurement process.

The compliance of the public procurement procedures with the national competition policy is implemented by the Portuguese Competition Authority (PCA) which also plays this role in the field of public procurement. Lastly, the Agency for Development and Cohesion (AD&C), operating under the Ministry for Regional Development is working towards public procurement. The AD&C manages the regional development policy and guarantee, at the technical level, the common management of the ESI Funds for the 2014-2020 programming period. The National Innovation Agency (ANI) is considered to be principal actor in the innovation policy area and is also a high possibility to become the national competence centre for innovation procurement. The National Office for the Promotion of the EU R&I Framework Program (GPPQ) holds also a position in the aforementioned field whereas it was also the promotion and monitoring entity for the participation on the Horizon 2020 Programme, and currently covering participation to EU projects in the area of PPI, PCP and R&D procurement.

The Public Contracting Code of 2008, the 2004 Directives and their alterations as well, comprise a fundamental public procurement process in Portugal. Centralized purchasing entities and their framework agreements are being employed by public entities of central administration. Centralization also is taking place inside each Ministry, as already mentioned, and with the combination of the purchasing procedures grown by UMC (purchase Ministerial units).

Buying procedures are beginning with expenditure approval which can be complicated due to budgetary rules to avoid public debt. Actions published under public notice require using the procurement mechanisms. There is a variety of procurement platforms (managed by private organisations) that can be chosen by each public contracting authority.

The Portuguese Public Contracting Code regulates the innovation procurement under the "partnership to innovation" (PPI) in accordance with Directive 2014/24 of the EU. A national program is put in place to foster innovation, creation of start-ups and the collaboration between companies, academia, and public administration. Moreover, innovation procurement is supported by several funding schemes. The R&D contracts are not required to be performed in Portugal. A majority of innovative technology can be purchased from foreign companies without any restriction. The national legislation limits the purchase of IT technologies under an innovation procurement procedure. In public procurement procedures regarding IT technologies it is mandatory to use open source software and transfer Innovative Product Resources (IPR) or divide IPR with a contractor. A 10-day standstill period is also required in tender of IT technologies. Moreover, Letters of Guarantee are mandatory for contracting above 200.000 euros but may also be determined for contracts below this amount. Proposals and applications must be written obligatory in Portuguese or, if not, they must provide an official translation. Procurement in the security area is regulated by the Portuguese Public Contracting Code allows contracting authorities to award contracts directly when the contract needs to be executed under special security conditions or when the tender documents were classified under security regulations.

Joint cross-border procurement is not regulated by national legislation, but it is allowed. Foreign companies participating in joint procurement of security solutions may encounter some legal obstacles. Portuguese contracting authorities may demand an accreditation for security levels issued by the Security National Cabinet

or similar, considering the level of security and confidentiality required (EU, National, NATO). These accreditations take several months to be issued and they entail a very long investigation process of criminal records of company's managers, families and of the company itself. The parties participating in iProcureNet H2020 Project identified several obstacles to participation in joint cross-border procurement. Namely the differences between EU countries regarding investment plans timing and approval, differences in the use of e-procurement, digital signatures, rules and approvals regarding expenditure and budgetary approvals, as well as the need to define a jurisdiction.

There are no legislative difficulties in economic transactions caused by the VAT legislation. However, some problems may arise when companies have their headquarters located outside of Portugal. All the procedures are regulated under the VAT Code.

LITHUANIA

Procurement procedures in Lithuania are regulated by four principal laws:

1. Law of the Republic of Lithuania on Public procurement,
2. Law of the Republic of Lithuania on Procurement by the entities, operating in the Field of Procurement Waste Water Management, Energy, Transport or Postal Services,
3. Law of the Republic of Lithuania on Public Procurement in a Field of Defence and Security, and
4. Law of the Republic of Lithuania on Concessions.

In 2016, the EU Procurement Directives 2014/23,24 and 25 were altered. More particularly, in the PCP sector, highly paramount is the Decree 709 (1st July 2015) of the Government of the Republic of Lithuania concerning the Approval of the Procedures for Pre-commercial Procurement.

In the sector of defence and security specifically, it has been carried out the Directive 2009/81/EC by the law on Public procurement, No XI-14912. In Lithuania, the national procurement supervising entities are directing a strict reporting system to audit the activities of public procurement which is administered mainly by sub-national contracting organisations. The Ministry of Economy and Innovation, at a national level owns a principal role in public procurement since it is responsible for this activity as well as for the relevant legislation and for technology and innovation. Nevertheless, the Public Procurement Office (PPO), which implements the public procurement policy and audit obedience with the law and the legislation, also assists the Ministry. The PPO's activities involve the provision of methodological guidance to the contracting entities, the management of the central e-procurement portal, countering infringements, overseeing contracting entities' obedience with the law and coordinating and supervising public procurement activities jointly with partner Ministries and other State entities. The Competition Council is also a key player and is responsible to research potential anti-competitive activities from contracting organisations and bidders. The Council reports to the PPO and has the power also to charge fines as well as to send a case to the court in case of competition law infringements applied to public procurement.

The Central Purchasing Organisation (CPO LT) is the main body responsible for centralised purchases on behalf of contracting authorities at national and local level. Other substantial entities in the innovation procurement area are the Ministry of Education, Science and Sport, in charge of the research policy, and the Agency for Science Innovation and Technology (MITA), which provides funds to PCPs and experts as well as support and assistance to the contracting entities. The measures for capacity building, are generated mainly through MITA, since it is participating in the awarding procedure for the finance of the PCPs. Thus, when the applicant PCPs own an amount of more than 1 million euro, the governmental council on R&D&I also takes part in the awarding procedure. ESIF funds measure "Pre-commercial procurement LT", is funding the Pre-Commercial Procurement (PCP), which is the area that Lithuania is basically focused regarding innovation procurement activities. The responsible organisation for funding is the Lithuanian Business Support Organisation (LVPA).

Every public procurement procedure, above and below European thresholds, is performed on the Central Public Procurement Information System (CPP IS). This portal for all electronic procurement procedures is run and

administered by the Public Procurement Office. There are some procedures exempted from the mandatory use of CPP IS which are the procedures that, under the national law and European directives, may be performed without prior publication. This also includes low-value procurement procedures for the contracts under 10 000 EUR (excluding VAT) for the contracting authorities (classical sector). The deployment of market consultations in preparation of a procurement is regulated by Public Procurement Law and it depends on the stage of document preparation. Companies from countries affiliated to the Government Procurement Agreement (GPA) can freely participate in the procurement process in Lithuania. The procurement process may be delayed in case one of the bidding companies decides to challenge the award decision in court.

Innovation procurement is regulated by Law on Public Procurement, Description of the Procurement Procedure for Research and Experimental Development Services approved by the Decision No 22 of the Government of Lithuania on 15th January, 2020 and the Law on Technologies and Innovation. The law only applies to public service contracts for research and development services provided that the following conditions are fulfilled: the benefits accrue exclusively to the contracting authority for its use in the conduct of its own affairs and the service provided is wholly remunerated by the contracting authority. The Government of the Republic of Lithuania or the institutions authorised by it are responsible for awarding of contracts for research and development services which are intended to meet the needs of higher education and research institutions or are intended to develop an innovative product or service or innovative works and thus meet the needs of the public sector. Even though the process is regulated it is still limited due to the lack of clarity in regulations concerning procurement activities and different interpretation of regulation.

The innovation procurement is stimulated by the Ministry of Economy and Innovation. R&D contracts for pre-commercial procurement may be required to be performed in Lithuania depending on the source of their funding. If a contract is funded by the EU Structural Funds programme it has to be performed in Lithuania. However, the supplies do not have to be based in Lithuania. Innovation procurement is restricted in the fields of national security and defence. According to the Law on Public Procurement in a Field of Defence and Security the contracting authority shall have the right to exclude suppliers (legal persons) not established in a Member State and suppliers (natural persons) not declared in the Member State of residence, or to prevent suppliers from using such subcontractors. This information has to be provided in the procurement documents. Additionally, the procedures for procurement related to intelligence must be approved by the government. According to those procedures, suppliers are selected to participate in procurement procedures on the basis of the market situation and information available to the contracting authority, assessing whether the participation of a potential supplier poses a threat to national security. The deployment of an innovation procurement is constricted by the fact that there is no clear definition of public procurement of innovation. As there is no definition in EU Law or Policy documents each Member State has its own understanding of the concept.

Joint cross-border procurement is allowed by the national legislation. Nonetheless, the lack of clear provisions and methodologies on how to implement joint cross-border procurement poses obstacles for the participation. When it comes to joint procurement of security solutions the language poses a limitation for the participation of contractors from other countries, as all documents must be written in Lithuanian.

Procurement in Lithuania can benefit from a funding scheme. However, it only relates to pre-commercial procurement as there is no funding scheme for Public Procurement of Innovation yet. Pre-commercial procurement in Lithuania is funded by EU Structural Funds measure "Ikiprekybiniai pirkimai LT". Contracting Authorities can get up to 2 million euros funding (funding rate up to 90% of the value of PCP).

The VAT legislation does not pose any difficulties in economic transactions with suppliers located in other EU countries or in non-EU countries.

GREECE

Public Procurement process in Greece is regulated by the Law 4412/2016 - Public Procurement of Works, Supplies and Services, which transposes the EU legislation, coming into action on 1st August of 2016 (altering the Directives

2014/24 and 2014/25/EU) and by the Law 4413/2016 referring on award and execution of concessions in transposition of Directive 2014/23/EU. In the Defence and Security sectors, Public Procurement is regulated by law 3978/2011 - Public Procurement of Works, Services and Procurement in the Fields of Defence and Security Harmonization, which altered the Directive 2009/81/EC.

The principal actors in the area of public procurement in Greece are:

- The National Central Purchasing Bodies,
- The Government Council for Economic Policy authorises, oversees and assesses the Action Plan for National Procurement Strategy and any potential amendments,
- The General Directorate of Public Procurements (under the authority of the Ministry of Economy and Development) possess and manages the national e-procurement system and is in charge of public supplies and services, involving a definite focus on green and innovation procurement,
- The General Secretariat of Infrastructure, overseen by the Ministry of Infrastructure and Transport, in charge of works procurement and public services contracts relating to public works,
- The National Central Authority for Procurements in Health “EKAPI”, responsible for procurements in the health sector and,
- The Hellenic Single Public Procurement Authority (SPPA), settled by the Government in 2011, which is in charge of the evolution and promotion of the national strategy in the area of public procurement, supplies policy advice to the legislature as well as assists to awarding entities on the implementation of procurement law and regulation and approval of the application of certain activities such as negotiated procedure without publication notice. Further, SPPA holds an administrative role by supervising and assessing awarding entities’ judgement, several policy documents and schemes, such as the Greek National Strategy for R&D&I and the Greek Smart Specialization Strategy.

Additionally, Law 4310/2014 on Research, Technological Development, Innovation and other provisions, facilitates and promotes innovation procurement as well as introduces definition of Pre-Commercial Procurement (PCP). Nevertheless, the Greek innovation procurement framework is still in an emergence level. To standardize innovation procurement at a national level, a competence centre within the General directorate of public procurement is demanded to be established.

It should be mentioned that there are also several electronic platforms which can be used for public procurement in Greece. The National Electronic Public Procurement System (NEPPS) is the main online hub for public procurement. Its objective is to modernise and simplify award procedures and to provide support to interested parties (citizens, contracting authorities, suppliers, supervisory authorities). The Directorate of Management, Development and Support of NEPPS at the Ministry of Digital Governance has a helpdesk that provides telephone support to NEPPS. The website provides information on NEPPS issues, allows users to search for tender procedures, offers user manuals for all NEPPS functions, as well as an e-learning service and CPV. The National System of Electronic Public Procurement (ESIDIS) is the electronic system of the Ministry of Development and Competitiveness through which a candidate supplier of the State can submit an offer. Tender invitations are also published on the Central Electronic Register of Public Procurement (KIMDIS), which aims to collect, process and publish data relating to all public contracts for the execution of works, supply of products and provision of services, independently from the process and the amount, for all the stages of the contract award. The Transparency Program DIAVGEIA (or DI@VGEIA) was created by Law 3861/2010 and serves as a means for publishing decisions of government bodies and the administration on the Internet.

The public procurement process comprises of six stages which are as follows:

- Stage 1: Tender preparation, in this phase drafting or verification of Notice/Declaration documents based on the approved technical specifications take place.
- Stage 2: Creation of a competition – posting on ESIDIS, during this stage a tender for a public contract for procurement is created, a Tender Committee is appointed and the Announcement is posted on

KIMDIS, DIAVGEIA or ESIDIS platform, the announcement is clarified through the ESIDIS system and preparation for unsealing are started.

- Stage 3: Unsealing of tenders, in this stage the Document file and Technical Bid file are unsealed by the President and Tender Committee, Financial Offer file is also unsealed at this point.
- Stage 4: Evaluation - rating of bids, for a competition based on the price criterion, a single report is issued with the suggestion on the definition of the bidder with the lowest price as a temporary bidder. In case of grading (optimal value for money) a report is issued per phase.
- Stage 5: Invitation of bidding documents, in this phase supporting documents are submitted and evaluated. The minutes with the proposal for award to the contractor are composed and an Assignment Decision is posed.
- Stage 6: Invitation of the contractor to sign a contract.

Prior to the commencement of a public procurement procedure, contracting authorities may consult with the market in order to prepare the public procurement and to inform the economic operators of their plans and public procurement requirements. To this end, contracting authorities may, for example, seek or receive advice from independent experts or authorities, such as the Hellenic Single Public Procurement Authority (HSPPA) and the Tender and Contracts Monitoring Unit of the Centre for International and European Economic Affairs or other bodies active in the market. Such advice may be used in the planning and conduct of the public procurement process, provided that such advice does not distort competition or infringe the principles of non-discrimination and transparency.

Participation in the procurement to companies from countries affiliated to the WTO Government Procurement Agreement is regulated according to the EU Criteria for qualitative selection: Article 57 "Exclusion grounds" (1 to 6) of Directive 2014/24/EU. Natural or legal persons and, where applicable associations of economic operators can participate in the procurement if they are established in a Member State of the European Union, or a Member State of the European Economic Area, or in third countries that have signed and ratified the Government Procurement Agreement (GPA) of the World Trade Organization (WTO), or in third countries which do not fall into the above cases and which have concluded bilateral or multilateral agreement with the Union.

Any interested party who has or had an interest in being awarded a contract and has suffered or may have suffered damage from an enforceable act or omission of the contracting authority in breach of European or Domestic legislation, has the right to appeal to the Authority for the Examination of Preliminary Appeals and to seek temporary protection or annulment of an illegal act or omission of the contracting authority or annulment of contract which has been entered into unlawfully. Any interested party who has suffered or may be harmed by a decision of the Authority for the Examination of Preliminary Appeals upon the reference for a preliminary ruling may file an application for suspension of operation and an application for annulment of its decision before the competent courts. The contracting authority has the right to exercise the same legal remedies if the Authority for the Examination of Preliminary Appeals accepts the preliminary appeal. Disputes arising from the award of public contracts and concerning claims for compensation are adjudicated by the competent courts, in accordance with the general provisions. The case is being heard in court as soon as possible.

Innovation procurement is regulated by the article 31 in Law 4412/2016 abovementioned, in accordance with Article 31 "Innovation partnership" of Directive 2014/24/EU. In cases where there are no suitable products or services available in the market new R&D procedures are required. In these cases, the procedures of Pre-commercial procurement (PCP) can be activated by seeking to weigh the pros and cons of possible alternatives competitive solutions. The PCP is regulated by the article 14 "Research and development services" also of Directive 2014/24/EU.

Joint cross-border procurement is allowed under the national legislation and is regulated by Article 38 "Occasional joint procurement" and Article 39 "Procurement involving contracting authorities from different Member States" of Directive 2014/24/EU.

Procurement in security areas is regulated by the Law 3978/2011, and more specifically in the chapter *H* which is titled “Research and Development Programs”. Article 7 “Protection of classified information” of Directive 2009/81/EC which is also adopted in domestic legislation foresees that contracting entities may impose on economic operators’ requirements aimed at protecting the classified information they communicate throughout the tendering and contracting procedure. They may also request these economic operators to ensure compliance with such requirements by their subcontractors. Also Articles 15 “Defence and security”, 16 “Mixed procurement involving defence or security aspects” and 17 “Public contracts and design contests involving defence or security aspects which are awarded or organised pursuant to international rules” of Directive 2014/24/EU apply to the procurement in the defence and security area. Obstacles and restrictions in the participation of contractors from foreign countries in the procurement of security solutions are mentioned in Directive 2009/81/EC and in particular Articles 40 “Suitability to pursue the professional activity”, 41 “Economic and financial standing” and 42 “Technical and/or professional ability” of the same Directive which are adopted in domestic legislation.

Greece has funding schemes that support innovation and regular procurement.

No difficulties in economic transactions with suppliers located in other EU countries or in non-EU countries result from the national VAT legislation.

NORWAY

In Norway, the legislation referring to public procurement is mainly based on a substantial level on EU public procurement Directives in correlation with the country’s obligation under the European Economic Area (EEA) Agreement. The public procurement legal framework is constituted in the Norwegian Act on Public Procurement of 17th June 2017, No. 73 (LOV-2016-06-17-73), and in three regulations adopted on 20th December 2016, i.e. the Regulation on Public Procurement of 20th December 2016, No. 1744 (FOR-2016-12-20-1744), implementing Directive 2014/24/EU, the Regulation on Procurement Rules in the Utilities Sectors (FOR-2016-12-20-1745), implementing Directive 2014/25/EU and the Regulation on Concessions Contracts (FOR-2016-12-20-1746), implementing Directive 2014/23/EU). In 2014, the EU Directive on defence procurement (2009/81/EC) came into operation which was carried out by the Regulation on Defence and Security Procurements. A principal role in the area of innovation procurement plays the Ministry of Trade and Industry (NHD), which outlines the rules and regulations on public procurement and is in charge of innovation policy. Innovation objectives have a key role in the strategic use of public procurement. The Government as well as key procurers, are supported by the Agency for Public Management and eGovernment (Difi) in the remodelling of the public sector and in the application of innovation procurement through competence creation and communication.

More in particular, Difi in collaboration with the Norwegian Association of Local and Regional Authorities (KS) and Confederation of Norwegian Enterprise (NHO) put into action the *National programme for supplier development* which aims to support innovation and creativity into the public sector via detailed innovation procurement projects, method development and competence building activities. From a supply-side perspective regarding innovation procurement, there is another actor namely the Innovation Norway (IN) Norwegian Government's most important institution for innovation and development of Norwegian enterprises and industry.

ROMANIA

All national legislations in the field of public procurement are adopted in accordance with the European directives. Procurement in Romania is regulated by:

1. The Governmental Emergency Ordinance no. 13/2015 on the establishment, organization and functioning of the National Agency for Public Procurements,
2. The Law no. 98/2016 on public procurements (Government Decision no. 395/2016 for the approval of the methodological norms for Law no. 98/2016),
3. The Law no. 99/2016 on sectoral procurements,

4. The Law no. 100/2016 on work and services concessions,
5. The Law no. 101/2016 on remedies and appeal for the award of public procurement, contracts and work and services concession, as well as for the organization of the National Council for Solving Complaints,
6. The Governmental Emergency Ordinance no. 98/2017 on the ex-ante control function on the process of contracts awarding (Government Decision no. 419/2018 for the approval of the methodological norms for OUG no.98/2017),
7. The Governmental Emergency Ordinance no. 114/2011 on the award of some public procurements in defence and security domains.

The Electronic Public Procurement System (SEAP) is the national software used for procurement. It is an online platform for publishing all information related to public procurement: procedure initiation notices, clarifications, errors in the award process, appeals and decisions. It was designed in order to ensure the highest possible level of transparency and accessibility.

Two central purchasing bodies are involved in procurement processes: The National Agency for Public Procurements and The National Office for Centralized Procurements. The National Agency for Public Procurements (ANAP), established by Governmental Emergency Ordinance no. 13/2015, is a public institution with legal personality subordinated to the Ministry of Public Finance. The fundamental role of ANAP is the formulation, promotion and implementation of the public procurements policy, the establishment and implementation of the control system for unitary application of the legal and procedural provisions, and the monetarization of the efficient functioning of the public procurement system. ANAP is involved in the ex-ante control function on the process of contracts awarding.

The National Office for Centralized Procurements (ONAC), established by Governmental Emergency Ordinance no. 46/2018, is the public institution with legal personality fully financed from the public budget, subordinated to the Ministry of Public Finance, which makes centralized acquisitions for all public institutions. ONAC has the following responsibilities: collection of public institutions' needs, establishment of the annual program of public procurements for centralised purchased products and services, ensuring the legal representation of public institutions' rights and interests, as well as control of the centralised agreement for public procurements.

The public procurement process consists of three phases: planning and preparation of the process, organization of the procedure and contract management and lastly performance evaluation. The procedure types for procurement are provided by the Law no. 98/2016 and they are as follows: limited auction, competitive negotiation, competitive dialogue, partnership for innovation, negotiation without prior publication, the solutions competition, direct award procedure and simplified procedure. The contracting authority has the right to organize a dialogue with independent experts or economic operators and their representative organizations in order to prepare the procurement. Consultations are held on the SEAP platform or other information sites. Market consultations held before the initiation of the procurement process are regulated by the Law no. 98/2016 and GD no. 395/2016.

Considering the diversity and dynamics of public procurements, the article 49 of Law no. 98/2016 on public procurements stipulates the obligation of Romanian authorities to grant economic operators equal and non-discriminatory treatment in the field of public procurements. The article 53 stipulates the right to participate in procurement procedure of all economic operators established in: the European Union member states and countries in the accession process, the European Economic Space countries, countries affiliated to the WTO Government Procurement Agreement and third countries which are not part of the GPA agreement, but which are signatories to other international agreements by which European Union is obliged to grant free market access in the field of public procurement. The freedom to buy technologies owned by companies from other countries is not restricted by law. Moreover, Law 98/2016 (art. 3) guarantees these freedoms.

The Romanian National Strategy in the field of public procurements (approved by the Government decision no. 901/2015) sets the reduction of all delays in public procurements procedures due to appeals as a major objective.

According to Law no. 101/2016, which regulates the terms and means for solving all the appeals in public procurements, these can be filed both by administrative jurisdiction and by judicial means. However, in the procurement procedure planning stage, the contracting authority should draw up the estimated timetable for the procurement procedure, setting realistic deadlines and taking into account all risks that may arise during the procedure, including all types of appeals and maximum of delays.

The Law 98/2016 (art. 3) on public procurement defines innovation as the new or significantly improved product, service or process, including production or construction processes, new marketing methods or new organizational methods in business and work or external relations, in order to support the Europe 2020 Strategy for smart, green and inclusive growth. The provisions of Law no. 346/2004 (art. 17) on simulating the establishment and development of small and medium enterprises provide that they can benefit from information, assistance, consultancy, technological development and innovation services in the banking, finance, management and marketing fields in order to carry out and develop their activity.

The purchase of innovative and sustainable products and services is regulated by two procedures: the partnership for innovation and the competitive dialogue. According to Law 98/2016 on public procurement (article 100), the partnership for innovation aims to develop an innovative product, service or work and the subsequent purchase of the resulting products, services or works, if it corresponds to the performance level and maximum costs agreed between the contracting authority and the participant to the program.

The innovation partnership is applied when the contracting authority identifies the fact that the need for the development and subsequent purchase of an innovation product, service or work cannot be satisfied by the existing solutions on the market. The partnership is designed as a three-stage procedure: a competitive selection stage, a research and innovation stage and a commercial stage when the partner provides the final solution. The competitive dialogue procedure is regulated by Law 98/2016 on public procurement (article 70). It states that the contracting authority has the right to apply the competitive dialogue procedure in case of needs that cannot be satisfied by the existing solutions on the market. The competitive dialogue is designed as a three-stage procedure: the submission of the requests for participation, the selection stage, and the stage for candidates to submit final bids after the evaluation.

Limitations to purchase technologies from outside countries are set by the provisions of the Governmental Emergency Decision 202/2008 regulate the implementation of international sanctions, restrictions and obligations in relation to the governments of some states, non-state entities or legal persons, adopted by the Security Council of the United Nations, The European Union and other international organizations or by unilateral decisions of Romania or other states, in order to maintain international peace and security, to prevent and combat terrorism, to ensure the respecting of human rights and fundamental freedoms, the development and consolidation of democracy and the rule of law.

In Romania, the procurements for innovation in the field of security and defence are exempted from the general procurement rules, only if the conditions provided by the Law no. 98/2016 are fulfilled, especially the provisions defined by article 37. Procurement in the security field is exempt from the general procurement procedures when protection of the essential security interests of the state cannot be guaranteed by less invasive measures and when the application of the procurement law would oblige the authority to provide information which disclosure is contrary to the essential interests of national security. Moreover, some exceptions from the rules are provided by the Governmental Emergency Decision no. 114/2011 regarding the award of certain public procurement contracts in the field of defence and security.

Innovation and regular procurement in Romania can benefit from several funding schemes. One of the schemes is the Operational Program for Smart Growth, Digitization and Financial Instruments, that proposes measures in the field of research, development and innovation/smart specialization and in the field of digitisation.

According to the national Law no. 98/2016, Section 9 national contracting authorities may act jointly with contracting authorities from other EU member states for the award of public contracts. The Romanian

procedures which request security authorizations of contractors from other countries which want to participate in a joint procurement are regulated by the Governmental Emergency Decision no. 114/2011 regarding the award of certain public procurement contracts in the field of defence and security. The Romanian law complies with the EC Directives 81/2009 on the coordination of the procedures for the award of certain works, services and supply of goods contracts, by the contracting authorities or entities in the field of defence and security (amending the Directives 17/2004 and 18/2004).

There are no difficulties in economic transactions with suppliers located in other EU countries or in non-EU countries that would be caused by the national VAT legislation.

SPAIN

In Spain, the Law 9/2017 of Public Sector Contracts consists of the national legal framework which came into operation on March 9th 2018 and transposes the EU directives 2014/23/UE and 2014/24/UE in the field of public procurement establishing several procurement types. For additional improvements whenever is needed, the initiative of the Spanish Minister Council is demanded. In Spain, the relative public procurement system is basically decentralised and is based on more than 8,000 contracting authorities at national, regional, and local level, including the central administration and its agencies, public-funded bodies, universities, and healthcare services.

The National Police most commonly uses work contracts, services contracts, supply contracts and public service contracts. The Centralized Procurement Board is the central purchasing institution in Spain. The Spanish Centralized Procurement System is devoted to procurements of works, services and supplies that are tendered with similar and homogenous essential features by public administrations of the central state. Any natural person or legal entity from Spain or abroad who has full ability to act and has not been banned from official contracts can be a contractor in the public sector. The contractor should prove economic, financial and technical solvency. In order to prepare a tender and to inform the contractors about the administration plan and conditions of participation in the procedure the contracting authority can hold preliminary market consultations, which are regulated by article 115 of Law 9/2017. The contracting authority can be advised by external experts and technical experts from other public administrations or professional societies.

The access to the market consolidations is open and can be reached through the public sector tender platform. It is guided by the no discrimination and transparency principles. After the finalisation of the consultations a report about all the undertaken activities must be prepared. Before the commencement of the procurement process, the public administration should issue a document describing its needs. After the file is approved the procurement procedure begins. The process can be performed under three different procedures: regular, urgent or emergency procedure. All communication with public administrators must be done in writing, oral communication is forbidden except in the case of emergency. Every procurement process is accompanied by supporting documents which determine tender specifications and technical specifications.

The document on tender specification sets the terms and conditions according to rights and obligations of the parties. It also includes contract objective description, tender budget, contract duration and execution deadline, guarantee period and other guarantees and procedures for proposals submission. The technical specification document should include at least the technical features, the price per unit in the budget and estimated number of units able to be delivered. In case it is needed a list of requirements, modalities and technical specifications of different variants must be attached. The procurement process is based on publicity principle. Public administrations can use different publicity means depending on the type of the procurement. The publicity is done through the official national or European journals and the public sector tender platform. Tenders under harmonized regulation are published in the EU official journal. Tender contracts can be awarded through an open or restricted procedure. It could also be via a negotiated procedure, with or without publicity, and competitive dialogue.

Only some decisions and actions regarding the procurement can be challenged in a court, such as tender announcements, contractual documents guiding the contractual conditions, actions in the awarded procedure and award agreements. The legal appeal is facultative and free of charge for the appellant. In most of the cases the appeal is suspended when it is related to the decision of granting tender award. In the cases when the process continues precautionary measures have to be implemented.

Public procurement for Innovation has been excluded from the framework of Public Procurement rules, but art 177 to 187 of Law 9/2017 regulates the association for innovation. The procurement for innovation (PCP and PPI) is regulated by Law 2/2011 on “Sustainable economy” and Law 14/2011 on “Science, Technology and Innovation”. Every company from Europe can bid for any tender in the PCP or PPI and technology can be purchased from any foreign country. Under the Spanish Strategy on Science, Technology and Innovation 2021-2027 companies can develop innovative products funded by several programs with the formula of subvention and loans at a very low rate. The Centre for the Development of Industrial Technology of the Ministry of Science and Innovation is in charge of these programs. Some Ministries can develop their own funding strategies. Additionally, regions have their own programs for funding R&D projects through Structural Funds.

The innovation procurement in the security area falls under norms of the Law 9/2017. However, the law excepts the Defence and National Security tenders from the general regulation as it is regulated by the Law 24/2011 that regulates the “secret procurement procedures” related to defence and security. Most of the provisions are related to technologies, intelligence, ICT systems and the classified information that has to support the tenders regulated in this Law. In some cases, the defence and security procurement follows separate regulations, but mostly it falls under the public sector regulations.

Innovation procurement in Spain faces many limitations. The main one is the fact that the public administration has the right to commercialise the Innovative Product Resources (IPR) which are shared between the companies and public administration. Although the IPR belongs to the developer company, the public administration has the right to use its results for a specified time. If the company does not commercialise the solutions the public administration can recover the IPR and offer it to another company to continue with the improvement of the solution. Another limitation to the innovation procurement is the short time limit for a receipt of tenders which is 60 days. Furthermore, subcontracting limits in maximum 50% of the total cost, and only takes place with companies who have concrete professional or technical skills. Companies wishing to participate in a tender need to demonstrate a financial guarantee report that shows the financial balance from the last three years. Moreover, the bidding process must be held in Spanish.

Cross-border procurement is not limited by the national legislation, but there are also no provisions to facilitate it.

In all procurement procedures, the VAT is paid to the company. When the contracting company is from a country other than Spain it should claim for the VAT to the Financial Ministry.

FINLAND

The procurement system in Finland is centralised and two Ministries competence under its scope. Firstly, the Ministry of Finance is in charge of assisting central government procurement via the government procurement plan, and it can choose about centralised joint purchasing activities as well as improving procurement activities and is also responsible for the the general terms and conditions of procurement. The Ministry of Economic Affairs and Employment (MEAE) is in charge of the national procurement legislation and amendments development as well as the provision of consultation to economic operators and contracting entities in relation to law elucidation and by promoting innovation procurement in Finland through its responsibilities for the Finnish innovation policy. In addition, a part of the aforementioned responsibility, is the joint work between MEAE with the Association of Finnish Local and Regional Authorities (FLRA) in order to operate the Public Procurement Advisory Unit (PPAU), which is an information desk for contracting entities working through phone and online. The Finnish Competition and Consumer Authority (FCCA) is supervising public procurement and ensuring the compliance of legislation

related to public procurement. The Finnish National Audit Office on the other hand regulates public procurement activities. The Finnish Competition and Consumer Authority (FCCA) is supervising public procurement legislation. The Finnish National Audit Office (NAO) finally regulates public procurement activities related to budget, accounting and monetary activities.

Additionally, it should be highlighted that the Hansel Oy, a publicly owned stock company (part of the Ministry of Finances) is the central purchasing company while is in charge for the development of the Government's savings via entering into framework agreements relating to procurement. The company is responsible for providing state authorities with joint procurement and regular procurement support functions and customers with expert and developed services related to procurement, as well as procurement data processing and analysis services and related technical solutions. The company may also participate in joint procurements along with procurement entities of other European Union Members. Further, the Market Court (MC) is considered to be a distinct review entity on public procurement.

Several policies in Finland currently, include, strategic priorities regarding innovation procurement since the Finnish Government programme 2015-2019 provided substantial motivation to the evolution of innovation procurement policy.

In addition, in 2017 the Ministry of Economic Affairs and Employment prepared an Action Plan regarding innovation procurement whereas in the same year the Government choose to set a competence centre of excellence on sustainable innovation procurement which started operating in April 2018. The network-based Competence Centre for Sustainable and Innovative Public Procurement (KEINO) is currently the basic operative entity in the assistance of activities in the implementation of innovation procurement policy. *Business Finland* (previous name: Innovation Funding Agency Tekes) has a finance instrument for innovative public procurement since 2009, and between 2013 and 2016 ran a Smart Procurement programme. Several aspects in the area are VTT Technical Research Centre of Finland Ltd, a technology and research entity which has developed a method to monitor and measure volume, trend and impact of innovation procurement, SYKE, the Finnish Environment Institute, which is involved in measurement activities, and HAUS - the Finnish Institute of Public Management Ltd, which is engaged in some capacity building activities such as ad hoc training for public procurers.

In Finland, the legal framework presents an official legal definition for R&D procurement but is related only to the defence sector. Innovation procurement, Pre-commercial procurement (PCP) and Public Procurement of Innovative solutions (PPI) are specifically defined in the report *Public procurement of innovation – definition, opportunities and measurement*, published by the Prime Minister's Office in December 2017.

Overall, in Finland three acts related to Procurement procedures are applied, and more specifically:

- the Act on Public Procurement and Concession Contracts (1397/2016),
- the Act on Procurement and Concession Contracts of Entities Operating in the Water and Energy Supply, Transport and Postal Services Sector (1398/2016) and
- the Public Defence and Security Procurement Act (1531/2011), have been altered by the two EU Procurement Directives (2014/23/EU, 2014/24/EU, 2014/25/EU) and the EU Defence Procurement Directive (2009/81/EC) into the national legal framework.

Only procurements above EU and national thresholds are regulated by the Procurement Act. The national threshold for goods, services and design is 60.000 euros. The Procurement Act obliges state authorities and municipal authorities (i.e., contracting entities) to tender their procurements openly in accordance with the rules of the Procurement Act. The Procurement Act requires contracting entities to organize tenders in accordance with the principles of the Procurement Act, i.e., in a non-discriminatory, equitable, transparent, and proportionate manner.

Public procurement process of goods and services has the following stages: market mapping (optional), exploring inquiry, questions (optional), sending quotation, procurement decision walkthrough and possible appeal

(optional). For all contracts above the national threshold, the public contracting entities shall publish the contract notice in the HILMA system.

Prior to the start of the procurement procedure, the procuring entity may conduct a market survey in preparation for the procurement and provide information to suppliers on its plans and requirements for future procurement. In the market survey, the contracting entity may use independent experts, other authorities or suppliers. The advice of these bodies may be used to assist in the planning and conduct of the procurement procedure, but the use of such advice shall not lead to distortions of competition (Procurement Act §65). Information also can be gathered independently from public sources and e.g., industry days, which do not limit buyer's options. Preparation phase of the request for a quote is the first step in public procurement of goods or services. In this phase a procurement schedule and security resources are established, a call for tenders and a draft key documents are drawn up, market mapping and involvement of users of the service are implemented and the invitation to tender is finalised. In the second phase a contract notice must be uploaded in the HILMA notice channel and invitation to tender must be publicised.

This is the time for taking questions and answers from tenderers and for clarifying the invitation to tender, and if applicable, correction of notice. In the next phase of the procurement process the intake and processing of tenders' applications take place. The quotations are opened and the invitation to tender is verified for suitability and conformity. The presented quotations are compared, and a winner is selected. Following the phase completed procurement decisions are made and after the end of the waiting period a contract is concluded. Challenging the tender award by one of the bidding parties causes major delays. Every bid has a 30-day possible appeal time for complying with quotations. When a procurement is done according to the legislation then no delays are expected.

Innovation procurement is included in the Public Procurement Act and follows the same procedures. Contracting entities, such as municipalities, universities, government authorities and bodies governed by public law, must always comply with the Procurement Act regardless of public sponsor. If private procurement is funded by public investment money, private companies must follow similar procedures as public entities. Innovation procurement is facilitated by Business Finland, which is the Finnish government organization for innovation funding and trade, travel and investment promotion.

Business Finland channels public research, development and innovation funding into risky projects that accelerate the renewal of the business world. Its funding encourages renewal and growth. As for now there are no innovation procurement standards in Finland. However, the government program has set a target to increase Finland's research and development expenditure from the current GDP share of 2,7 percent to 4 percent by 2030. Limitation to the procurement approach under an innovation procurement procedure arise from the trade of dual-use items. National legislation on export-import control regulates the export of dual-use items and dual-use technology. Export control seeks to promote responsible export of Finnish technology and to prevent the use of Finnish technology for the development of WMDs, for undesirable military ends, for uses against the interests of Finland, or for purposes that violate human rights. Non-proliferation policy is implemented through international agreements and multilateral export control cooperation.

Joint cross-border procurement is allowed under public legislation. However, there are some obstacles for contractors from other countries. In practice only one tender is published on behalf of all participating authorities.

Procurement of defence and security products in Finland is regulated by the *Communication from the Commission Guidance on the participation of third-country bidders and goods in the EU procurement market*. The document gives Sweden the freedom to decide whether to allow public buyers to admit foreign bidders. The Public Procurement Act does not apply to procurements within the meaning of Section 5 of the Public Defence and Security Procurement Act (1531/2011), hereinafter referred to as the Defence and Security Procurement Act, or to procurements falling outside the scope of that law under Section 6(2), Article 7(1) or Articles 8 or 13

therefor. The procurement act does not apply to procurement that is confidential or requires special security measures based on the law. Moreover, the law does not apply to procurement where the application of this law would oblige the contracting entity to provide information the disclosure of which is contrary to the essential security interests of the State. The condition is that the protection of the essential security interests of the State cannot be guaranteed by measures less restrictive than non-application of the law.

The sale of goods from Finland to other EU countries is tax-exempt corporate sales only if the conditions for tax-exempt corporate sales are met. At other times, the seller of goods must charge and pay VAT on the sale of goods in Finland. The sale of goods to a buyer from outside the EU who is not liable for VAT in any EU country does not fulfil the conditions for Community sales. Thus, sales cannot be treated as tax-exempt corporate sales, even if the goods are transported from Finland to another EU country in connection with the sale. Sales will then be treated as domestic sales. The broad-based VAT system applies to almost all OECD countries in Europe. In addition, some commodities, such as export deliveries, are subject to a zero rate. In this case, the sales are tax-exempt, but the seller is refunded the VAT included in the input purchases. The tax rate is reported based on the tax-exempt price.

GERMANY

In Germany, public procurement is coordinated through a complicate regulatory framework that includes delegated acts, such as ordinances and guidelines via non-governmental entities and giving the potential for a great level of autonomy to the relative German federal states. Following, in the public procurement area the basic legislations are:

- the German Act against Restraints of Competition (Gesetz gegen Wettbewerbsbeschränkungen – GWB), which includes key elements of public procurement in Germany, and
- the Procurement Regulation for Public Works (Vergabe- und Vertragsordnung für Bauleistungen – VOB/A-EU) which coordinates public contract awards in the field of public supplies and services.

Other regulations exist like the German Regulation on the contract award to entities operating in the transport, water and energy supply as well as the transport sectors (Sektorenverordnung - SektVO), the German Public Ordinance for Contracts in the fields of Defence and Security (Vergabeverordnung Verteidigung und Sicherheit - VSVgV), which transposed the Directive 2009/81/EC, and the German Regulation on the award of concession contracts (Konzessionen Konzessionsvergabeverordnung - KonzVgV).

In principle, all procurement procedures in Germany must be made through the procurement office. These offices are responsible for the implementation of procurement procedures in accordance with the procurement instructions, the coordination of procedure with the user assistance, as well as providing advice to the users on topics related to procurement procedure (e.g., obtaining and evaluating offers), as well as examination of the tender documents for completeness, clarity and traceability.

The administrative procurement requirements in Germany, leads to a highly decentralised system whereas the public procurement procedures are allocated in between three different governmental levels (federal, regional and local level). Majority of the procurement procedures are implemented at a local level.

The formulation of the public procurement principles as well as the drafts of relevant legislation is being made by the principal institution in charge of public procurement which is the Federal Ministry of Economy and Energy (BMWi). In addition, the Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB), is responsible for public works procurement, whereas the Federal States Committee for the public procurement guarantee common exchanges between Federal States on the current aspects of procurement policy and activities in the context of EU Funds. In Germany, there are also additional actors in the procurement system which assist in the generation of procurement guidelines regarding private and public sector needs.

The procurement guidelines for public works are generated also from the German Committee for Construction Tendering and Contract Regulations (DVA) whereas the procurement guidelines for supplies and services are generated also with the contribution of the German Committee for Supplies and Services Tendering and Contract Regulations (DVAL).

There are four centralised purchasing entities at the federal level which are also thematically distinguished. These four entities are:

- the Central Purchasing Body of the Ministry of the Interior, which acquire all the necessary goods and services for all federal bodies, monitor the basic e-procurement platform as well as is responsible for other administrative activities,
- the Federal Institute for Materials Research and Testing, is in charge of the framework agreements generation regarding special technical product groups,
- The Federal Office for Equipment, IT Technology, and Use of the German Armed Forces is in charge to procurement for the military of Germany, and
- the Federal Financial Directorate Southwest (BFD Südwest) procures for the tax administration.

At regional level there can also be found central purchasing entities. The principal player at the national level regarding innovation procurement implementation is the Competence Centre for Innovative Procurement (KOINNO) whose objective is to act as an information knowledge organisation. KOINNO is responsible for various activities, such as awareness raising and international networking for procurers as well as specialized assistance to public institutions at all levels on innovation management and on innovative products. The centre is coordinated via the Federal Ministry for Economic Affairs and Energy (BMWi).

Lastly, ZENIT GmbH, a Public Private Partnership, composed by a group of private entities constitutes an alternative on innovation procurement. ZENIT is mainly active in the development and assistance of innovation procurement regionally, since it is implementing some elements of the KOINNO competence centre mandate. In addition, since 2017 acts also as the EU Contact Point for innovation procurement in Germany, providing consulting services for Pre-Commercial Procurement and Public Procurement of Innovative Solutions funded under HORIZON 2020 or other EU funding programmes.

Regarding innovation procurement, this is regulated by the same policies as the national procurement. Grants and low-interest loans are provided to make research and innovation projects easier to finance. The national public procurement legislation does not exempt from its scope the application of an innovation procurement procedure in the security area. Cooperation with research institutions is particularly encouraged so that new scientific findings can be quickly converted into marketable products. Public procurement law offers public clients many opportunities to take strategic aspects into account in the procurement process. This facilitates production of innovative services that focus on environmental and social issues. Innovation-friendly framework conditions and market-oriented funding programs are put in place. The aim is to further advance medium-sized businesses in terms of innovation and digitization, to arouse enthusiasm for technical and scientific professions and to secure the qualified young talent of tomorrow.

It is important to highlight that there are no national regulations/policies that restrict the freedom to purchase technologies owned by companies from specific countries, not even under a security call. Free world trade with fair international competitive conditions provides important impulses for economic growth and employment with open markets and clear rules. The national Public Procurement legislation regulates the deployment of market consultations and there are no major delays for the procurement procedure if one of the bidding companies would challenge the award decision in court as there is no room for interpretation with the procurement.

However, joint procurement with partners from other countries is not allowed by the law in Germany. Joint procurement only happens at the national level. In this process some legal obstacles may arise regarding

clarification on the intellectual property ownership or the responsibility in the event of an accident or maintenance.

Finally, no difficulties in economic transactions with suppliers located in other EU countries or in non-EU countries are expected by national VAT legislation.

POLAND

The public procurement process is regulated by the Public Procurement Law of 11 September 2019. The Act applies to tenders the value of which is equal to or exceeds 130,000 PLN or the European thresholds. Public procurement process in Poland is also regulated by other legal acts, such as the Public Finance Act, the Civil Code, the Code of Administrative Procedure and the Act on combating unfair competition. The procurement process has to be held in compliance with the following principles: the principle of fair competition, the principle of equality, the principle of impartiality and objectivity, the principle of openness, the principle of transparency and the principle of writing and conducting the procedure in Polish. The procurement above the EU thresholds can be held in one of the following procedures: open tender, restricted tender, negotiated procedure with publication, competitive dialogue, innovative partnership, negotiation without publication and single-source procurement. In the case of contracts below the EU thresholds, the contracting authority may conduct the procedure in the following manner: basic, innovation partnership, negotiation without announcement and single-source procurement.

Awarding a contract above the EU thresholds requires the contracting authority to make public notices on the website of the procedure and forward the notice to the Publications Office of the European Union, which publishes it in the Official Journal of the European Union. Awarding a contract below the EU thresholds requires placing an announcement in the Public Procurement Bulletin, available on the website of the Public Procurement Office website. The contracting authority may additionally submit the notice for publication in the Official Journal of the European Union. In classic procurement procedure with a value equal to or exceeding the EU thresholds the public contracting authority is obliged to prepare a document describing the needs and requirements of the authority, taking into account the type and value of the contract. This document has to be published, prior to the commencement of the contract award procedure.

Since public procurement in Poland is highly decentralized, all contracting entities (including local administrations) have the possibility to implement their own secondary policies and objectives. During 2018, the number of contracting entities reached up to thirty-three thousand. For governmental level authorities, the basic purchasing body is the Government Administration Service Centre (COAR).

Innovation procurement policy as well as national innovation policy is carried out by the Ministry of Economic Development, Labour and Technology. Under the auspices of the Ministry is, also, the Public Procurement Office (PPO), which is a governmental agency and is responsible for the public procurement implementation as well as is in charge for the relative laws and amendments of the procurement. It is an independent unit within the Polish government, which plays a policy making and co-ordinating role in the procurement system. The key duties of PPO are:

- to prepare drafts of legislative acts on public procurement;
- to check the regularity of conducted procedures;
- to prepare training programs, organise and inspire training events in the field of public procurement;
- to maintain international cooperation on issues relating to public procurement;
- to monitor compliance with the principles of awarding public contracts and exercising control powers in the process of awarding public contracts;
- to analyse the functioning of the public procurement system;
- to disseminate knowledge about public procurement and sample templates of public procurement contracts, regulations and other documents used in the award of contracts;

- to issue in electronic form the Public Procurement Bulletin, in which the announcements provided for by the Act are placed;
- to ensure the organizational conditions for the functioning of legal remedies under the appeal procedure;
- to conduct activities related to the computerization of the public procurement system.

The Public Procurement Office implemented a portal for public procurement – miniPortal. It is a publicly available, free and intuitive tool to ensure electronic communication in a public procurement procedure. However, it is not widespread across the country, as public procurers still use commercial platforms for procurement (different among different public bodies).

More relative entities in the innovation procurement field are the Ministry of Investment and Development, which is in charge for monetary provision in innovations and the Polish Agency for Entrepreneurship Development (PARP), a government entity under the coordination of this Ministry, assisting innovative entrepreneurs and contractors. Furthermore, it has to mentioned that the Ministry of Science and Higher Education is responsible for R&D policy and its executive agency, while the National Centre for Research and Development (NCBR) coordinates substantial innovation projects (PPI) jointly with public, private, and academic partners as well as is involved in supervision and assistance of supply side R&D grant projects contributing to the solution of potential issues arisen in the public sector.

Art. 84 of the Procurement Law regulates market consultations in classic procurement procedure with a value equal to or exceeding the EU thresholds. The contracting authority, prior to commencing the contract award procedure, may conduct preliminary market consultations in order to prepare the procedure and inform contractors about its plans and requirements regarding the contract. In order to do so the awarding entity has to publish information on the intention to conduct preliminary market consultations and their subject on the awarding entity's website. When conducting market consultations, the awarding entity may use the advice of experts, public authority or contractors. This advice may be used in planning, preparing or conducting a procurement procedure, provided that it does not distort competition or infringe the principles of equal treatment of economic operators and transparency. The awarding entity shall include information on conducting preliminary market consultations in the contract notice.

Market consultations take place in the competitive dialogue procedure. This procedure is used for awarding a contract in which all interested contractors may submit requests to participate in a contract in response to a contract notice. In order for contractors to determine the contracting authority's needs regarding the nature and scope of the contract as well as formal and procedural requirements of the conducted contract award procedure, the contracting authority draws up a description of the needs and requirements. The contracting authority conducts a dialogue with contractors invited to participate in the dialogue on the solutions proposed by them.

Pre-commercial procurement is not regulated in Polish legislation. Moreover PCP is excluded from the national bill (art 11, paragraph of Public Procurement Law) which states that research and development services are excluded unless they are covered by CPV codes from 73000000-2 to 73120000-9, 73300000-5, 73420000-2i73430000-5, as defined in the "Common Procurement Vocabulary", and if the following conditions are cumulatively met: the benefits of these services accrue only to the contracting authority for the purposes of its own activities and the entire remuneration for the service rendered is paid by the ordering party.

Innovation procurement in classic procurement procedure with a value equal to or exceeding the EU thresholds is regulated by Section II Chapter 3 Division 6 "Innovation partnership" of the Public Procurement Law. The contracting authority may award a contract under the innovative partnership procedure regulated by the Procurement Law in the event of a demand for an innovative product, service or construction works, if these are not available on the market. The contracting authority may decide to establish an innovation partnership with one or more partners carrying out separate research and development. In order to initiate the innovation

partnership the contracting authority draws up a description of the needs and requirements in order for contractors to determine the nature and scope of the required solution for the development of an innovative product, service or construction works as well as formal and procedural requirements for the procurement procedure. The contracting authority has to provide free, full, direct and unlimited access to the description of needs and requirements on the website of the procedure. At this stage all interested contractors may submit requests to participate in a contract.

The contracting authority invites economic operators whose applications for admission to participate in the procedure were not subject to rejection to submit preliminary tenders, and if the selection criteria are established, invites economic operators who meet these criteria in the number specified by the awarding entity. The deadline for submitting initial bids may not be shorter than 30 days from the date on which contractors are sent the invitation to submit initial bids. When the time for submitting initial bids is closed the awarding entity invites to negotiations selected contractors who submitted preliminary tenders. It also indicates place, date and manner of conducting negotiations. After the conclusion of the negotiations, the contracting authority draws up a description of needs and requirements, which is a clarification and supplement to the information contained in the description of needs and requirements.

The contracting authority invites contractors with whom he conducted negotiations and who were not eliminated from the procedure at previous stages of the procurement process. The contracting authority selects the most advantageous offer that presents the most favourable balance of price or cost and quality criteria relating to the subject of the contract. The awarding entity may select several offers submitted by several contractors. The contracting authority concludes a public procurement contract, the subject of which is to establish an innovation partnership. Innovation partnership consists of stages corresponding to the sequence of activities in the research and development process, in particular, it may include the development of prototypes and the production of products, provision of services or completion of construction works. As part of the innovation partnership, the contracting authority sets goals to be achieved after each stage or intermediate goals, and provides for remuneration in parts taking into account the stages of the partnership or intermediate goals. The contracting authority may terminate the innovation partnership after each stage or, in the case of an innovation partnership with several partners, reduce the number of partners by terminating individual contracts.

Polish national Public Procurement legislation allows joint procurement with awarding entities residing or established in other Member States of the European Union. Awarding entities may, together prepare or conduct a procurement procedure or organize a competition, award a contract, conclude a framework agreement, establish a dynamic purchasing system or award a contract under a contract framework or under a dynamic purchasing system (art.42of the Public Procurement Law). In general, the national law on joint cross-border procurement law reflects the regulation on the EU level.

The offer scheme is constructed in a way that 'enforces' the division between net and gross amount, including the detailed information on the VAT costs. Moreover, the Reverse Charge works the same way in all EU countries.

All complaints about the procurement procedure are examined only by the competent District Court in Warsaw - the public procurement court. The appointment of one specialized court to hear complaints in the field of public procurement is to contribute to shortening the time of examining cases and ensuring the quality of court judgments at the highest level. However, when one of the bidding companies challenges the award decision in court major delays are predicted which can take up to several months.

Certain tenders in the defence and security area are exempt from the provisions of the Public Procurement Law (art. 12-15). The regulations of the law do not apply to competition or contests:

- which has been given a clause in accordance with the provisions on the Protection of Classified Information;
- if required by a significant state security interest when the protection of the state's security interests cannot be guaranteed otherwise;

- concerning the production or sale of weapons, ammunition or war materials, referred to in Art. 346 of the Treaty on the Functioning of the European Union, if it is required by the fundamental security interest;
- which are subject to a specific procedure on the basis of an international agreements;
- where the application of the provisions of the Law would oblige the contracting authority to provide information, the disclosure of which is contrary to the essential interests of state security;
- provided for the purposes of intelligence or counterintelligence activities;
- awarded in a country which is not a member of the European Union, including contracts for the supply of non-military equipment, construction works or services for logistic purposes, carried out during the deployment of armed forces, and forces whose basic tasks include the protection of security, where operational reasons require them to be provided to contractors located in the area of operations;
- granted by state, regional or local authorities to state, regional or local authorities of another state related to: supplies of military equipment or sensitive equipment or construction works and services directly related to such equipment or construction works and services exclusively for military use or sensitive construction works or services.

ITALY

In Italy in April 2016, the government authorized the Legislative Decree no. 50/2016, enforcing the Directives 2014/23/EU, 2014/24/EU and 2014/25/EU of the European Parliament and European Council. This Decree establishes the Italian Public Contract Code. The Code establishes rules on public procurement contracts and concession contracts by contracting authorities and contracting entities of services, supplies, works as well as on design contests. The procurement process is not centralised, but the central government put in place a digital platform. The government functions as a service provider, while the individual contracting parties are responsible for managing the procedures themselves. There is no centralised procurement platform and tenders are managed through various digital platforms belonging to different subjects (Central Government, Regional Administrations, private companies of public interest). The Directive no.2009/81/EU implemented by the Italian code and the Legislative decree no.208/2011 (Defence decree) are directing public procurement in the defence and security sectors.

The public procurement system in Italy is decentralized having more than twenty thousand local, regional and national level contracting entities. Additionally, there are some aspects of centralisation in public procurement taking place via a central procurement authority at national level (CONSIP) and thirty-one purchasing entities (named *soggetti aggregatori*) at regional and local level, depicting almost half of the procurement expenditure in Italy. In order to benefit from economies of scale, centralisation of procurement is implemented whereas the New Code encompass targets to further strength the National Anti-Corruption Authority (ANAC) regarding national public procurement system. ANAC also supervises public contracts and sets soft regulations, for example public statements concerning the public procurement system of Italy, as well as innovation public procurement.

Even though Italy does not possess a permanent authorized competence centre for innovation procurement, the national purchasing body, CONSIP, by taking part in the EU-funded project “Procure2Innovate - European network of competence centres for innovation procurement”, acts as a national competence centre for innovation procurement in Italy in the framework of the project.

The Ministry of Education, University and Research (MIUR) is another actor disseminating the importance of the public sector as a procurer regarding research and innovation. Assisted by external professionals and at a regional level, the Lombardy region is holding a principal role on innovation public procurement and more specifically for PCP & PPIs having settled a universal policy Regional Guidelines and Governance Framework, under the legislation *Regional Law n.29/2016 “Lombardy is Research and Innovation”*. The region was able to promote the usage of innovation procurement in the health sector establishing this way a regional competence centre.

Market consultations are regulated under national law in a specific procedure called "expression of interest". In order to define the parameters of the tender the contracting body inquires for prices and documents available on the market. When a tenderer contacts the contracting authority outside of this specific procedure, it must be declared in the tender documents.

Any country affiliated to the WTO Government Procurement Agreement can participate in the procurement process in Italy. Purchasing technologies owned by companies from foreign countries is not restricted by national regulations, but in such a case all legal details must be provided. Joint procurement with procurers from other countries is allowed under national legislation and is referred to as "temporary business clusters".

In the last 2 or 3 years, challenging an award in a court did not postpone the award of contracts. This is caused by the fact that the appeals are expensive and long. The contracting authorities proceed with contract execution regardless of the ongoing appeal. A very important problem in realisation of a contract is the duration of a tender procedure, which usually takes around 6/7 months from the tender release to the contract awarding.

NETHERLANDS

In the Netherlands, the alteration of the EU public procurement directives 2014/23/EU, 2014/24/EU and 2014/25/EU were incorporated under the public procurement law since July 2016. The Defence directive 2009/81/EC was also incorporated in the national legislation by the defence and Security Procurement Act (28/01/2013).

R&D service where results and the costs are shared between the CA and the supplier, are exempted from the scope of application of the Dutch Public Procurement Law (Aanbestedingswet 2012). However, PCP is not explicitly mentioned in this regulation. Since 2013, the national Action Plan has been set in place in order to reinforce innovation procurement (Innovatiegericht Inkopen) in the Netherlands. The Department for Innovation and Enterprise which falls under the jurisdiction of the Dutch Ministry of Economic Affairs and Climate Policy reassure political commitment on innovation procurement.

The national competence centre for public procurement is PIANOo, which is the entity aiming at implementing innovation procurement and motivate governmental bodies to incorporate innovation thought their procurement activities. The entity also works as a network forum and dissemination platform at national and international level. The last two activities are substantially important in the Netherlands since the majority of public procurements are taking place at regional and local level. Other key actors are the Ministry of Interior and Kingdom relations, in charge of digitalisation involving an action program for innovation procurement in the area of ICT and the Ministry of Infrastructure and the Environment which is responsible for disseminating the Dutch Sustainable Procurement Action Plan.

For innovation procurement in the Netherlands, regional and urban administrations spend about fifty-seven percentage of their total procurement budget whereas national authorities spend around thirty percentage. Some cities are a step ahead in innovation procurement such as Eindhoven in procuring innovative street lighting, Rotterdam in procuring innovative solution in transport, and Amsterdam in innovative solutions for digitalization of their services. On national level procurement is implemented in the defence and security sector, and several infrastructure projects such as the construction of national roads, bridges and public buildings.

The Dutch regulation on public procurement indicates the possibility to conduct a market consultation prior to the launch of the procurement. The public knowledge institute Pianoo has developed guidelines for contracting authorities, in order to effectively deploy market consultations. A good evidence that market consultations are being correctly implemented and no disputes arise is that there are no court cases related to a conducted market consultation since 2016.

The Dutch legislation does not limit the purchase of technologies from specific countries, nor does it mandate the performance of R&D contracts on the country's territory.

A 2012 Law allows contracting authorities to conduct ad-hoc joint procurement with other procurement entities from EU countries. The Law mandates the contracting authority to sign a joint procurement agreement with the other procurers, which outlines the roles and responsibilities of each participant and the national legislation that will be applicable to the joint procurement.

An advantage of the Dutch regulation is that unsatisfied bidders have a concrete and quick procedure at their disposal (kort geding) where the court releases a decision within 2 weeks from filing a claim.

BELGIUM

The public Procurement Act, which came into effect on June 17, 2016 (later included some additions), administers public procurement in Belgium. The Act, coordinate public procurement activities including all types of public procurers and incorporated into national legislation all the EU public procurement Directives 2014/24/EU, 2014/25/EU, 2014/23/EU and 2009/81/EC. Procurement in Belgium, which is a federal state with decentralised authorities, is distributed between the central government and three regions: Wallonia, Flanders, and the Brussels-Capital Region. Procurement Law, at the federal level, regulate public procurement whereas each region possessing a specific level of flexibility for illustrating and implementing legislation. The three regions as well as the provinces, the municipalities and other public bodies where five thousand contracting authorities exist, are possessing a level of procurement authority which is distributed by the Belgian federal system.

The main entities in the federal public procurement system are the Federal Public Service Chancellery of the Prime Minister, the Central Procurement Body for the Federal Services, and the Purchasing Advice and Policy Unit (ABA-CPA). The Federal Public Service Chancellery of the Prime Minister is in charge of the development, management, and supervision of public procurement legislation as well as the formation of e-procurement. More precisely, the Chancellery acts as the secretariat of an expert advisory entity consisted of representatives from the federal authority, federated entities, public corporations, supervision bodies, and representatives of businesses and trade unions. The country has a Central Procurement Body for the Federal Services (CMS-FOR) which includes eleven sector dedicated departments.

With the provision of guidance to purchasing entities, the federal workers are supported in the contracting procedures through the support of the ABA-CPA. Lastly, the Federal Public Service Policy and Support (BOSA) provide assistance in multiple areas, regarding public procurement. Even though there is not a dedicated policy, plan or initiatives in relation to innovation procurement at a national level, some efforts can be found at the federal level since a national competence centre regarding innovation procurement is under development. Nevertheless, at regional level and more specifically in the Flemish region, there is an advanced policy and legal framework regarding innovation procurement.

The Programme for Innovation Procurement (PIO) was implemented by the government, which consists of a structured and detailed plan for monetary support and assistance for local contracting authorities to implement innovation procurement. The Wallon region has recognised the importance of innovation procurement, without having yet developed a dedicate plan. From 2018, the Brussels region has also been engaged in innovation procurement and at a local level the cities of Ghent and Antwerp are the most active ones having set a spending target of 10% for innovation procurement.

The Belgian procurement law clearly regulates market consultations, stating the necessity of reassuring transparency. It also includes provisions on how a public procurer should act in case an economic operator has taken part in the previous market consultation.

Joint procurement is explicitly regulated in the Belgian legislation at national level and international levels.

Finally, even if PCP is exempted from the Belgian regulation, there might be potential major delays if one of the bidding companies challenges the award decision in court. In this case, the potential impact differs on the time that the procedure is challenged.

FRANCE

In France, the Order no 2015-899 of 23 July 2015 on public procurement and the Order no 2016-360 of 25 March 2016 which incorporated the EU procurement Directives (2014/24/EU, 2014/23/EU, 2014/25/EU), consists the innovation procurement legal framework in the country. The Decree no. 2011-1104 (14 September 2011) incorporated into the national procurement legislation the EU Directive on defence and security procurement (2009/81/EC).

Since France is quite a large country with a semi-decentralised structure, the public procurement system is defined by the involvement of a large number of contracting and supervision entities. France is possessing the highest number of procurement procedures each year within the EU whereas most of these contracts are public works performed at local and regional levels.

The Ministry of Economy and Enterprise and the Directorate of Public Procurement (DAE – by the Minister of Finance and Public Accounts) are the principal entities evolving innovation procurement policy at the central level. The first one, is responsible for leading the development of public procurement legal framework, whereas the latter is in charge for the definition and implementation of public procurement policy under the supervision of the Prime Minister. The DAE performing its activities in connection to the Directorate General for Enterprise (DGE) and the Directorate of Legal Affairs of the Ministries of Economics and Finance (DAJ).

At the governmental level, the principal entities for the procurement policy implementation are the Secretaries General of the ministries which are in charge for procurement organization as well as for proper implementation of procurement policy into the Ministry. For central authorities and hospitals, the principal procurement entity is the Union of Public Purchasing Groups. The Prefects, at regional level, are responsible for application of public procurement policy as well as the administrative aspects of the procurement via regional procurement platforms. Further, procurers' knowledge and assistance in sourcing activities is implemented through the contact point which is the Regional Directorates of Enterprises, Competition, Consumer Affairs, Labour and Employment (DIRECCTE), providing a significant contribution to France's innovation procurement framework. DIRECCTE established also the budget target of two percent of the total procurement budget of national State level contracting authorities to be distributed for innovation procurement contracts awarded to innovative SMEs (Small and Medium Enterprises).

PCP is not under the scope of French legislation on public procurement. The legislation distinguishes between innovative solutions and solutions that are not available in the market and would require R&D.

French procurement legislation includes the deployment of market consultations broadly in order to provide flexibility to adapt to different contexts. Flexibility and freedom for the deployment of such procedures is left to the public procurer depending on his needs, time and availability.

Moreover, TFEU applies when it comes to purchase technologies owned by companies from specific countries or other EU countries. In this context, tenders should be left open Europe-wide and cross-border or transnational interest must be taken into account.

Finally, cross-border joint procurement is encouraged by the legislation by encouraging contracting authorities to explore the possibility of a cross-border shared need. The creation of "transnational joint entities" is also regulated.

ESTONIA

The Public Procurement Act (PPA), which transferred the EU procurement Directives (2014/23/EU, 2014/24/EU, 2015/25/EU) and the Directive on Defence Procurement (2009/81/EC) into the national legislation, regulates public procurement in Estonia whereas the government supplies are governed with multiple regulations. The governmental system in Estonia is highly centralised and a substantial part of the budget for public procurement is used by the central government which is considered to have the biggest proportion of procurement

expenditure. In addition, Estonia is usually characterized as a promptly and effective in the implementation of e-procurement.

The Ministry of Economic Affairs and Communications is also a principal entity regarding innovation procurement, and is in charge for public procurement policy, undertaking key activities such as law drafting, administration and consulting. The Ministry also established innovation procurement objectives within its national policy as part of the wider entrepreneurship and innovation strategy (Estonian Entrepreneurship Growth Strategy 2014- 2020”).

Further, Enterprise Estonia (EAS), supports the Ministry and is a public entity developing business and regional policies and is responsible for multiple capacity -building activities regarding innovation procurement as well as administrates a financial support scheme, set up in 2016, that co-finances Estonian public procurers to develop and administrate innovation procurement. “Estonia 2020”, “Sustainable Estonia” and “Estonian Entrepreneurship Growth Strategy 2014-2020” are the three key strategies which identify the role of public organisations as a first customer for innovation.

Finally, multiple development national plans, both sectorial or horizontal contributes either directly or indirectly to this objective.

2.1.2. PROCUREMENT LEGISLATION AT THE NATIONAL LEVEL FOR THE REMAINING EU MEMBER STATES

After the review which was carried out in D4.1, the present deliverable has followed by supplementing the review with the procurement landscape of the remaining EU Member States.

AUSTRIA

The Austrian Central Purchasing Body involved in procurement processes is The Procurement Office of the Federal Ministry of the Interior (BeschA). BeschA is the largest civil procurement agency in the federal government and the central outfitter for public administration in Austria and is part of the Federal Ministry of the Interior and Homeland.

In Austria, information on procurement procedures are made publicly available. In some award procedures, non-binding preliminary information about future award procedures is to be made known. After that, calls for tenders, participation competitions and often the results of the award procedure too must be made known. This is carried out via internet portals, official publication sheets and, in individual cases, through specialist or daily newspapers. The aim is for as many potential applicants and bidders as possible to gain knowledge of orders and participate in the process. The procurement office uses - in addition to the specified publication channels of the EU - the e-tendering platform for the announcements.

Before the contracting authority accepts a bidder's bid, it informs bidders who have not been considered in procedures that are subject to EU law about its intention to award the contract. Because of this, there may be significant delays in the case of challenges.

In Austria, there are no specific mandatory legal provisions that could limit the procurement approach under an innovation procurement procedure, and they are processed and dealt with in the usual procurement processes.

Austrian policy mandates only national R&D contracts.

BULGARIA

The Public procurement process in Bulgaria is regulated by the Public Procurement Act (PPA) as a transposition of the EU Directive 2014/24/EU, 2014/25/EU, Directive 2009/81/EC and the two Remedies Directives 92/13/EEC and 89/665/EEC. According to Art. 20 of PPA, depending on the indicative price, determined by the contracting authority, public contracts might be awarded:

- following a procedure for the award of a public contract
- through gathering proposals with an advertisement or an invitation to certain persons
- directly, without the application of a procedure or any other manner defined in the law.

Bulgarian law defines 13 types of public procurement procedures and there appears to be a correlation between types of contracting authorities and types of procedures:

- open procedure, innovation partnership, design contest, public competition and direct contracting (procedures used by Classic Contracting Authorities and Utilities Contracting Authorities).
- restricted procedure and competitive dialogue (for all types of Contracting Authorities, i.e. Classic Contracting Authorities and Utilities Contracting Entities and Contracting Authorities in the Fields of Defence and Security).
- competitive procedure with negotiation and negotiated procedure without prior publication of a contract notice (only for Classic Contracting Authorities).
- negotiated procedure with prior publication of call for competition and negotiated procedure without prior call for competition (the procedures are dedicated only for Utilities Contracting Entities).
- negotiated procedure with prior publication of a contract notice and negotiated procedure without publication of a contract notice (used only by Contracting Authorities in the Fields of Defence and Security).

PPA also regulates the deployment of market consultations in preparation of a procurement. Dialogue with the industry may be conducted, provided that they do not lead to distortion of competition and violation of the principles of non-discrimination and transparency. To comply with this requirement, the contracting authority shall at least undertake the following actions: publishing all of the information exchanged in relation to the preparation of the public procurement, including the result received by the contracting authority. In the event where this is not possible, an indication of where this information can be obtained through the buyer's profile should be included; specifying a reasonable time limit for receiving tenders, including considering whether the reduction of the time limits will lead to infringement of the principle of equal treatment (Art. 44 para 2 and 3). Art. 18 para 7 and Art. 79 establish the base for a negotiated procedure without prior publication, "in which the contracting authority conducts negotiations with one or more preselected persons in order to determine the terms and conditions of the public contract. This procedure is applied only in the cases exhaustively listed in the law". Moreover, Art. 18 para 7 and art 182 establish the base for direct negotiations. This is a procedure where the contracting authority conducts negotiations with one or more preselected persons for the purpose of determining the terms and conditions of the public contract. It is conducted only in case the indicative value of the public contract is under the set thresholds and only if specific circumstances exhaustively listed in the law are present.

As regulated by the PPA, some contracting authority acts (awarding a public procurement, including by signing a framework agreement, dynamic system for purchases or qualification systems;

signing a framework agreement; creating a dynamic system for purchases or qualification systems; competition for a project) may be appealed within 10 days as of execution of the respective action. The appeal is made to the competent body of appeal i.e. Commission for Protection of Competition (CPC), whose decision can also be appealed within 14 days as of its announcement to the parties. The CPC's decision can be appealed to the competent body of appeal i.e. the Supreme Administrative Court.

The Public Procurement Act (PPA) in Bulgaria establishes the Public Procurement Agency which shall be a legal person at budgetary spending with a central office in Sofia and it shall be directed and represented by an executive director, who shall be appointed by the Minister of Finance. The activity, structure, organization of operation and the staff of the Public Procurement Agency shall be provided by Rules of Procedure, adopted by the Council of Ministers. According to Art. 5 of the PPA, the contracting authorities shall be liable for the correct forecasting, planning, conduction of, finalization and accounting of the results of public procurement. The Contracting authorities shall belong to the public sector. Public contracting authorities shall be: the President of the Republic of Bulgaria; the President of the National Assembly; the Prime Minister; the Ministers; the Ombudsman of the republic of Bulgaria; The Governor of the Bulgarian National Bank; the President of the Constitutional Court of the Republic of Bulgaria, the administrative heads of the judiciary bodies, which govern independent budgets, as well as the administrative heads of Prosecutions in the Country; the Regional Governors; Municipality Mayors of regions, of City Halls, as well as Deputy Mayors, where they are budgetary spending units; the Chairpersons of state agencies; the Chairpersons of the state commissions; the Executive Directors of executive agencies; heads of state institutions established by an act or a Council of Ministers Decree, including separate structures of the executive, where they are legal persons and budgetary spending units; representatives of public-legal organizations; heads of diplomatic and counselor representations of the Republic of Bulgaria abroad, as well as the permanent representations of the Republic of Bulgaria at international organizations; the representing medical establishments – trade companies, owned by the state and/or municipalities, of which more than 50% of the revenues are from the state and/or the municipal budget, and of the budget of the National Health- insurance Fund; heads of central bodies for purchases, established for satisfaction of the needs of the public contracting authorities. The public contracting authorities shall also be unifications of abovementioned contracting authorities.

As was mentioned above, Bulgarian PPA regulations establish the innovation procurement (partnership). In the innovation partnership the contracting authority conducts preliminary negotiations with candidates, which are admitted following the completion of a selection stage for the purpose of establishing a partnership with one or more partners that will be tasked with the implementation of a certain type of research and development activity. The specifics here are related to the fact that the contracting authority is required to justify the necessity for the receipt of an innovative product, service or works as well as the inability to acquire it through available market solutions. Art. 18 para 6 and Art. 78 regulate and establish the innovation partnership, and specify that the contracting authority is required to justify the necessity for the receipt of an innovative product. In addition, a tender is submitted for innovation partnership following an invitation of the contracting authority after the completion of the selection stage.

The leading strategic document, which outlines the state policy in the field of public procurement, is the National Strategy for Development of the Public Procurement Sector in Bulgaria for the period 2014 - 2020 (NSDPPS)¹². The specific measures for its implementation are specified in the Implementation Plan of the National Strategy for Development of the Public Procurement Sector in Bulgaria for the period 2014-2020 (IPNSDPPS)¹³.

Bulgaria has a policy that mandates the performance of R&D contracts on the territory of its country described in The National Roadmap for Research Infrastructure (2022-2027)¹⁴.

In Art. 229 para 1, PPA establishes that the executive director of the Public Procurement Agency shall participate in the international cooperation of the Republic of Bulgaria with organizations in the area of public procurement from other countries. Contracting authorities have the right to award public contracts, conclude framework agreements or manage a dynamic purchasing system together with contracting authorities from other Member States.

¹² [Strategy_EN.pdf \(aop.bg\)](#)

¹³ [file_1637221480.pdf \(interregeurope.eu\)](#)

¹⁴ https://naukamon.eu/wp-content/uploads/2021/06/RoadMapBulgaria_2020-2027_EN-1.pdf

Bulgarian law, in Art 13 para 1, states that the PPA shall not apply to specific areas of public procurements and competition for a project, such as those related to defence and security, although innovation procurement in the security area is not explicitly mentioned. Special rules for contracts awarded by authorities operating in the field of defence and security are set out in separate parts of the PPA, i.e. Annex No 16 to Art. 156, Para 2 “Notices for procurements in the defence and security areas”¹⁵.

CROATIA

In Croatia The Central State Office for Procurement establishes an efficient system of central public procurement with responsibility towards taxpayers, the state budget, payers/users of central procurement, and all economic entities involved in the public procurement environment with the aim of achieving savings in public spending, taking into account the optimal relationship between the quality and price of the procured goods, works and services, respecting ecological and socially acceptable principles, sustainable and innovative procurement, and encouraging small and medium-sized enterprises. The Central State Office also establishes an efficient system of auxiliary procurement activities and occasional joint procurement.

Croatian public procurement process follows the EU Directive. Almost all processes are open procedures and with small number of bidders.

The national tool used in public procurement process is EOJN (Electronic Public Procurement Bulletin of the Republic of Croatia).

Croatian public procurement legislation regulates the deployment of market consultations in preparation of a procurement, but it is not obligatory.

In Croatia major delays within the procurement procedures are foreseen. It happens especially when one of the bidding companies do not agree with the decision and go to court. Until a final decision is made by the High Administrative Court, The State Commission for Supervision of Public Procurement Procedures (DKOM) decides on the appeal. The court is then obliged to decide on the appeal against DKOM's decision within 30 days.

Croatia has a public procurement competence center for innovative solutions within PPI2Innovate project run by the Croatian Agency for SMEs, Innovations and Investments – HAMAG-BICRO (HR) but doesn't reap any benefits for targeting or stimulating innovation procurement.

Joint-cross procurement is allowed under Croatian Legislation.

CYPRUS

Procurement procedures in Cyprus are defined by the Treasury of the Republic of Cyprus. Cypriot procurement procedures are regulated by the following laws:

- Circular_ar_AR_GL_ADS_105 - Use of electronic media in Public Procurement (The submission of tenders electronically through the Electronic Procurement System is mandatory for all tenders advertised),
- European Union thresholds in the field of public procurement, which are applicable from January 1st, 2022 to December 1st, 2023,
- Law 140(I)/2016 - Public Utilities (procedures for the award of contracts for entities which belong to the water, energy & transport sectors and postal services and related matters of 2016)
- Law 73(I)/2016 (the regulation of public procurement procedures and related matters of 2016),
- Green Paper on expanding the use of e-Procurement in the EU.

The aforementioned provisions legislate dialogue with industry in preparation of a procurement.

¹⁵ [Public procurement act | MRDPW \(mrrb.bg\)](#)

All public procurement procedures foreseen by the Cypriot law are supported for both one-off or repetitive purchases through several dedicated sub-modules providing facilities for user registration, competition notification, tender preparation and submission, online tender evaluation, upholding of auctions, contract awarding, contract management, creation and management of catalogues, and placement of electronic orders. National public procurement legislation allows joint procurement with procurers from European Union countries without any legal obstacles.

Cyprus has a decentralized public procurement system with a single administrative body at the State level and around 700 contracting authorities/entities at the State and local levels. The public procurement system has a decentralized approach since contracting authorities/entities are responsible for their own tenders, even though the Competent Authority for Public Procurement and review body are centralized at the State level.

Cypriot procurement law doesn't foresee major delays for the procurement procedure if one of the bidding companies would challenge the award decision in court.

Central Purchasing Body is involved in procurement processes by e-PPS. e-PPS is a web-based, collaborative system to facilitate the full lifecycle of a tendering process, for both buyers and suppliers in Cyprus.

Referring to possible limitations on the participation in the procurement to companies from countries affiliated to the WTO Government Procurement Agreement (GPA), WTO members/observers use the TBT and SPS Committees to discuss specific trade concerns (STCs). This is often about draft laws, regulations or procedures that may affect their trade; in many cases these measures have been notified to the Committees before they enter into force. Essentially, members raise STCs to find out more about the scope and implementation of each other's regulations in light of the core TBT and SPS obligations, and to flag (potential) effects on trade.

According to national Cypriot policy, Cyprus does not trade with Turkey.

The one condition to the application of innovation procurement in the security area in Cyprus is to receive authorization to handle classified information by the Cyprus National Security Authority.

CZECH REPUBLIC

In the Czech Republic, public procurement plays an above average role (in terms of the country's economy). Public procurement procedures are regulated by the Public Procurement Act – Act No. 134/2016 Coll. since October 1st, 2016. The purpose of this law is to comprehensively regulate the area of public investment in the Czech Republic, especially in connection with the provisions of EU law in this area. Public procurement law has changed over the years. The most important changes in the new Act No. 134/2016 Coll., on the awarding of public contracts include:

- new clear systematization
- from general rules to specific ones (there is no need to read the entire law, only the relevant passages)
- the ability to effectively respond to situations arising during the procurement process
- flexibility of the sublimit mode - elimination of unnecessary administration
- strengthening the responsibility of the contracting authority
- regulation of competition between suppliers, not the entire investment process
- support for the selection of the winning bid based on qualitative indicators
- tightening and supplementing the rules compared to the directive in essential areas (changes to the contract up to a value of 30% of the expected value cumulatively after deducting less work)
- simplification of publication forms - speeding up and streamlining review procedures at ÚOHS (Office for the Protection of Competition).

Czech public procurement law regulated that the estimated value of a public contract shall be determined on the basis of data and information on contracts of the same or similar subject-matter; where the contracting authority does not have such data or information available, it shall be based on information obtained by market research, preliminary market consultations or other appropriate means. The contracting authority shall be entitled to hold market consultations with experts or suppliers in order to prepare the terms of reference and to inform suppliers of its intentions and requirements, provided that this does not distort competition.

Czech Republic does not have a Central Purchasing Body involved in procurement processes. Responsibilities are decentralised, with contracting authorities processing their own procurement at all levels of government without central coordination. Moreover, while there is no Central Purchasing Body at the national level, there is a move to increase aggregation of procurement demand through joint purchasing, e.g. at the Ministry level. 25% of public procurement takes place at the national level, 25% at the regional/local level, 24% by bodies governed by public law and 26% by other types of public procurers.

The Public Procurement Act defines innovation as “the implementation of a new or significantly enhanced product, service or process, including but not limited to processes of production or construction, a new method of placing on the market or a new method of organization in business practice, organization of workplace or external relations among others to help address social challenges or to support the Europe 2020 strategy for smart, sustainable and inclusive growth.

The innovation partnership procedure shall be initiated by the contracting authority by sending a notice of the opening of the procurement procedure for publication, by which the contracting authority invites an unlimited number of suppliers to submit a request to participate. The contracting authority shall set a deadline for the submission of a request for participation of at least 30 days from the start of the innovation partnership procedure. This time limit shall be extended by 5 days if the contracting authority does not allow tenders to be submitted by electronic means. In the tender documentation, the contracting authority shall indicate which requirements for the performance of the public contract constitute the minimum technical conditions that tenders must meet. The contracting authority shall lay down in the tender documentation the rules governing intellectual property rights arising in connection with the innovation partnership and the performance of the public contract. The contracting authority shall assess the compliance of the request for participation with the tender conditions and shall reduce the number of participants in the tendering procedure if it has reserved so in the notice of initiation of the tendering procedure. The contracting authority shall exclude from participation in the procurement procedure any tenderer whose application for participation does not comply with the terms of reference or who has not been selected in the reduction of the number of tenderers. It shall invite the non-excluded tenderers to submit their provisional tenders. The procuring entity shall negotiate with the tenderers on preliminary tenders with a view to improving the tenders for the benefit of the procuring entity. The contracting authority shall be entitled to disclose confidential information to other tenderers during the negotiations only on the basis of the written consent of the tenderer given in relation to the specific information. The number of tenders to be discussed may be reduced in the course of the meeting if the contracting authority has so reserved in the notice of initiation of the procurement procedure. The contracting authority may amend or supplement the tender conditions, in particular the technical conditions, in the course of negotiations, except for the minimum technical conditions. The contracting authority must inform the tenderers in writing of such amendment or supplementation of the terms of reference and give them a reasonable period of time to modify their provisional tenders. The amended terms of reference shall continue to meet the conditions for the use of the innovation partnership procedure. The contracting authority may amend or supplement the tender conditions during the negotiations, with the exception of the evaluation criteria and minimum technical conditions. The contracting authority shall inform the tenderers in writing of such amendment or supplementation of the terms of reference and allow them a reasonable time to modify their provisional tenders.

The amended terms of reference shall continue to comply with the law conditions. The contracting authority may decide to set up an innovation partnership with one or more partners who will carry out separate research and development activities.

Czech Republic law does not define how Intellectual Property Rights (IPR) allocation is dealt with in procurement contracts. It is left to the individual responsibility of each Czech procurer to specify clearly the IPR allocation for the procurement in its tender documents so that it stimulates innovation and is compliant with applicable IPR/copyright law. The Czech public procurement regulations foresee that procurers can require in the tender specifications the transfer of IPR rights to the procurer. However, the Czech copyright act assigns copyright to the creator and determines that the copyright (moral right) cannot be transferred by the creator to another party, even when he is commissioned by the procurer (the contractor) or employed by a contractor (e.g. as a subcontractor) to work on the procurement contract. As the economic rights are also not transferrable under Czech law, if the procurer wants to use the commissioned work, he cannot require a transfer of those rights, but he can only require in the tender specifications to obtain a non-exclusive license to the economic rights (e.g. for usage, licensing, publication, modification, reproduction rights) at equitable payment. Copyright protects also scientific work (product designs, product specifications, tests etc.), computer programs and databases. For computer programs and databases produced on order there is an exception in the Czech copyright act which provides that the procurer shall have in any case economic rights.

With 3,6% of public procurement devoted to purchasing innovative solutions in the classical and utilities sectors (i.e. € 1,4 bn), Czech Republic ranks 29th in the benchmarking of investments on public procurement of innovative solutions (PPI) across Europe. Czech Republic falls within the group of bottom level performers, significantly below the European average of 9,3%. A considerable increase of investments in PPI is still needed to reach the level of 17% of public procurement devoted to purchasing innovative solutions that would enable a full-speed modernisation of the Czech public sector. When taking into account also PPI in the defence sector, the Czech Republic moves up to the 28th position.

In the field of R&D and innovation policy, The National Research, Development and Innovation Policy of the Czech Republic 2016–2020¹⁶ recognises the crucial role of the state in the creation of demand for innovative solutions and it gives an important role to public procurement (especially R&D procurement and PCP) for enhancing innovation. It encourages the development of adequate framework conditions to this end. Concerning this policy, an important actor is the Technology Agency of the Czech Republic (TA CR), an organizational unit of the state with its own budget allocation, which acts as the agency for the implementation of the support for RDI, preparing and implementing research programs, RDI tenders.

Czech public procurement law allows joint procurement with procurers from other countries. Where a public contract is awarded jointly by several contracting authorities and at least one of these persons is a contracting authority under the law of another Member State, the law of the Czech Republic or the law of such Member State shall be the law applicable to the award and review of the public contract. The applicable law shall be determined by international treaty or by agreement of the persons involved in the joint procurement. Where a public contract is awarded by a person established or set up by a contracting authority jointly with a contracting authority established in another Member State, those contracting authorities shall agree that the law applicable to the award and review of the contract shall be the law of the Member State in which the person so established or set up has a registered office carry out its activities.

¹⁶ http://www.czech-research.com/wp-content/uploads/2016/09/NRDIP_2016-2020_eng.pdf

According to the public procurement law, the contracting authority is not obliged to award a public contract through a tendering procedure, if the implementation of the procurement procedure would endanger the protection of the fundamental security interests of the Czech Republic and at the same time no measure can be taken that would allow the implementation of the procurement procedure. Security of classified information in the case of a defence or security contract involving access to classified information a requirement for separate access to a secure area or meeting area, the contracting authority may specify in the tender documentation the measures necessary to protect the information, according to the type of protection of classified information. Subcontractors must also comply with the measures laid down to ensure the protection of classified information, if necessary to protect that information.

Czech legislation regulates special provision for exceptions for defence or security contracts. When awarding a public contract in the field of defence or security, the contracting authority shall not be entitled to use the general exclusions regulated in Art. 29 of Act No. 134/2016 Coll (e.g. where the conduct of the procurement procedure would threaten protection of the basic security interests of the Czech Republic and simultaneously any measures to enable the conduct of the procurement procedure may not be adopted). A contracting authority is not obliged to award a defence or security contract in a procurement procedure if:

- procurement is under cooperative research and development programs which are jointly carried out by the Czech Republic and at least one other Member State in the development of a new product and, where appropriate, in the later stages of all or part of the life cycle of that product; when contracting for such cooperative programs between the Czech Republic and other Member States only, the Czech Republic shall communicate to the European Commission the share of research and development costs in the total costs of the program, the cost-sharing, as well as the intended share, if any, of purchases by individual Member States.
- during the deployment of the Czech Armed Forces outside the territory of the European Union, operational needs require that they be awarded to contractors located in the area of these operations, they are awarded by a contracting authority to a government or local authority of another State and their subject matter is: supply of military or sensitive material; works or services directly related to the aforementioned supplies; construction work or services for exclusively military purposes or sensitive construction work or sensitive services.
- their subject matter is financial services other than insurance services.
- are entered for the purposes of intelligence activities of the intelligence services.
- are awarded under special rules laid down by an international treaty concluded between the Czech Republic and a non-member state.
- their award is governed by the specific rules of an international organisation which makes purchases for its own purposes, or which must be awarded by Member States in accordance with those rules.

There are no foreseen difficulties in economic transactions with suppliers located in other EU countries or in non-EU countries that are caused by Czech VAT legislation. The standard VAT rate is 21 percent, the reduced VAT rate is 15 percent and the second reduced VAT rate is 10 percent. Czech VAT Act distinguishes between VAT exempt supplies of goods/services with credit (i.e. zero rated supplies) and VAT exempt supplies without input VAT claim deduction

DENMARK

Denmark has a well-functioning procurement system that is quite advanced in its strategic dimension, as it includes green, SME, social, and to lesser extent innovation criteria. Procurement is conducted primarily at the local level, whereas the central government and the regions have a lower share of procurement. Each contracting

authority is responsible for their own procurement, but they can make use of framework contracts managed by the central purchasing body SKI.

The Danish Competition and Consumer Authority plays an essential role in procurement, as it is responsible for supervision on the one hand, and for guidance and support on the other one. At the ministry level, the Agency for Modernisation is in charge of procurement policy and of the aggregation of procurement needs for government bodies. Denmark transposes EU Directives directly and maintains two sets of rules for national procurement.

The Danish public procurement process is based on January 1, 2016, on rules regulated in the following documents:

1. The Public Procurement Act (PPA) implements the procurement directive and regulates public contracts above and below a certain threshold.
2. The Consolidation Act on Electronic Communications regulates the use of electronic communications in the procurement and advertising of public procurements under the thresholds with a clear cross-border interest.
3. The Tender Act regulates the awarding of public works contracts below the threshold. Note that section 198 of the Public Procurement Act introduced a number of amendments to the Tender Act, among other things repealing paragraph II from January 1, 2016.
4. The Act on the Complaints Board regulates the right of complaints regarding the awarding of public contracts. The Act makes it possible for complaints to be dealt with by the Danish complaints board.
5. The Utilities Directive. The Consolidation Act implements the Utilities directive. The utilities directive regulates the procurement of water, energy, transport and postal services.
6. The Concession Directive. The Consolidation Act implements the Concession directive. The concessions directive regulates the awarding of concession contracts, i.e. contracts where a private operator gains the right to perform a particular task and to the earnings this may result in, for example the establishment of a bridge and the accompanying bridge tolls.
7. The Consolidation Act on the announcement of public procurements below the thresholds with clear cross-border interests and on the use of electronic means of communication in tenders in accordance with paragraphs II and III of the Public Procurement Act. The consolidation Act establishes that advertising of procurements below the thresholds with cross-border interests shall be advertised on Udbud.dk. In addition, the consolidation Act contains detailed provisions regarding public contracting entities' option of receiving bids electronically.
8. The Defence and Safety Directive. A number of contracts in the defence and security area should not follow the Public Procurement Act, but rather be assessed according to the Defence and Security Directive.
9. Correction of Annex following Croatia's entry into the EU.

The Public Procurement is defined procurement procedures shall be performed according to one of the following procedures described in Section 55: Open procedure, Restricted procedure, Competitive procedure with negotiation, Competitive dialogue, Innovation partnerships, Negotiated procedure without prior publication and Design contest.

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for Modernisation is in charge of procurement policy and of the aggregation of procurement needs for government bodies. Denmark transposes EU Directives directly and maintains two sets of rules for national procurement.

Despite the absence of a central e-procurement strategy, Denmark has long been considered a leader in developing e-procurement capabilities. The most important actor in e-procurement is SKI, which runs the national e-procurement platform. It established electronic tendering as far back as the late 1990s and more recently introduced an electronic dynamic purchasing system. Other platforms are available but are not accessible from a single location. E-notification is mandatory for all contracting authorities through the advertising Portal. E-submission must be used by contracting authorities for at least 50% of their total procurement budget. E-invoicing took an important role in the e-Government Strategy for 2011-2015, and is mandatory for all public bodies and suppliers for all types of purchases. As a result, the implementation of e-invoicing is close to 100%.

Denmark Public Procurement legislation regulate in Section 39 of PPA the deployment of market consultations in preparation of a procurement. Before launching a procurement procedure, contracting authorities may conduct market consultations with a view to preparing the procurement and informing economic operators of their procurement plans and requirements. In that connection, the contracting authority may enter into dialogues with and receive guidance from economic operators. Such guidance may be applied in the planning and conduct of the procurement procedure in accordance with principles of equal treatment, transparency and proportionality. If an economic operator or an enterprise affiliated with an economic operator has provided guidance to a contracting authority in relation to a market consultation or otherwise provided guidance to or been involved in the preparation of the procurement procedure, the contracting authority shall take appropriate measures to ensure that competition is not distorted by the participation of the economic operator referred to in the procurement procedure. As a minimum, the contracting authority shall: 1) ensure to the greatest possible extent that relevant information exchanged in connection with the involvement of an economic operator in the procurement procedure is included in the contract documents, and 2) set the time limits for receipt of requests to participate and receipt of tenders to equalise the advantage in terms of time which an economic operator may have gained by its involvement in the preparation of the procurement procedure, including via dialogue with and guidance received from economic operators. A contracting authority shall exclude the candidate or tenderer referred if the contracting authority cannot guarantee that the principle of equal treatment is observed by less radical measures.

In Denmark major delays might be expected for the procurement procedure if one of the bidding companies would challenge the award decision in court. The Act on the Complaints Board regulates the right of complaints regarding the awarding of public contracts. The Act makes it possible for complaints to be dealt with by the Danish complaints board. In Chapter 3 of Act on the Appeals Board for Public Procurement detailed right of appeal and submission to the courts.

Denmark have been regulated innovation procurement. Section 73 of PPA described that contracting authority may apply innovation partnerships where the contracting authority plans to develop innovative products, services or works which are not already available in the market. An innovation partnership includes three stages: a procurement procedure, an innovation process and the possible purchase of the service developed.

The legislation on public procurement and the complaint system are generally considered too complex and burdensome. According to Section 157 of the PPA, contracting authority may require that a candidate or tenderer presents certificates from independent bodies confirming that the candidate or tenderer complies with specific quality assurance standards. If the contracting authority requires compliance with specific quality assurance standards, the contracting authority shall refer to quality assurance systems based on the relevant European standards series certified by approved bodies.

According to Section 74 of the Public Procurement Act (PPA). In procurement procedures for innovation

partnerships, all economic operators may request participation in response to the contract notice. The contract notice shall include the information stated in Annex V, Part C of Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on public procurement and repealing Directive 2004/18/EC (the Official Journal of the European Union 2014, No. L 94, page 65).

The procurement documents shall include the following information: whether the contracting authority reserves the right to award a contract based on the initial tender, the arrangement which will apply to intellectual property rights, whether the contracting authority will enter into one or more partnership contracts, the anticipated progress of the negotiation procedure, including whether the negotiations will take place in successive stages in order to limit the number of tenders which require negotiation, whether the contracting authority will pay remuneration to the participants and whether the contracting authority will limit the number of participants based on sub-targets (contracting authority shall divide the individual innovation partnership into stages and related sub-targets. After each sub-target, a contracting authority may decide to terminate all or individual partnership contracts).

The framework for procurement for innovation is part of a national procurement strategy. In October 2013 the Danish government launched a "Strategy for Intelligent Public Procurement" The strategy included a number of actions that were intended to strengthen focus on:

- ensuring that public procurement supports public sector effectiveness (e.g. through low prices, total costs of ownership and transaction costs)
- using public procurement to develop innovative and high quality solutions (e.g. through support of immature markets. more clear and flexible public procurement processes and increased use of public-private innovation partnerships)
- supporting sustainability and green growth through public procurement (e.g. through increased use of environmental targets and social clauses).

Performance of R&D contracts on the territory of Denmark are mandated in accordance with the following sections of PPA:

- Section 22: This Act shall only apply to public service contracts for research and development included in the CPV codes 73000000-2 to 73120000-9, 73300000-5, 73420000-2 and 73430000-5 where the benefits accrue exclusively to the contracting authority for its use in the conduct of its own affairs and the service provided is wholly remunerated by the contracting authority.
- Section 33. The value of an innovation partnership shall be the highest estimated value of the research and development activities envisaged for all stages of the partnership referred to and of all supplies, services or works expected to be developed or purchased on termination of the partnership.
- Section 75: A contracting authority shall select minimum three candidates to submit tenders. Where the number of candidates is lower than three, the contracting authority may select one or more candidates which fulfil the fixed requirements for suitability. As a minimum, a contracting authority shall emphasise the capacity of the candidates in the fields of research and development and performance of innovative solutions in the selection process.

According to Section 123 of PPA, contracting authorities may agree to organise joint procurement procedures. Not only is joint procurement allowed, but the Competition and Consumer Authority takes part in EU cooperation, at both Council and Commission level, including the preparation of new legislation. In addition, the Authority is responsible for implementing EU procurement rules into Danish law. Moreover, the Competition and Consumer Authority cooperates with key procurement authorities in the other Nordic countries. A meeting is held every six months, allowing exchange of experiences and discussion of issues and topics of common interest.

There is also continuous collaboration on specific issues. The network aims to strengthen the application and enforcement of procurement rules through mutual exchange of experience and informal collaboration, including problem-solving in cross-border cases related to public procurement. The network meets 4-5 times a year. The Competition and Consumer Authority also monitors the negotiations on the WTO procurement agreement and the bilateral agreements.

There do not seem to be legal obstacles to participate in a joint procurement procedure. In the Danish legal system, the 2004 EU procurement Directives were transposed directly into national legislation as governmental order number 937 of 16 September 2004 concerning the procedures for the award of public works contracts, public supply contracts, and public services contracts, and governmental order number 936 of September 2004 concerning procurement procedures of entities operating in the water, energy, transport and telecommunications sectors. On 19 November 2015, the new Contract Law (Udbudsloven) was passed, which implements the EU Directive 2014/24/EU. The new provisions stipulate that if a supply and service contract has a clear cross-border interest the national threshold is EUR 67,000. Instead, if such a contract does not have a clear cross-border interest, no national threshold applies.

Danish defense and security procurement rules in PPA pointed in Section 23 that:

- contracts and design contests covered by Directive 2009/81/EC of the European Parliament and of the Council of 13 July 2009 on the coordination of procedures for the award of certain works contracts, supply contracts and service contracts by contracting authorities or entities in the fields of defence and security, and amending Directives 2004/17/EC and 2004/18/EC (the Official Journal of the European Union 2009, No. L 216, page 76) (the Defence and Security Directive),
- contracts and design contests not covered by the Defence and Security Directive pursuant to Articles 8, 12 and 13 of the Defence and Security Directive,
- contracts and design contests not excluded under 1) or 2) where protection of essential national security interests cannot be protected by means of less radical measures, or
- contracts or design contests where the procurement procedure or the completion hereof has been declared confidential or must be accompanied by special security measures when it has been determined by law or by the contracting authority that the relevant essential security interests cannot be protected by means of less radical measures.

Denmark makes use of EU Funding schemes that support innovation/regular procurement.

Difficulties in economic transactions with suppliers located in other EU countries or in non-EU countries are not caused by VAT legislation in Denmark. Denmark is one of the first countries in Europe to introduce a VAT system. On 3 July 1967, the first VAT Act came into force replacing traditional sales tax. The VAT legislation in Denmark went through several tax reforms since then. The most significant change so far has been the modification to bring local legislation in line with the Sixth EC VAT Directive (which, since 1 January 2007, is officially named the Council Directive 2006/112/EC on the common system of Value Added Tax).

HUNGARY

Hungarian public procurement legislation is regulated by ACT CXLI of 2015 on Public Procurement (PPA) and Government Decree No. 321/2015 (30 October) on the way of certifying suitability and the non-existence of exclusion grounds as well as the definition of public procurement technical specifications in contract award procedures which is based on the empowerment of Article 198 (1) point 1 and 2 of Act CXLI of 2015 on Public Procurement and acting within its competence pursuant to Article 15 (3) of the Fundamental Law of Hungary.

PPA Act regulates procurement procedures and concession award procedures, furthermore, rules concerning the legal remedies related thereto in accordance with the international agreements concluded by Hungary in the

field of public procurement and directives of the European Union (Directives 2014/23/EU, 2014/24/EU, 2014/25/EU). Hungary is also a state-party to the WTO Government procurement Agreement (GPA).

Article 9(1)(a) of the PPA excludes procurements in the fields of defence and security specified in the Defence Procurement Act ((DPA, Act XXX of 2016). The aforementioned Law transposes into law Directive 2009/81 / EC of the European Parliament and of the Council of 13 July 2009. In the DPA, security procurement refers to purchases not qualified as defense procurement, but which concern or affect Hungary's internal and external security and involve or generate classified data. Conditions related to security of supply and information are to be specified by the contracting authority. Such measures might be an obligation of the tenderer and its subcontractors to commit that they intend to use and adequately ensure the protection of all classified data in their possession or what comes to their attention during the contract or after its conclusion in accordance with the relevant legislation. "Confidential" or higher classification level data may only be transmitted electronically in accordance with the requirements set out in the government decree on the electronic security of classified data and the detailed rules for the authorization and official supervision of cryptographic activities authorized by the National Security Authority.

According to legislation, in Hungary excluded economic operators include those not based in an EU member state, the European Economic Area or the Organization for Economic Co-operation and Development, in a state party to a public procurement agreement of the World Trade Organization or in any of the overseas countries and territories referred to in Article 198 of the TFEU or do not have tax jurisdiction in a state with which Hungary has an agreement on the avoidance of double taxation, or with which the European Union has a bilateral agreement in the field of public procurement.

Public Procurement legislation has not identified provisions regarding market consultations. In April 2021, the Public Procurement Authority launched the Sustainable Hungary Programme to promote sustainability objectives in public procurement, within the framework of which, among other things, it initiated the establishment of a Sustainability Working Group. The second meeting of the Sustainability Working Group conducted a preliminary market consultation.

In Hungary the electronic conduct of public procurement procedures is supported by The Electronic Procurement System (ekr.gov.hu).

Hungary has the following procurement procedures:

1. Open procedures: The open procedure of a contracting authority may be applied at any time in both EU and national procedures. The open procedure is a one-stage procedure, where no negotiations take place.
2. Restricted procedures: The restricted procedure is a two-stage procedure consisting of a participation and a tender phase. Any interested economic operator may apply to participate in the participation phase of the call for proposals, by submitting a participation application. In the bidding stage, the submission of bids takes place. The contracting authority is obliged to call upon candidates who are qualified after the submission of applications. The contracting authority invites all qualified candidates to take part in bidding, unless it has determined a framework number.
3. Innovation partnerships: following EU rules as summarized on the Innovation Public Procurement Platform.
4. Negotiated procedures: the negotiated procedure may only be applied when the conditions set out in the PPA are met. The negotiated procedure is a two-stage public procurement procedure whose first stage of participation is the decision of the contracting authority to decide on the eligibility of the candidate to perform the contract. At the participation stage, candidates cannot bid. At the second bidding stage of the procedure, the contracting authority negotiates the terms and conditions of the contract with candidates qualified are invited to tender.
5. Competitive dialogues: Competition dialogue can be applied in the same cases as in which cases a negotiated procedure can be conducted. Thus, authorities may freely decide whether to pursue a

negotiated procedure or a competitive dialogue. All interested operators are eligible to submit applications for participation in a competitive dialogue. The contracting authorities will continue to consult the candidates and discuss their solution proposals. The purpose of the consultation is to specify the subject-matter of the procurement, which will enable the selected candidate to submit a bid later.

6. Negotiated procedures without a contract notice: One-stage procedure with no participation qualification. At the initiation of the procedure, negotiations are held after the bidders have been invited to tender. Due to the restrictive features of negotiated procedures without notice, they are only permitted under strict conditions, subject to stringent rules. The contracting authorities are obliged to inform the Public Procurement Authority of the initiation of a negotiated procedure without notice, explaining the facts underlying the legal basis. If, during the audit, the Authority finds that the legal basis is not in place, the Public Procurement Authority's Chair shall initiate an appeal procedure before the Public Procurement Arbitration Committee, upon receipt of a deficiency.

In Hungary, delays for the procurement procedure can be expected – administrative review must take place first, otherwise claims are not admissible. Review proceedings are quite common in this country. The authority responsible for reviewing infringements of the PPA is the Public Procurement Arbitration Board which is entitled to conduct investigations and make administrative decisions on legal disputes falling within its competence. Remedy proceedings may usually be requested or initiated within 15 days from the date on which the violation of the PPA came to the attention of the complainant. In an ongoing review procedure, until conclusion of the contract based on the procurement procedure involved in the review procedure, the Public Procurement Arbitration Board may order interim measures if there is a likelihood or risk that an infringement of the provisions has been or will be committed. As an interim measure, the Public Procurement Arbitration Board may suspend the procurement procedure. Such suspension of the procurement procedure shall result in the extension of the ongoing periods of time prescribed in the invitation by the duration of the suspension period, however, to protect a pressing, of particularly vital interest or public interest the Board may allow the conclusion of the contract on request of the contracting authority. Review proceedings before the Public Procurement Board may take up to 30 days. After the Board decides on the matter, judicial review may be requested not more than 15 days after the receipt of the decision. Such procedures take around 1-1.5 years

The Directorate General for Public Procurement and Supply (KEF) acts as a central purchasing body for central Government agencies. Using KEF is mandatory based on product categories, specifically software and IT services, stationery and office products, and motor vehicles. Contracting authorities at the local level must take charge of their own procurement. The central purchasing body has responsibility for the functioning of the centralised public procurement system.

Innovation Partnership in Hungary is a special type of procurement procedure which aims at the development of an innovative product, service or works and the subsequent purchase of the resulting supplies, services or works. The innovation partnership consists of two stages:

- a) the conclusion of the innovation partnership agreement or agreements is subject to the procedural rules laid down by this Act (procedural stage)
- b) the development process and the purchase is subject to the terms and conditions specified in the innovation partnership agreement (contractual stage).

Innovation partnerships are regulated in detail in Articles 95 - 97 PPA.

Hungarian Public Procurement legislation has the following potential groups of limitations specific to innovation procurement: IPR (the contract terms included in the procurement documents shall define in detail the arrangements applicable to intellectual property rights), budget (In the case of public works, it is not necessary to provide economic operators with an unpriced budget or to submit a priced budget in the tender. The contract shall be awarded on the sole basis of the award criteria for the best price-quality ratio), deadlines (the time limit for participation may not be shorter than thirty days from the date of dispatch of the invitation to participate

and the possibilities for the reduction of time limits in negotiated procedures are unavailable), number of candidate (the invitation may limit the number of candidates to be invited to tender. The contracting authority will apply criteria in particular concerning the candidates' capacity in the field of research and development and of developing and implementing innovative solutions to select the candidates), termination of partnership (the partnership agreement shall provide for the organisation of the research and innovation process which shall be structured in successive phases. The contracting authority may decide after each phase to terminate the innovation partnership or to reduce the number of partners by terminating individual contracts, provided that the contracting authority has indicated in the procurement documents this possibility), prequalification (contracting authorities may issue prequalification notices. They are established by contracting authorities, are required to be made public and any economic operators are entitled to request to be added onto the list of prequalified participants provided that it duly submits the data, facts, certification, declarations or statements and other documents prescribed by the documents pertaining to the public procurement procedure in question.)

Research, Development and Innovation Strategy of Hungary (2021-2030) includes a commitment to increase R&D expenditure as a share of GDP to 3% by 2030. The RDI Strategy is reinforced by Hungary's Smart Specialisation Strategy (S3) which identifies eight national economy priorities including digitalization of the economy, energy and cutting-edge technology. Hungary's RDI strategy sets out 3 main overarching objectives for domestic innovation policy:

1. making more use than at present of the research results of public research institutions (research institutes and higher education institutions);
2. improving the innovation performance of domestic enterprises, especially small and medium-sized enterprises;
3. strengthening cooperation between actors in the R&D and innovation system.

Article 62 of Act CXLIII of 2015 on Public Procurement excludes the participations of applicants who have their fiscal domicile in a country outside the European Union, the European Economic Area or the Organisation for Economic Cooperation and Development or in a non WTO/GPA country or outside the overseas countries and territories specified in Article 198 of the TFEU or in a country which has not signed any agreement with Hungary on avoiding double taxation or which has not signed a bilateral agreement with the European Union concerning public procurement. Grounds for exclusion are also defined in Article 63 PPA. Moreover, at the moment there is also an exclusion of Russian companies based on current EU sanctions. The sanctions cover ongoing and future public procurement procedures, as well as awarded public contracts and concessions. Furthermore, there doesn't seem to be exclusions based on country of origin, but there is a blacklist for companies that have provided false information and companies that were disqualified from public procurement procedures (the list is drawn up on the basis of a notification by the contracting authority, it is not a public register and is for information purpose).

The Organisation for Economic Co-operation and Development (OECD) has identified the lack of financial and human resources to initiate procurement for innovation procedures (PCP/PPI) and noted that only a small number of public actors are interested in joining cross border PCP/PPI projects, but mainly as observers. It might be the main obstacle to participation in a joint procurement procedure with other countries.

IRELAND

In Ireland, the Office of Government Procurement (OGP) recently absorbed the key executive role played by the National Procurement Service (NPS), which acted as both a central purchasing body and an oversight body. Within this new capacity, the OGP's goals are to standardize the procurement process and achieve savings by implementing a systematic approach to public procurement.

Ireland is governed by the following procurement regulations:

1. European Union Award of Public Authority Contracts Regulations 2016 (Public Contracts Regulations) which implement Directive 2014 /24/EU into Irish law
2. European Union Award of Contracts by Utility Undertakings Regulations 2016 (Utilities Regulations) which implement Directive 2014/25/EU into Irish law
3. European Union Award of Concession Contracts Regulations 2017 (Concessions Regulations) which implement EU Directive 2014/23/ EU into Irish law
4. European Union Award of Contracts Relating to Defence and Security Regulations 2012 (Defence Regulations) which implement Directive 2009/81/EC into Irish law.

The public procurement process in Ireland involves a series of steps that must be followed: market research, competitive bidding, and a selection process.

The Irish national software tool used for public procurement is eTenders which has been developed as part of the Irish Government's Strategy for the Implementation of eProcurement in the Irish Public Sector. The site is designed to be a central facility for all public sector contracting authorities to advertise procurement opportunities and award notices. The site is managed by the abovementioned OGP.

A contracting authority may conduct market consultations with a view to preparing the procurement and informing economic operators of the authority's procurement plans and requirements. A contracting authority may seek or accept advice from independent experts or authorities or from market participants. This advice can be used in the planning of the procurement procedure; however, contracting authorities must ensure that the use of such advice does not have the effect of distorting competition or violating the principles of non-discrimination and transparency. Where a tenderer (or an undertaking related to a tenderer) has previously advised a contracting authority or has otherwise been involved in the preparation of the procurement procedure, the contracting authority shall take "appropriate measures" to ensure that competition is not distorted by the participation of that candidate or tenderer. Such mitigating measures must include communication to tenderers of relevant information exchanged in the preparation of the procurement procedure and the fixing of adequate time limits for the receipt of tenders. A tenderer should only be excluded from a procurement procedure because of prior involvement where there are "no other means to ensure compliance with the duty to treat economic operators equally".

Major delays in Ireland's procurement procedure are usually uncommon, as there are very strict time limits under the Remedies Regulations; however, it can still be delayed in general. The time limit is 30 calendar days after the applicant was notified of the decision or knew or ought to have known of the alleged infringement. An application for a declaration that the contract is ineffective must be made within six months after the conclusion of the relevant contract. While the High Court has the power to extend the limitation period, the High Court takes a restrictive approach and tends not to grant applications for extensions of time. As the unsuccessful bidder may not have been aware of the infringement until it received new information, the limitation period had not expired at the time of issuance of the proceedings. For ordinary judicial review proceedings, applications to set aside the decision must be made within three months from the date when grounds for the application first arose. The High Court can extend the time period where there is a good reason; however, the courts take a restrictive approach to granting extensions of time.

In Ireland the substantive procurement regulations require contracting authorities and contracting entities to apply no less favourable treatment to the economic operators and signatories of the GPA.

In the Irish Public Procurement Framework, apart from above EU threshold public procurement, there are six types of procedures available to contracting authorities in awarding contracts, one of which is the Innovation Partnership Procedure. The innovation partnership is a procedure that allows for the combination of research, innovation and procurement. The process should be conducted in three phases:

1. The tendering phase takes place at the very beginning of the procedure, when the most suitable partner(s) are selected on the basis of their abilities and capacity to execute the contract and on the

basis of their tenders. The contracts establishing the innovation partnership are awarded using the criteria of the best price-quality ratio proposed.

2. In the next phase, the partner(s) will develop the new solution in collaboration with the contracting authority. This innovation process phase can be divided into several stages during which the number of partners may be gradually reduced, depending on whether they meet predetermined targets.
3. In the final, commercial phase, the partner(s) will provide the results.

Ireland has no specific mandatory legal provisions that could limit the procurement approach under an innovation procurement procedure as legislations follows EU Public Procurement Law. Since Ireland follows the EU public procurement legislation and directives, public procurement legislation allow joint procurement with procurers from other countries.

Innovation policy goals in Ireland are being incorporated into the procurement system through the promotion of the use of pre-commercial procurement to modernise public services, and the procurement of innovative solutions to create new business opportunities for industry.

Irish Regulation 57(1) of the Public Contracts Regulations specifies the mandatory grounds upon which a contracting authority shall exclude an economic operator from participation in a procurement procedure. A contracting authority is obliged to exclude an economic operator from the procurement process where it becomes aware that the economic operator concerned has been convicted of one or more of the following offences within the last five years:

- participation in a criminal organisation
- corruption
- fraud
- terrorist offences or offences linked to terrorist activities
- money laundering or terrorist financing
- child labour and other forms of trafficking in human beings

Regulation 57(8) of the Public Contract Regulations lists a number of discretionary grounds upon which the contracting authority may exclude an economic operator from participation in a procurement procedure. These include:

- where the contracting authority can demonstrate by any appropriate means a violation of applicable obligations in the fields of environmental, social and labour law that apply at the place where the works are carried out or the services provided that have been established by European Union law, national law, collective agreements or by international law;
- where the economic operator is bankrupt or is the subject of insolvency or winding-up proceedings, where its assets are being administered by a liquidator or by the courts, where it is in an arrangement with creditors, where its business activities are suspended or it is in any analogous situation arising from a similar procedure under the law of the State;
- where the contracting authority can demonstrate, by appropriate means, that the economic operator is guilty of grave professional misconduct, which renders its integrity questionable where the contracting authority has sufficiently plausible indications to conclude that the economic operator has entered into agreements with other economic operators aimed at distorting competition;
- where a conflict of interest cannot be effectively remedied by other, less intrusive, measures;
- where a distortion of competition from the prior involvement of the economic operator in the preparation of the procurement procedure cannot be remedied by other, less intrusive, measures;
- where the economic operator has shown significant or persistent deficiencies in the performance of a substantive requirement under a prior public contract, a prior contract with a contracting entity or a prior concession contract, which led to early termination of that prior contract, damages or other comparable sanctions;

- where the economic operator has been guilty of serious misrepresentation in supplying the information required for the verification of the absence of grounds for exclusion or the fulfilment of the selection criteria, has withheld such information or is not able to submit supporting documents required;
- where the economic operator has undertaken to unduly influence the decision-making process of the contracting authority, or obtain confidential information that may confer upon it undue advantages in the procurement procedure or where the economic operator has negligently provided misleading information that may have a material influence on decisions concerning exclusion, selection or award.

Joint-cross procurement is allowed, since Ireland follows the EU public procurement legislation and directives.

The national legislation for Defence contracts, stemming from EU legislation, is S.I. No. 62/2012 - European Union (Award of Contracts relating to Defence and Security) Regulations 2012. In regard to classified information, it is stated in article 20 of Part 5 that 20.

When contracts involve, require or contain classified information, the contracting authority shall specify in the contract documentation (contract notices, contract documents, descriptive documents or supporting documents) the measures and requirements necessary to ensure the security of such information at the requisite level. For the above purposes the contracting authority may require that the tender contain, inter alia, the following particulars:

- a commitment from the tenderer and the subcontractors already identified to appropriately safeguard the confidentiality of all classified information in their possession or coming to their notice throughout the duration of the contract and after termination or conclusion of the contract, as required by or under a relevant statute or administrative provision;
- a commitment from the tenderer to obtain the commitment referred to in subparagraph above from other subcontractors to which it will subcontract during the execution of the contract;
- sufficient information on subcontractors already identified to enable the contracting authority or entity to determine that each of them possesses the capabilities required to appropriately safeguard the confidentiality of the classified information to which they have access or which they are required to produce when carrying out their subcontracting activities;
- a commitment from the tenderer to provide the information required under subparagraph above on any new subcontractor before awarding a subcontract.

The exclusion criteria aforementioned might be (legal) obstacles in the participation of contractors from other countries to the procurement procedure or in joint procurement procedure on security solutions.

Ireland has the Small Business Innovation Research mechanism, which aims to drive innovation across the public sector, by solving societal challenges in new, innovative ways. SBIR is intended to help accelerate solutions to market for identified unmet public sector needs. SBIR falls under the category of pre-commercial procurement (PCP). PCP, as defined by the European Union, involves the purchase of research by a Government entity which is undertaken with the objective of stimulating innovation that the contracting authority or some other party may benefit from at a later stage, when goods or services not currently available are developed from the outcomes of the research. In essence, SBIR enables robust engagement between the public sector and innovative, technology agile companies, through competitive Challenges. Both risks and benefits are shared by Procurers and Suppliers. Through SBIR, a public sector body procures R&D (research & development) to develop a new solution, when no current 'off the shelf' solutions are readily available for purchase.

As far as difficulties in economic transactions that are caused by Irish VAT legislation with suppliers located in other EU countries or in non-EU countries, none are foreseen.

LATVIA

Latvian public procurement procedures are regulated by two main laws:

- the 2006 Law on Public Procurement (PPL) transposed Directive 2004/18/EC,
- the 2010 Law on the Procurement of Public Service Providers transposed Directive 2004/17/EC.

The PPL regulates procurement procedures both above and below EC thresholds. Latvia has two levels of national thresholds below the EU thresholds. First, direct procurement is allowed for small value contracts of less than EUR 4,000 for supplies and services and EUR 14,000 for works. Second, simplified procedures can be used for contracts between EUR 4,000 and EUR 42,000 for supplies and services and EUR 14,000 and EUR 170,000 for works. Above this second level, the same procedures and rules apply as above the EU thresholds, except for shorter time limits.

Since 2013, centralised procurement was made mandatory for local authorities for all goods and services offered in the e-catalogue, such as stationary and computer equipment. This has been implemented mainly through the creation of Tender Committees in charge of conducting the entire tender procedure from the drafting of tender documents to the awarding of contracts.

The national tool used for public procurement is <https://www.iub.gov.lv>.

National Latvian public procurement regulates the deployment of dialogue with the industry. The Procurement Monitoring Bureau on its website offers the possibility, within the framework of preliminary market research, for contracting authorities (including public service providers) to publish a notice on market consultation with suppliers prior to the launch of the procurement. The aim of publishing this notice together with the procurement documentation is to identify the market possibilities in the current situation and to prepare as high-quality documentation of the procurement procedure as possible before the announcement of procurement, and to promote competition in the procurement.

The publication of a notice on market consultation is an additional instrument for the consultation and is one of the market research tools or sources. According to the abovementioned laws, before launching a procurement procedure, the contracting authority may conduct consultations with the economic operators with a view to prepare the procurement and inform the economic operators of the procurement plan and requirements. The contracting authority shall announce the consultation on its website, specifying the issues to be discussed, the time and place of the consultation, the manner how economic operators can apply for participation in the consultation, the requirements with respect to documenting the consultation and publishing such documentation. In the invitation to participate, or in the procurement procedure documentation, the public service provider shall indicate whether variants of tenders may be submitted. Without such an indication the submission of variants shall not be allowed.

Delays to the procurement procedure are possible. The application review commission created by the Procurement Monitoring Bureau reviews the application within a month after it is received. Moreover, the review period might be prolonged up to one year due to objective reasons.

The central purchasing body in Latvia is the State Regional Development Agency (VRAA) which is responsible for promoting harmonised and comprehensive public purchases nationwide through the management of e-procurement and the conclusion of framework agreements for certain types of goods and services. For central government institutions, purchasing from the e-catalogues based on these framework agreements is mandatory. The Providing State Agency for Internal Affairs and the State Agency for Defence Properties of the Ministry of Defence also act as central purchasing bodies in the security and defence sectors.

Limitations on participation in procurement to companies from countries affiliated to the WTO Government Procurement Agreement, according to Latvian law on the Procurement of Public Service Providers indicates that the contracting authority, insofar as it is prescribed by the Agreement on Government Procurement of the WTO and other international agreements binding on the European Union, shall apply at least as favourable conditions

to the construction work, supplies, services, and economic operators of the abovementioned contracting parties as those applied to the European Union construction work, supplies, services and economic operators.

Latvia procurement legislation clearly regulates the innovation partnership procedure. It is a procurement procedure where all interested economic operators may request the right to participate, but the tenders may only be submitted by the candidates invited by the contracting authority, and the procedure is applied to establish a long-term innovation partnership aimed at the development and subsequent acquisition of an innovative product, service or construction work. This Law shall be applied to the procurement procedures if the contract price of public supply contracts, or of service contracts, is EUR 42,000 or more and the contract price of public works contracts is EUR 170,000 or more.

The contracting authority is entitled to apply a competitive procedure with negotiation or a competitive dialogue if:

- the needs of the contracting authority cannot be met without adjusting solutions already available on the market
- the procurement contract includes designing or innovative solutions
- the procurement contract cannot be awarded without prior negotiations because of specific circumstances related to the nature, the complexity or the legal and financial make-up of the procurement, or because of the risks attaching to them
- the technical specifications cannot be prepared with sufficient precision by the contracting authority with reference to a standard, European Technical Assessment, common technical specification or technical references
- in response to an open or a restricted procedure, the tenders not corresponding to the requirements prescribed by the procurement procedure documents are submitted or the tenders exceed the estimated contract price specified in the procurement procedure documents, or the tenders have been found to be abnormally low, or the tenders are submitted after the expiry of the term for submission thereof, or the tenderers do not meet the qualification requirements prescribed by the procurement procedure documents. This procedure may be applied, without prior publication of a contract notice, if only all those tenderers are called for negotiation, who meet the qualification requirements prescribed in an open or restricted procedure and who have not been excluded from participation in the procurement procedure, and who have submitted their tenders within the term for the submission of the tenders prescribed in an open or restricted procedure.

According to a study carried out by the EU in 2014/2015, the integration of Europe 2020 objectives into the public procurement process has only recently become a priority for Latvia and the inclusion of environmental, social and innovation criteria in tender procedures is not highly developed.

Latvian policy doesn't restrict freedom to purchase technologies owned by companies from specific countries. The contracting authority shall exclude the tenderer to whom the procurement contract would be awarded from participation in the procurement in example cases:

- insolvency proceedings of the tenderer have been announced (except for the case where a set of measures is applied within insolvency proceedings oriented towards restoration of solvency of the debtor), economic activity thereof has been suspended or the tenderer is liquidated.
- it has been established that on the last day of the term for submission of tenders, or on the day when the decision is taken to possibly award the procurement contract, the tenderer has tax debts in Latvia or in the country of registration or permanent residence thereof, including the debts of mandatory State social insurance contributions which exceed EUR 150 in total in any country.
- a person preparing the procurement procedure documents (an official or employee of the contracting authority), a member of the procurement commission, or an expert is related to the tenderer or is interested

in the selection of the tenderer and the contracting authority has no possibility to prevent this situation by less restrictive measures with respect to the tenderer.

According to joint cross-border procurement, the Latvian procurement law allows for such procedures. The Central Purchasing Body may purchase products and services, and also carry out procurements in order to conclude procurement contracts and framework agreements for the needs of other contracting authorities and public service providers, including contracting authorities and public service providers of other countries. In such case, the Central Purchasing Body shall apply the requirements laid down in this Law. The central purchasing body may maintain an electronic information system for the receipt of applications and tenders, and also provide consultations to the contracting authorities and economic operators regarding the use of such a system.

Latvian National Public Procurement Law shall not be applied to the supplies, services and construction work that comply with Section 3 of the Law on Procurement in the Field of Defence and Security. This Law shall not be applied if its application may cause harm to the protection of essential State security interests. The Cabinet shall decide on the protection of essential State security interests on a case by-case basis. The basis for the application of this exception shall be neither urgency nor protected information itself, if the protection thereof can be ensured in procurement procedures in accordance with PPL or the laws and regulations governing procurements in the field of defence and security. This Law shall not be applied if the Cabinet, in accordance with external laws and regulations, has recognised the information on a contract or the performance thereof as an official secret. For procurement in the field of security, the relevant law is the Law on Procurements in the Field of Defence and Security.

LUXEMBOURG

Luxembourg public procurement law transposed the UE Directive 2014/24/EU into national ground and since April 20th, 2014 entered into force:

- The Law on public procurement of April 8th, 2018;
- The Regulation of April 8th, 2018 regarding the implementation of the Law on public procurement of April 8th, 2018;
- The Grand-Ducal Regulation of August 27th, 2013 regarding the use of electronic means in public procurement procedures (as amended in 2019);
- The Law of November 10th, 2010 regarding review procedures concerning the award of public procurement contracts;

Based on Regulation¹⁷, E-submission of public procurements became mandatory on October 18th, 2018. The portal can be accessed at <https://pmp.b2g.etat.lu/>.

The main actor is the Public Procurement Department, which is part of the Public Works department of the Ministry of Sustainable Development and Infrastructures (MDDI). It is responsible for the regulatory framework, drafting legislation, monitoring its implementation, publishing tenders online on the public procurement portal and ensuring the external representation of the authorities in the field of public procurement.

Another key actor is the Tender Commission, a consultative and administrative body within the MDDI composed of representatives from contracting authorities, chambers of commerce and cottage industries. It can act as a supervisory body, ensuring that public procurement rules are applied properly by contracting authorities, or upon the reception of complaints from tenderers.

¹⁷ [Règlement grand-ducal du 27 août 2013 relatif à l'utilisation des moyens électroniques dans les procédures des marchés publics modifiant le règlement grand-ducal modifié du 3 août 2009 portant exécution de la loi du 25 juin 2009 sur les marchés publics et portant modification du seuil prévu à l'article 106 point 10° de la loi communale du 13 décembre 1988. - Legilux](#)

Luxembourg regulates market consultations in Art. 26 of The Law of April 8th, 2018. According to this Article, before commencing a procurement procedure, contracting authorities may carry out market consultations with a view to preparing the procurement and informing economic operators of their plans and requirements. To this end, contracting authorities may, in particular, request or accept the opinions of authorities or independent experts or market players. Such advice may be used for the planning and conduct of the procurement procedure, provided that it does not have the effect of distorting competition and does not involve a breach of the principles of non-discrimination and transparency. Luxembourg has used Preliminary Market Consultations in 6% of the procedures (this percentage is slightly below the European average of 9%)¹⁸.

Art. 69 of The Law of April 8th, 2018 regulates innovation partnership which is the procedure which aims at the development of an innovative product, service or work - for a need which cannot be satisfied by the acquisition of products, services or works already available on the market and the subsequent acquisition of the resulting supplies, services or works, provided that they correspond to the performance levels and maximum costs agreed between the contracting authorities and the participants. In an innovation partnership, any economic operator may submit a request to participate in response to a published contract notice in accordance with the rules determined by Grand-Ducal regulation, by providing the information for the purposes of the qualitative selection which is requested by the contracting authority". The aforementioned Article details that only economic operators who have received an invitation from the contracting authority following the assessment of the required information may submit research and innovation projects which aim to meet the needs defined by the contracting authority and which existing solutions cannot cover.

Luxembourg has The National Agency For Innovation and Research (Luxinnovation GIE). Luxinnovation GIE empowers companies to innovate today to be ready for tomorrow and contributes to the development of the economy as a whole, by identifying innovation opportunities and fostering collaborative innovation projects that stimulate the development of a sustainable, competitive, and digital economy. Luxinnovation published "Luxinnovation Strategy 2022 – 2025"¹⁹, clearly spelling out their mission, vision, values and strategic objectives as Luxembourg's national innovation agency, taking into account the vast challenges their companies and economy face in light of digital transformation and climate change. Moreover, the Agency promotes innovation procurement and regularly publishes on its website innovative solutions carried out in Luxembourg.

The performance of Research and Development contracts is regulated by The Law on Public Procurement which shall apply only to contracts for research and development services under specific CPV codes (mentioned in Art. 58) and provided that both of the following conditions are met:

- their fruits belong exclusively to the contracting authority for its use in the performance of its own activity.
- the provision of services is fully remunerated by the contracting authority.

Luxembourg procurement law allows joint procurement with procurers from other countries based on subsection III - Special Relationships (Cooperation, Affiliated Enterprises and Joint Ventures). Art. 134 of the aforementioned regulation describes contracts involving contracting entities from different Member States and their rules.

The procurement in the security area is regulated by the Law of December 26th, 2016, on public procurements in the fields of defence and security, which implements the EU Directive 2009/81/EC on defence and security procurement. Regarding confidential information, provision (Art. 58) establishes that the level of confidentiality of classified information or other information contained in the files submitted by the parties should be ensured by the president of the district court sitting as a judge of summary proceedings.

¹⁸ >> [WBC-RTI.INFO - Western Balkan Countries Research Technology Innovation](https://www.wbc-rti.info/)

¹⁹ https://www.luxinnovation.lu/wp-content/uploads/sites/3/2022/01/10566_li_strategie2022_en_web.pdf

Contracting authorities must treat suppliers (in addition to contractors and service providers) in an equal, non-discriminatory and transparent way. The principles of equal treatment non-discrimination, mutual recognition, proportionality and transparency apply especially to economic operators that are settled in the European Union.

MALTA

In Malta the Department of Contracts (DOC) serves as a central purchasing body, and it even administers the framework agreements for supplies, works or services which are published by the same DOC. The DOC falls within the portfolio of the Ministry for Finance and Employment (MFE). The principal mission of the Department is to have the necessary administrative structures in place so that public procurement is carried out on the principles of non-discrimination, transparency and equal treatment between economic operators. The aims, objectives and responsibilities of the Department are set out in the Public Procurement Regulations, Subsidiary Legislation 174.04. The mission of the Department of Contracts is responsible for the administration of the procurement procedures as laid down in the Public Procurement Regulations (LN352/2016). It aims to deliver an efficient and effective service to both economic operators and contracting authorities alike.

Malta procurement procedures are regulated by the Public Procurement Regulations (S.L. 601.03). Contracts may be awarded using various methods of procedures procurement.

In open procedures, any interested economic operator may submit a tender in response to a call for competition. The open procedure provides for the following steps to be fulfilled: identify procurement needs, set technical specifications, selection criteria and award criteria, draw up tender documentation & obtain necessary approvals for publication, advertise as appropriate, allow appropriate time for submission of tenders (manage any pre-contractual remedies sought before the closing date of tender), evaluate tenders & award of contract to recommended tenderer/cancellation, standstill period (manage any appeals if these arise), sign the contract, publish contract award notice (if applicable), implement the contract.

In restricted procedures, any economic operator may submit an interest to participate but only those who satisfy the Selection Criteria are invited by the Authority responsible for the Procurement Process to submit a response to a Call for Tenders utilising the Restricted Procedure. Accordingly, the competent Authority only sends the Procurement Documents to the shortlisted candidates. The steps in a Restricted Procedure are as follows:

- Identify Procurement Needs, Set Technical Specifications, Selection Criteria and Award Criteria
- Request approval of DG Contracts to adopt a restricted procedure. The request should include a clear justification of why such a procedure is necessary
- Set Selection / Qualifying Criteria and Weighted Award Criteria
- Draw up Request for Participation and Obtain Necessary Approval for Publication
- Advertise as appropriate and allow appropriate time for submission of Request for Participation
- Shortlist candidates (at least 5) who meet the Qualification Criteria (Manage any Pre-Contractual Remedies sought before closing date of Request for Participation)
- Standstill Period (manage any appeals if these arise)
- Issue Tender Documents and invite those who qualified to bid and allow appropriate time for Submission of Tenders
- Evaluate Tenders and Award of Contract to Recommended Tenderer / Cancellation
- Standstill Period (manage any appeals if these arise)
- Sign the Contract
- Publish Contract Award Notice (if applicable)
- Implement the Contract.

Another possible procurement procedure in Malta is competitive procedure with negotiation and it can be implemented in any of the following situations:

- Needs cannot be met without adaptation of readily available solutions
- Inclusion of design or innovative solutions
- Contract cannot be awarded without prior negotiations because of specific circumstances related to the nature, the complexity or the legal and financial make-up or because of the risks attached to them
- Technical specifications cannot be established with sufficient precision, with reference to a standard, European Technical Assessment, common technical specification or technical reference.

Next procedure – competitive dialogue, may be used when meeting the one or more of the requirements:

- Needs cannot be met without adaptation of readily available solutions
- Inclusion of design or innovative solutions
- Contract cannot be awarded without prior negotiations because of specific circumstances related to the nature, the complexity or the legal and financial make-up or because of the risks attached to them
- Technical specifications cannot be established with sufficient precision, with reference to a standard, European Technical Assessment, common technical specification or technical reference.

Innovation partnership can be used where need of the contracting authority which cannot be met by purchasing supplies, services or works already available on the market. In an innovation partnership procedure, any economic operator may submit a request to participate in response to a contract notice by providing the information for qualitative selection. The procedure to be adopted may be similar to the competitive dialogue as described above.

One more type of possible procedures is design contest. This procedure enables a Contracting Authority to acquire, mainly in the fields of town and country planning, architecture and engineering or data processing, a plan or design selected by a jury after being put out to competition with or without the award of prizes. Special rules apply to the award of a contract through a design contest. A design contest, in this context, means a procedure in which a contract is to be awarded to the provider submitting the winning design. Design contests are procedures for obtaining plans or designs, which involve a jury. The jury is autonomous in making its decisions, and can offer prizes or payments, which may lead to the award of a services contract. The rules apply to contests which are expected to lead to public service contracts, the value of which, including the value of any prizes or payments for the contest, means that they would otherwise be subject to the regulations.

A basic principle adopted by the Government of Malta is to utilise a competitive process unless there are justifiable exceptional circumstances which must be approved by the appropriate authority/competent authorities.

With specific regard to below EU Thresholds Procurement, Malta Public Procurement Regulations, provides the regulations applicable to Departmental Tenders. The relative thresholds, relate to the Estimated Procurement Value (excluding VAT) as calculated by the Contracting Authority, are the following:

- ≤ €5,000: obtaining a minimum of three quotations; Publication of the Procurement Call (Open Call for Quotations) on Government's e-Procurement Platform (ePPS); In exceptional circumstances, through a Direct Contract at the discretion of the Head of the Contracting Authority;
- €5,000 but ≤ €10,000: publication of the Procurement Call on ePPS, unless otherwise authorised in writing by the Director General (Contracts); In exceptional circumstances, through a Direct Contract at the discretion of the Head of the Contracting Authority;
- €10,000 but < €139,000: publication of the Procurement Call on ePPS, unless otherwise authorised in writing by the Director General; Supplies, Works or Services must be procured after a Departmental Call for Tenders; In exceptional circumstances, through a Direct Contract, upon obtaining the prior written approval by the Minister of Finance who has delegated his authority to the Direct Orders Office.

All types of procurement, being Works, Services or Supplies are regulated by the same rules, regulations and

policies. Distinction in relation to regulations may only be attributed to the established Local and EU Thresholds, which are dependent on the Estimated Procurement Value of each specific call.

The aforementioned e-procurement Platform (ePPS) was introduced by the Department of Contracts (DoC) in 2011. Since 2016, all the procurement procedures with a value of €5,000 (excluding VAT) or above are published electronically through the ePPS. According to ensuring the efficiency and transparency of the procurement process the following information are available in the ePPS: tender notices and bidding documents, tender clarifications issued by contacting authorities, minutes of clarification meetings/site visits, record of bids and successful bidders and awarded price.

After a meeting, held on the 6th of January 2015, between the Department of Contracts (DoC) and the Management Efficiency Unit (MEU), it was decided that the Common Assessment Framework (CAF) tool would be put in operation at the DoC in order to further support the implementation of the recommendations emanating from the DoC Operational Review report as drawn up in April 2013 by the MEU. The Common Assessment Framework (CAF) is a result of the co-operation among the EU Ministers responsible for Public Administration. A pilot version was presented in May 2000 and revised versions were launched in 2002, 2006 and 2013. The CAF is a total quality management (TQM), easy-to-use, free tool to assist public-sector organisations across Europe in using quality management techniques to improve their performance, whilst taking into account their characteristics.

The CAF model is made up of nine different criteria:

1. Leadership
2. Strategy and planning
3. Human resources
4. Collaborations and resources
5. Procedures
6. Citizen / customer oriented results
7. Results for human resources
8. Results on society
9. Main results

Through the Self Assessment Group (5 DoC personnel) these different criteria are individually analysed through the use of the appropriate Enablers or Results panel, where finally a mark, which reflects the current status of affairs at the DoC, is given.

The implementation of the standard is divided into 4 phases:

1. Scope – Group formation
2. Division of tasks – determination of internal team operation
3. Collection-processing of the identified documentation data, preparation of an evaluation report and grading
4. Preparation of a report of improvement measures.

As part of Market Research, pursuant to Regulation 47 of S.L. 601.03, Contracting Authorities may conduct Preliminary Market Consultations. They may seek or accept advice from independent experts or authorities or from market participants. That advice may be used in the planning and conduct of the procurement procedure, provided that such advice does not have the effect of distorting competition and does not result in a violation of the principles of non-discrimination and transparency. Subject to the requirement to ensure that competition is not precluded nor diminished (and subject always to compliance with the Treaty principles), preliminary research for the purpose of preparing for procurement is permitted and encouraged. Contracting authorities must take care to ensure that the Treaty principles are not breached, both in the way in which the preliminary market consultation process is conducted and in the outcome of the consultations. In terms of the outcome of the

consultations, contracting authorities need to be particularly careful to ensure that the specification prepared does not, for example, favour a particular Economic Operator. The 2014 Directive (transposed into Maltese Legislations through Subsidiary Legislation 601.03), allows a contracting authority, with no specific limitations on the estimated budgets, to request potential tenderers (market participants), or others (independent experts or authorities), in advance of a tender process to provide to the same Contracting Authority detailed technical and/or financial information relevant on the subject matter of the planned procurement process. However, contracting authorities that are considering engaging in any pre-procurement consultations must bear in mind:

- the obligation to comply with the basic principles of non-discrimination, equal treatment and transparency that apply under the Directive;
- that the process and outcome must not have the effect of favouring particular providers or precluding competition;
- the public perception of their actions which, if the contracting authority is not very careful, may result in a belief that a particular Economic Operator/s are being favoured;
- that consultation should not be used as a substitute for proper research and preparation by the contracting authority and its advisers;
- that such Preliminary Market Consultation does not result in the award of the procurement.

The Department of Contracts provides for a template of the wording to be used for a Preliminary Market Consultation (PMC) process. This is further augmented by a number of screenshots of the relevant sections of the ePPS where a Contracting Authority may actually upload a Preliminary Market Consultation, as the ePPS actually caters for such a procedure. No prior approval by the Department of Contracts is necessary to issue a PMC.

Potential delays could be expected, since overall Malta's performance in public procurement processes was rated as average compared to other EU countries according to the EU Single Market Scoreboard for 2017 (European Commission, 2017). Malta achieved a satisfactory score on 3 areas but seven areas out of 12 were highlighted as unsatisfactory. Malta has progressed many initiatives and made a lot of progress during 2017, however it is acknowledged that there is still significant scope for improvement particularly in areas where it would enhance effectiveness and efficiency. To ensure that any areas of non-compliance are met with the appropriate remedy, it is important for the proper functioning of a procurement system that the right checks and balances are in place. There are a variety of remedies available in Malta which are set out in the Public Procurement Regulations and summarised below:

- set aside decisions;
- determine issues relating to the submission of an offer through the ePPS;
- remove discriminatory technical, economic or financial specifications in documents;
- correct errors or ambiguities in documents;
- cancel the call for competition on the basis that it is in violation of a law.

Additionally, the following remedies are available in regard to public procurement procedures in Malta which might be a source of delay in procedure:

- prior to the deadline for submission of offers, an economic operator may submit a pre-contractual concern to the Public Contracts Review Board (PCRB). This remedy is free of charge and may be submitted at any point during the publication and while the call is still open on the market;
- after the closing date and during the ten-calendar day "standstill period" any tenderer, candidate, or any person who has submitted a request for participating or a tender may file an appeal before the PCRB (subject to paying a deposit);
- contracts above a certain value can be the subject of an application of ineffectiveness for a period after award;

- ten days following receipt of notice of termination of a contract the economic operator can make an objection to the Public Contracts Review Board;
- any party who feels aggrieved by a decision taken by the Public Contracts Review Board may appeal to the Court of Appeal within 20 calendar days from when the decision is made public.

Objections from an award decision may be appealed within 10 days and a subsequent appeal to the Court of Appeal should be filed within 20 days from the Review Board's decision.

Innovation Procurement is regulated in Malta in accordance with, amongst others, the following Innovation Partnership regulations in S.L. 601.03 (Articles 128-130): upon being requested by the contracting authority the Director may, subject to any conditions he may deem fit to impose, approve in writing the use of the innovation partnership procedure. This request must be supported by documents demonstrating that the need of the contracting authority cannot be met by purchasing products, services or works already available on the market. In an innovation partnership procedure, any economic operator may submit a request to participate in response to a contract notice or call for competition, as the case may be, by providing the information for qualitative selection that is requested by the contracting authority. In the procurement documents, the contracting authority shall identify the need for an innovative product, service or works that cannot be met by purchasing products, services or works already available on the market. It shall indicate which elements of this description define the minimum requirements to be met by all tenders. The information provided shall be sufficiently precise to enable economic operators to identify the nature and scope of the required solution and decide whether to request to participate in the procedure. Further provisions in the section regulating innovation procurement refer to number of partners, time limits, aim, structure, termination, negotiation, selection, intellectual property rights and execution. These legal provisions might limit the procurement approach under an innovation procurement procedure. The contracting authority may decide to set up the innovation partnership with one partner or with several partners conducting separate research and development activities (Art. 131). The minimum time limit for receipt of requests to participate shall be thirty days from the date on which the contract notice is sent or from the date when the call for competition is published, as the case may be. Only those economic operators invited by the contracting authority following the assessment of the information provided may participate in the procedure. Contracting authorities may limit the number of suitable candidates to be invited to participate in the procedure. The contracts shall be awarded on the sole basis of the award criterion of the best price-quality ratio (Art. 132). In selecting candidates, contracting authorities shall in particular apply criteria concerning the candidates' capacity in the field of research and development and of developing and implementing innovative solutions. Only those economic operators invited by the contracting authority following its assessment of the requested information may submit research and innovation projects aimed at meeting the needs identified by the contracting authority that cannot be met by existing solutions (Art. 137).

Malta's research and innovation governance is centralised around a few actors:

- The Parliamentary Secretary for Financial Services, Digital Economy and Innovation within the office of the prime minister has research and innovation in its portfolio.
- The Malta Council for Science and Technology (MCST), under the authority of the above Parliamentary Secretary and the prime minister, is in charge of preparing and overseeing the implementation and monitoring the National R&I Strategy 2020. MCST advises the government on science and technology policy, runs the Esplora Interactive Science Centre (dedicated to science popularisation); manages the FUSION R&D programme and a few other R&D schemes; represents Malta in international and EU fora and networks dedicated to R&I; and acts as the National Contact Point for H2020.
- The Ministry for Economy, Investment and Small Business is responsible for Malta Enterprise (ME), the agency in charge of supporting Maltese businesses' growth in addition to promoting and facilitating overseas investment in Malta. ME provides assistance to research and development efforts, as well as innovation in industry.
- The Ministry for Education and Employment is responsible for education at all levels, and in particular for

higher education institutions, and for employment policy.

- The two main research performers on the public side are: 1) the University of Malta (UoM), with circa 11,500 students, the most prominent research performer in the higher education sector (HES) and the only university offering Maltese doctoral and post-doctoral research positions; and 2) the Malta College for Arts, Science and Technology (MCAST), with circa 6,000 students, which has recently introduced a Research Framework and set up a Research Committee with the aim to improve the level of teaching through relevant research;
- The Parliamentary Secretariat for EU Funds within the Ministry for European Affairs and Equality houses the managing authorities for EU Structural and Investment Funds (ESIF) and is responsible for the operational programmes which govern the utilisation of such funds. It is also responsible for managing R&I schemes; its Measures and Support Division (MSD) delivers R&D support to businesses, co-funded by the ESIF.

The National Research and Innovation Strategy 2014-2020 is the framework guiding the government on matters relating to research and innovation at both national, EU and international levels. This is the third such strategy for the island: the first strategy was launched in 2003 and a second one in 2007. The strategy also integrates the Smart Specialisation Strategy (RIS3), and reiterates Malta's commitment to the achievement of a well-functioning European Research Area. The ultimate goal of this strategy is that of embedding research and innovation at the heart of the Maltese economy to spur knowledge-driven and value-added growth, and to sustain improvements in the quality of life. It aims to achieve these goals by establishing the necessary building blocks for a R&I framework. It is built around three pillars: a comprehensive R&I support ecosystem, a stronger knowledge base, and smart and flexible specialisation.

In 2016, the Maltese Government introduced Public Procurement Regulations (PPR) that cover the exclusion, selection and shortlisting stage of public procurement processes undertaken by contracting authorities. This transposed the requirements of the EU Directive 2014/24/EU on public procurement into Maltese law. According to Part VI of the PPR, no economic operator or sub-contractor can be awarded a public contract if they are subject to any of the exclusion or blacklisting grounds. Through the PPR, the Public Contracts Review Board and the Commercial sanctions tribunal were created to oversee the exclusion and blacklisting of economic operators. Exclusion and blacklisting assists in the curbing of precarious work and also allows for the exclusion of companies or individuals convicted of corruption, fraud, money laundering, tax evasion, evasion of employees' social security contribution, organised crime, employment of minors, unprofessional behaviour and distortion of competition. The PPR set out grounds for exclusion and blacklisting of economic operators from procurement procedures. No economic operator or sub-contractor shall be given a public contract if they are subject to any reason for exclusion or blacklisting. If a sub-contractor is excluded or blacklisted, the Director of the Department of Contracts or the authority responsible for the tendering process, shall request in writing that the economic operator replaces the sub-contractor within a timeframe, otherwise the economic operator shall be automatically excluded from the award. The exclusion and blacklisting of economic operators represent two separate procedures. The implementation of the procedure followed the outlines of the EU Directive 2014/24/EU and was based on meetings with stakeholders incl. ministries, the Public Contracts Review Board (PCRB) and the Attorney General Office.

Contracting authorities may lay down conditions relating to the performance of a contract, provided that they are linked to the subject-matter of the contract and indicated in the call for competition or in the procurement documents. Those conditions may include economic, innovation-related, environmental, social or employment-related considerations (art. 245). Award criteria shall be considered to be linked to the subject-matter of the public contract where they relate to the works, supplies or services to be provided under that contract in any respect and at any stage of their life cycle, including factors involved in:

- the specific process of production, provision or trading of those works, supplies or services; or
- a specific process for another stage of their life cycle

Moreover, award criteria shall be considered to be linked to the subject-matter of the public contract even where the factors established in abovementioned provision do not form part of their material substance.

According to Reg. 25 (S.L. 601.03), a contracting authority may, with the approval of the Director and subject to the conditions the latter may impose, participate in procurement procedures involving contracting authorities from different Member States.

Maltese public procurement legislation exempts public contracts falling within the scope of Public Procurement of Contracting Authorities or Entities in the fields of Defence and Security Regulations and those contracts which are excluded pursuant to regulations of Public Procurement of Contracting Authorities or Entities in the fields of Defence and Security Regulation:

- 9 (1) - contracts which have a value, excluding value added tax (VAT), estimated to be no less than the following thresholds:(a) EUR 134,000 for supply and service contracts;(b) EUR 5,186,000 for works contracts
- 12 and 13 – contracts governed by: specific procedural rules pursuant to an international agreement or arrangement concluded between one or more Member States and one or more third countries; specific procedural rules pursuant to a concluded international agreement or arrangement relating to the stationing of troops and concerning the undertakings of a Member State or a third country; specific procedural rules of an international organisation purchasing for its purposes, or to contracts which must be awarded by a Member State in accordance with those rules.

There doesn't appear to be a reason for difficulties in economic transactions with suppliers located in other EU countries or in non-EU countries that are caused by VAT legislation in Malta. Being a Member of the EU, Malta has its own Value Added Tax (VAT) Legislation which is in accordance with the EU VAT Directive.

SLOVAKIA

The public procurement process in Slovakia is regulated by the Public Procurement Act (No 343/2015) which transposed the EU procurement directives (2014/24/EU and 2014/25/EU). The EU Directive 2009/81/EC on defence and security procurement has been transposed through several acts.

The main actor in the field of Public procurement is the Slovak Public Procurement Office (UVO). The Office was established in 2000 and represents the Slovak Republic on public procurement issues at the international level, including expert working group activities with the European Commission. UVO works to ensure the compliance of the "Public Procurement Act", overseeing the principles of transparency, equal treatment and non-discrimination of tenderers and candidates, as well as the principles of economy and efficiency in the spending of funds.

Slovak legislation regulates the deployment of dialogue with the industry in preparation of a procurement. According to the law, the contracting authority or contracting entity may carry out a market consultation prior to the start of the procurement procedure for the purpose of preparing it and informing economic operators of the intended procurement procedure. For that purpose, the contracting authority or contracting entity may, in particular, seek or take advice from independent experts, independent institutions or market participants which may be used in the planning or implementation of the procurement procedure, provided that it does not distort competition or infringe the principle of non-discrimination and the principle of transparency (Section 25, Act No 343/2015).

Major delays might appear in the Slovak procurement procedure because the length of the concession period shall depend on the subject-matter of the concession contract, the amount of the monetary consideration for the works to be carried out or for the service to be provided and the estimated reasonable return to the concessionaire arising from the right to use or benefit from the subject-matter of the concession contract during the concession period. A decision under section which has become final may be reviewed by the President of the Authority on his own initiative. Where the subject of a decision under the first sentence is the review of the

procedure for awarding a contract, concession or framework agreement financed in whole or in part by the European Structural and Investment Funds in the 2014-2020 programming period, the President of the Authority shall review the decision on the basis of an initiative of the managing authority or the certifying authority.

In Slovakia, there is the Central Purchasing Body which is involved in procurement processes. The contracting authority or contracting entity may:

- acquire goods or services from a central purchasing organization;
- acquire goods, services or works on the basis of contracts awarded by the central purchasing organization;
- award contracts on the basis of a dynamic purchasing system operated by a central purchasing organisation;
- award contracts on the basis of a framework agreement concluded by a central purchasing organisation.

In Slovak Republic legislation there is no official definition of innovation procurement but Act No 345/2015 provides a definition of innovation in the context of public procurement. Innovation is defined, in line with the EU definition and applicable to all public procurers in the country, as “the introduction of a new or significantly improved product, service or process, which may include a production, building or construction process, a new marketing method, or a new organizational approach to business practice, the organization of a working environment or external relations”.

There is no default scenario for the distribution of Intellectual Property Rights between procurers and suppliers in the Slovak Republic. The Slovakian law, general terms and conditions for government contracts and guidelines on public procurement do not define how allocation of IPRs is best dealt with in procurement contracts. It is left to the individual responsibility of each Slovakian procurer to specify clearly the IPR allocation for the procurement in its tender documents so that it stimulates innovation and is compliant with IPR/copyright law.

In Slovakia there is no policy framework for innovation procurement (absence of action plan, target, financial incentives for procurers, monitoring system). However, in the benchmarking of the national innovation procurement policy frameworks across Europe, the Slovak Republic is found at the 16th position of the overall ranking with a total score of 23,0%. Amidst the 30 countries analysed, the Slovak Republic is among the group of modest performing countries in implementing a mix of policy measures that are conducive for mainstreaming innovation procurement. Having implemented only 23% of the policy measures to roll- out a comprehensive policy framework for innovation procurement, there is still a strong reinforcement of the policy framework needed to reach its full 100% potential.

The main actors in the area of innovation are the Ministry of Economy and the Ministry of education, science, research and sport. The ministry of economy sets the innovation policy. The ministry of education, science, research and sport is responsible for the research policy and is also the managing authority for the operational program for research and innovation funded by the European Structural and Investment Funds. The Ministry of economy is supported in the implementation of the national innovation policy by three executive agencies:

- the Slovak Business Agency (SBA),
- the Slovak Investment and Trade Development Agency (SARIO)
- the Slovak Innovation and Energy Agency (SIEA).

Research and Development procurement is defined in Act No 345/2015 as “all activities involving basic research, applied research and experimental development; experimental development may involve the implementation of equipment demonstrating the performance of a new concept or new technology in the appropriate environment, or in a representative environment”.

Public procurement rules are not applied to public service contracts in the field of research and development unless:

- the benefits accrue exclusively to the contracting authority for its use in the conduct of its own affairs.

- the service provided is wholly remunerated by the contracting authority.

The Slovak Research and Development Agency (SRDA) is responsible for R&D promotion in all research fields, including international research cooperation. It also plays a key role in managing R&D grant schemes. In the field of innovation procurement, the UVO carries out capacity building activities to increase procurers' skills and competences on innovation procurement procedures. Within the UVO, the Working group in Innovation Procurement directly supports contracting authorities to engage in more innovation procurement procedures. The transposition of the EU procurement directive has given a primary input to the development of Innovation procurement in the country.

Slovakia allows joint procurement with procurers from other countries. Cross-border procurement is carried out through:

- centralised public procurement activities provided by a central purchasing organisation from a Member State.
- cooperation between contracting authorities from different Member States or contracting entities from different Member States.
- a joint entity set up by contracting authorities from different Member States or contracting authorities from different Member States pursuant to a special regulation.

A defence and security contract for the purposes of Act No 343/2015 is a contract for the supply of goods, the execution of works or the provision of services, the subject matter of which is:

- the supply of military equipment, including parts, components, or sub-assemblies thereof.
- the supply of sensitive equipment, including parts, components, or sub-assemblies thereof.
- the carrying out of works, the supply of goods or the provision of services directly related to the aforementioned supply of equipment for any stage of its life cycle.
- the execution of works or provision of services for specific military purposes.
- the carrying out of works or the provision of services of a sensitive nature.

Sensitive equipment, construction work of a sensitive nature and service of a sensitive nature for the purposes of this Act is equipment, construction work and service for security purposes which is associated with classified information, requires classified information, or contains classified information.

Slovak VAT legislation is not troublesome for economic transactions with suppliers located in other EU countries nor for non-EU countries. Value added tax is a general tax, in that it applies to all goods and services. It is an indirect tax, i.e. it is collected and paid into the central government budget by someone other than the person who actually pays it (the final consumer). Value added tax applies to all final consumption without exception.

The standard VAT rate is 20%, the reduced VAT rate is 10%, the reduced 10% VAT rate is charged, for example, on the sale of books, selected foods, selected medical devices, accommodation services, and goods and services within the social economy.

Goods and services sold are exempt from VAT in certain cases. Exempt supplies can be split into two groups: those for which VAT may be deducted on input and those for which there is no such right. Exempt supplies with the right of VAT deduction in Slovakia include: the supply of goods to another EU country; the supply of an international passenger transport service and the export of goods outside the EU. Exempt supplies without the right of VAT deduction in Slovakia include: financial services; insurance services and the supply and rental of real estate.

SLOVENIA

In the case of the Slovenian procurement system, the Directorate for Public Procurement within the Public Administration has the role of system steward. The key tasks carried out in the Directorate include the systematic

regulation of public procurement in the Republic of Slovenia (preparation of regulations in the field of public procurement, harmonization of Slovenian regulations in the field of public procurement with the European legal order, systematic monitoring and cooperation in the harmonization of regulations of the European Union and the World Trade Organization in the field of public procurement, preparation of materials for working bodies of the European Commission and other European institutions), execution of orders for the needs of the Ministry of Public Administration and joint public procurement, standardization of typical procurements, including the preparation of sample tender documents for typical types of public procurement, development of electronic business in the field of public procurement and offering assistance to clients and economic entities that carry out public procurements or participate in them.

Legislation in the field of public procurement in the Republic of Slovenia consists of the Public Procurement Act (PPA) and Legal Protection in Public Procurement Procedures Act (LPPPPA). The PPA establishes rules on the procedures for procurement by contracting authorities with respect to contracts and design contests. The LPPPPA applies to the following: it governs legal protection of tenderers, contracting authorities and the public interest, including legal protection of defence and security interests, in procedures of awarding public contracts; and it designates bodies responsible for protecting rights pursuant to this Act. The LPPPPA also defines legal protection after the conclusion of a contract or framework contract. Furthermore, Slovenia has a Public Procurement in the Defence and Security Sector Act (PPDSA) which establishes rules of conduct of contracting authorities and tenderers in the procurement of goods, services and works in the field of defence and security.

When awarding public contracts, contracting authorities may, in the manner and under the conditions laid down in the PPA, apply the following procedures:

- open procedure
- restricted procedure
- competitive dialogue
- innovation partnership
- competitive procedure with negotiation
- negotiated procedure with publication
- negotiated procedure without prior publication and
- low-value contract procedure

There is no free choice amongst them. The main feature of these procedures is that they can be divided into one-phase and two-phase processes. The open procedure consists of one phase, while four of the remaining procedures (restricted procedure, competitive dialogue, innovation partnership, negotiated procedure with publication and low-value contract procedure) consist of two phases. The main difference between the one-phase procedure and the two-phase procedure is that in the one-phase procedure, all interested parties may submit their bids upon publication of the public notice, whereas in the two-phase procedure in the first stage, all interested parties are invited to pre-qualify. In the second stage, only pre-qualified bidders may submit their financial offers.

The e-JN information system provides electronic submission of applications/offers, electronic catalog, electronic execution of internal public procurement procedures, electronic verification of exclusion conditions in official records and electronic reverse auction, realizes the plan of the electronic public procurement process and is available for use free of charge. Access or user registration takes place using a digital certificate. There are no other restrictions or conditions of use.

Slovenia is a Member State of the EU and is therefore subject to the applicable EU legislation on public procurement. Slovenia has implemented the following directives into its legislation:

- Directive 2009/81/ES (Implemented in the LPPPPA)

- Directive 2014/24/EU (Implemented in the PPA)
- Directive 2014/25/EU (Implemented in the PPA)
- Council Directive 89/665/EEC (Implemented in the PPA and the LPPPPA) and
- Council Directive 92/13/EEC (Implemented in the PPA and the LPPPPA)

Bidders or participants that have cooperated with the contracting authority in the preparation of a procurement procedure may participate in the tender, provided that such advice or recommendations do not have the effect of preventing or restricting competition and do not result in a violation of the principle of equal treatment of tenderers or the principle of transparency of public procurement.

Contracting authorities may exclude an economic operator from participating in a procurement procedure where a distortion of competition from the prior involvement of the economic operators in the preparation of the procurement procedure cannot be effectively remedied by other, less intrusive, measures.

The National Review Commission for Reviewing Public Procurement Award Procedures (DKOM) monitors compliance with procurement legislation on the one hand, and acts as a review body on the other. It is empowered to annul award decisions and can make legally binding advice on how award disputes should be resolved. It is independent and autonomous in its operations. The Court of Audit is the highest authority for supervising public spending in Slovenia. It has the authority to audit any past or ongoing operation, including for the efficiency of operations. Legal protections for economic operators are considered strong in Slovenia. Applicants have the right to request an audit of the procurement procedure to the contracting authority. If approved, the audit is carried out and the procedure is interrupted, as the contracting authority cannot sign a contract during the course of the audit. If rejected, the applicant can refer to the DKOM. While guaranteeing a high level of legal protection, audits contribute to a longer duration of procurement procedures.

The Slovenian public procurement market is open to all signatory countries of the Government Procurement Agreement within the framework of the World Trade Organization, as well as all Member States of the European Economic Area.

According to Article 43 of the Public Procurement Act (PPA) any business entity may apply for participation in innovation partnerships on the basis of a published public procurement notice, and in the case of public procurement in the infrastructure field also on the basis of a published notice on the establishment of a qualification system, by attaching information to the application to determine ability, which are requested by the client. In the documentation related to the awarding of the public contract, the client defines a need for innovative goods, services or constructions that cannot be satisfied by purchasing goods, services or constructions already available on the market. It also indicates which elements of the description define the minimum requirements that all tenders must meet. The information provided must be sufficiently accurate so that economic entities can identify the type and scope of the required solution and decide whether to apply for participation in the procedure. The customer may decide to establish an innovation partnership with one or more partners who will carry out separate research and development activities. The minimum deadline for receiving applications for participation is 30 days from the date the public procurement notice is sent for publication. Irrespective of the previous paragraph, for a public procurement in the infrastructure field, the minimum deadline for receiving applications for participation is, as a rule, at least 30 days from the date on which the public procurement notice was sent for publication. In no case should the deadline be shorter than 15 days. Only economic entities invited by the client based on the evaluation of the submitted information may participate in the procedure. The contracting authority may limit the number of eligible candidates to be invited to the innovation partnership. Public contracts using the innovation partnership are awarded exclusively on the basis of the criterion of the best ratio between price and quality. The aim of the partnership for innovation is the development of an innovative product, service or works and the subsequent procurement of goods, services or works that are the result of innovative development, provided that they correspond to the quality of execution

and the highest costs agreed between the clients and the participants. Partnership for innovation is carried out in successive stages, which take into account the sequence of steps in the research and innovation process, and may include the production of goods, the provision of services or the completion of works. An innovation partnership sets milestones to be achieved by the partners and provides for payment in appropriate instalments. On the basis of these objectives, the client may decide after each stage to terminate the innovation partnership, and in the case of an innovation partnership with several partners, to reduce the number of partners by terminating individual contracts. In this case, the documentation related to the award of the public contract must state the possibility of terminating the partnership and the conditions under which it can do so. If this article does not stipulate otherwise, clients negotiate with providers about the first and all subsequent offers submitted by the latter, in order to improve their content, with the exception of final offers. The minimum requirements and criteria for awarding a public contract cannot be subject to negotiation. During the negotiations, the contracting authority must ensure equal treatment of all bidders and must not provide information in a discriminatory manner, as a result of which some bidders could have an advantage over others. All providers included in the next stage shall be notified in writing by the client of any changes to the technical specifications or other documentation related to the award of the public contract, except for those that determine the minimum requirements for the public contract. The client shall ensure that, following these changes, the provider has sufficient time to amend or resubmit the offer if necessary. In the innovation partnership procedure, negotiations may be carried out in successive stages in order to reduce the number of offers based on the criteria for the award of a public contract defined in the notice of public contract, invitation to confirm interest or documentation related to the award of a public contract, or which must be negotiated. In the notification of the public contract, the invitation to confirm interest or the documentation related to the award of the public contract, the customer indicates whether he will use this option. When selecting candidates, the client applies, in particular, the conditions regarding the candidates' abilities in the field of research and development and in the development and introduction of innovative solutions. Research and innovation projects, the aim of which is to fulfill the needs specified by the client and which cannot be fulfilled with existing solutions, can only be submitted by economic entities that are invited by the client based on the evaluation of the required information. In the documentation relating to the award of the public contract, the client shall specify how intellectual property rights are regulated. In accordance with Article 35 of this law, the client may not disclose proposed solutions or other confidential information communicated to him by the partner to other partners without the consent of the partner. This consent must not be general but must refer to the information that the client intends to pass on to the other partners. The estimated value of goods, services or works must not be disproportionate to the investments required for their development.

Abovementioned legal provisions can limit the procurement approach under an innovation procurement procedure in the following scopes: standards, Intellectual Property Rights (IPRs), limit and subcontracting, time limits for receipt of tenders, standstill period, economic eligibility criteria and problems in the Phased approach of the PCP procurement.

Article 11 (conditions related to the GPA Agreement and other international agreements) of the PPA, when awarding a public contract, the subject of which is the Agreement on Government Procurement, concluded within the framework of the World Trade Organization (GPA) or another binding agreement of the European Union or the Republic of Slovenia, all economic entities from third countries must be guaranteed the same treatment as provided to economic entities from the member states of the European Union.

According to the European Innovation Scoreboard 2020²⁰, since 2012 innovation performance increased in 24 EU Member States and decreased in only three. Performance has decreased the most in Slovenia and Romania. The performance of Slovenia, as well as 12 other UE countries, is below the EU average²¹. Slovenia now belongs

²⁰ https://ec.europa.eu/growth/industry/policy/innovation/scoreboards_en

²¹ https://ec.europa.eu/growth/industry/policy/innovation/scoreboards_en

to the group of Moderate Innovators as its performance declined relative to that of the EU in 2012.

Procurement systems generally take two forms: legal-based or principle-based. Legal-based procurement systems rely on the law to grant permission for specific activities. Anything not declared as permissive within the law is, therefore, not permissible. Principle-based systems focus on core principles that outline the broad behaviours, ethics and principles that should guide officials. Slovenia has a strong legal-based system with little tolerance for mistakes. Analysis of the law by the Organisation for Economic Co-operation and Development (OECD) found clear signals for new thinking, new techniques and creativity, yet these are still missing.

Slovenian public procurement legislation allows joint procurement with procurers from other countries. For joint procurements, the following methods are available:

- joint procurement by the Government and centralised purchasing activities;
- occasional joint procurement;
- procurement involving contracting authorities from different Member States (this method is practically never used, but it is possible under the PPA).

The Public Procurement Act (PPA) does not apply to:

- contracts and design contests covered by Directive 2009/81/EC of the European Parliament and of the Council of 13 July 2009 on the coordination of procedures for the award of certain works contracts, supply contracts and service contracts by contracting authorities or entities in the fields of defence and security, and amending Directives 2004/17/EC and 2004/18/EC (the Official Journal of the European Union 2009, No. L 216, page 76) (the Defence and Security Directive);
- contracts and design contests not covered by the Defence and Security Directive pursuant to Articles 8, 12 and 13 of the Defence and Security Directive;
- contracts and design contests not excluded under 1) or 2) where protection of essential national security interests cannot be protected by means of less radical measures;
- contracts or design contests where the procurement procedure or the completion hereof has been declared confidential or must be accompanied by special security measures when it has been determined by law or by the contracting authority that the relevant essential security interests cannot be protected by means of less radical measures.

In general, a number of contracts in the defence and security area should not follow the Public Procurement Act, but rather be assessed according to the Defence and Security Directive.

There are no difficulties in economic transactions with suppliers located in other EU countries or in non-EU countries that are caused by VAT legislation in Slovenia. If a supplier's file is complete, it generally takes one month to obtain a VAT number from the competent Slovenian tax office. If a foreign company is providing goods under its Slovenian VAT registration, it must comply with the local obligations on record keeping, invoicing and VAT rates. Slovenian VAT authorities may require non-European suppliers to appoint a fiscal representative. This is a local company that will represent non-European suppliers to the local VAT authorities. The fiscal representative is responsible for respecting all VAT obligations of the non-European supplier, including those of which the non-European supplier might not be aware of. For this reason, the fiscal representative may require a deposit (e.g. a bank guarantee) from the non-European supplier before accepting the representation assignment. European companies are not obliged to appoint a tax representative. However, to facilitate their relations with the local tax authorities, they may appoint a proxyholder to carry out the tax formalities on their behalf. In this case, it is not necessary to issue a bank guarantee. The company remains solely responsible for paying its VAT debts.

2.2. TYPES OF INNOVATION FRIENDLY PROCUREMENT PROCEDURES

Research analysis revealed the available procurement procedures that are classified as innovation friendly ones. While formulating a procurement procedure it is crucial to take into account whether the contractual volumes are above (AT) or under (UT) the EU threshold in order to select the appropriate procedure as analysed below.

Primarily, there are **six distinct options**:

1. Public (UT) and open tender (AT): This is the principal standard procurement procedure.
2. Negotiated award (UT) and negotiated procedure (AT): These procedures are characterised by the potential to accommodate the procurement to the specific features. In the process of a pre-ongoing competition open to all bidders, new solutions to procurers could be generated through bidders.
3. Competitive dialogue: Competitive dialogue can be implemented in complicated contracts as the requirements in discussions with several suppliers are functionally described.
4. Pre-Commercial Procurement (PCP): Is implemented for the procurement of solutions that are not available in the market.
5. Innovation partnership: This recent procurement procedure associates the award of a development contract with the actual procurement which leads to the establishment of a long-term partnership between the company and procuring authority.

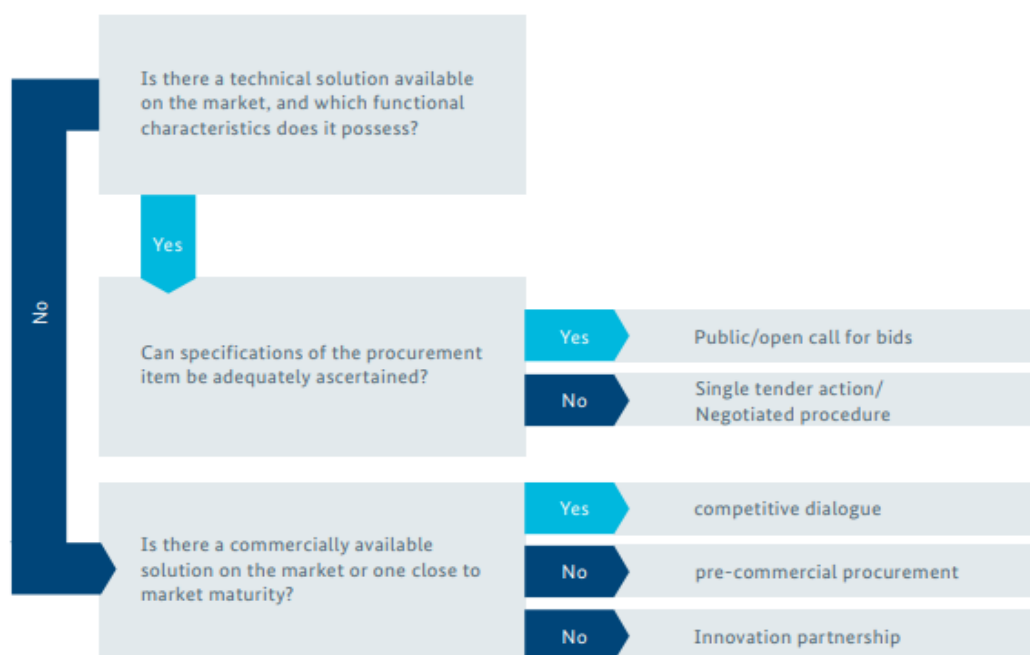


Figure 2: Decision Tool for selection of Procurement Procedure

Another instrument that can be used is the Public Private Partnerships (PPP). For the selection of the most suitable form of award in PPPs, principal questions are asked to the industry representatives followed by the market research and consultation. PPPs are contractual arrangements signed among private entities and public institutions and are mainly used for large infrastructure.

NEGOTIATED PROCEDURE AND NEGOTIATED AWARD

For contracts above the EU threshold values, the negotiated procedure is selected. In more detail, this is a procurement procedure setting the activity of the contracting authority to approach one or multiple selected companies to negotiate based on a pre-existing defined list of services in the context or not of a call to tender.

The main advantage from implementing such a procedure is that negotiations with the bidder are generating advanced and innovative aspects and hence, negotiated award. Under that aspect, shortfalls and high demands can be improved and high expectations can be met. Furthermore, innovation procurement potential is increasing by the nature of the overall procedure.

COMPETITIVE DIALOGUE

The competitive dialogue is the process where all the chosen companies are involved in a series of discussions regarding all the aspects of the tender. The aforementioned procedure according to market research, provides a flexible solution when issues arise such as inadequately described technical specifications or when financial and legal framework are not clear. During the analytical discussions with potential bidders, an in-depth understanding of contractual aspects, challenges and the specific demands of the procuring entity take place. The objective of the competitive dialogue is to consolidate all market information into the final description of services in order to respond to the demands of the contracting authority in the most efficient way. In the development of innovative solutions, such procedure between parties provides a methodical and practical approach in the formulation of the procurement documents. During the whole procedure, the following aspects are identified:

- This process demands experienced personnel to handle it and more time than conventional procedures. Moreover, it requires more resources since a dedicated project team or even external support is necessary.
- The dialogue phase demands substantial investment in time from the participating players. In times where it seems appropriate, there should be legitimate coverage for this, nevertheless, this should be set clearly during the implementation of the dialogue.
- To respond to bidders' considerations in relation to confidentiality issues that can arise (intellectual property, disclosure of sensitive data) and equality, mutual non-disclosure agreements could be signed.

ADVANTAGES

Competitive dialogue should be implemented in complicated markets or in solutions which are challenging to evaluate, where, for example, it is not easily defined what the market provides in terms of technical, financial or legal aspects. More precisely, regarding large innovative projects, which can be for example the installation of transport system. Since procurement specialist do not often conduct a comprehensive market research, this process is highly beneficial regardless of its complication.

INNOVATION PARTNERSHIP

The EU public procurement law (Dir/2014/24/EU, Art. 31, introduced a new procurement process identified as the Innovation Partnership. It is specifically designed, for the development and procurement of innovative products, services and works that are not yet available on the market. Thus, there is no need for a distinct process for the purchase, as is the case for pre-commercial procurement (PCP). Between the company and the contracting authority, a continuing partnership is built. Company's objective is to bring a product to the market, introduce it and constantly develop it.

As usually, before the tender process there is a call to tender. A bid is required by the selected companies for the first round of the tender. Following, a negotiation between the bidders and the contracting authority on the initial bids will take place and afterwards the procurer requests the follow-up bids. The objective is to alter and make better the bids in terms of the way they address the tender challenge. When the final bid will be accepted by one or more bidders, the innovation partnership will be implemented. It has to be noted also that award of a tender only taking consideration the lowest price or lowest cost is not foreseen.

ADVANTAGES

For products and services that are not available in the market yet, the innovation partnership assists the contracting authority in their procurement strategy. Hence, research and development actions from a possible bidder may arise because of a current issue or of a non-settled challenge and assisted by the said procedure. Nevertheless, this process is only ideal for complicated products and services because both aspects demand expansion of resources and the various tiers are time-consuming.

PRE-COMMERCIAL PROCUREMENT (PCP)

Pre-Commercial Procurement (PCP) is the call for bids for R&D services. The objective is the development of innovative products and services which takes place in three stages, during which the competition between the participating companies leads to the identification of several solutions addressing the same need. In this regard, through PCP vendor lock in is avoided.

During the research and development phase, the contracting authority possess the option to choose the ideal solution between various bidders. The research and development phase could possibly happen in multiple stages: for example, there can be six initial bidders competing among them in the concept-building stage and after the end of the said phase the selection only three bidders could evolve to a prototype. Lastly two bidders could pass to the third phase where the prototype will be tested in real operational environment and be financed to conclude with a marketable solution.

The procurement process of a PCP, could generate the decision to purchase the R&D outcome by selecting the most suitable solution. However, there is the possibility to search for a totally different solution outside the PCP procedure. The procurement of the R&D phase and the procurement of the actual products are legally independent. In contradiction, the innovation partnership award a contract to only one bidder or one bidding consortium that is a "partner" in the development phase and the procurement procedure.

PCP is a tool for promoting innovative, adequate, and continuous public sector provision and not a procurement process in a strict way. The principles of transparency, non-discrimination and equality must be taken under consideration (European state-aid rules applicable). Additionally, it is important to highlight that the PCP procedure depicts the typical stages of a product innovation cycle. There is a separation between the R&D activities and the purchase of the subsequent commercial products. Intermediate evaluations are implemented for the each of the three phases. In that way, risks are eliminated, and the most suitable solutions are chosen.

The bidder and the contracting authority are sharing both the risks and the benefits of the PCP on market conditions. The contracting authority does not acquire the rights of use of R&D results since it passes them to the bidders within the framework of the PCP along with the obligation for the commercialisation of the solution. A future call to tender (Procurement on Innovative Solutions – PPI) may take place for the actual procurement and commercial exploitation of the new product solution.

ADVANTAGES

All along PCP refers to the procurement procedure where multiple bidders evolve a solution. The contractors are filtered out during several intermediate stages subsequently revealing the best bidder. PCP decrease the risks of the procurement in the public sector since the developers hold a substantial proportion of the cost because they have the option to promote their solutions elsewhere if they do not succeed in the competition. Thus, development costs potentially do not exceed the financing of one developer.

PUBLIC-PRIVATE PARTNERSHIPS

A cooperative arrangement between two or more public and private sectors, primarily of continuous nature is defined as a public-private partnership. More precisely, it includes government(s) and business(es) that collaborate in order to complete a project and/or to provide services to the general public. In various countries public-private partnerships have been adopted and are principally implemented for infrastructure projects, such

as building and equipping of schools, hospitals, or transport systems. As funding instruments PPPs have been substantial controversial, mainly because the public return on investment which is considered lower than returns for the private funder. The inadequacy of shared understanding regarding PPP and the confidentiality about its financial details, makes the process for evaluating, whether PPPs have been successful, complex.

PPP on the other hand promotes the distribution of risk and the evolvement of innovation, while on the other hand critics highlight its higher costs and issues of accountability. In terms of value for money and efficiency, evidence of PPP performance is complicated and sometimes non available.

ADVANTAGES

- Guarantee the effective investments and usage of the public resources into public sector;
- Guarantee high quality;
- More investment projects are taking place in due terms and do not include unforeseen expenditures;
- Private entities can obtain a long-term remuneration;
- Private sector expertise and experience are capitalised from the public sector;
- The PPPs' risks allocation enables the reduction of the associated expenditures.

2.3. FINANCIAL TOOLS

FAST TRACK TO INNOVATION

Close-to-the-market innovation actions open to industry-driven groups which can be consisted of any type of participants are promoted by the Fast Track to Innovation (FTI), a fully-bottom-up innovation support programme which can assist partners to co-create and test breakthrough products, services or business procedures that could possibly alter existing or generate completely new markets, under the helm of the Enhanced European Innovation Council (EIC) pilot.

The FTI's goal is to:

- Decrease time from idea to market;
- Encourage the participation of first-time applicants to EU research and innovation funding;
- Escalate private sector investment in research and innovation.

EIC ACCELERATOR PILOT

As part of the Enhanced European Innovation Council (EIC) pilot, start-ups and SMEs that are located in one country inside the European Union or are established in a **Horizon 2020** associated country, have the opportunity to receive EU funding and assistance for advanced innovation projects with a market-creating possibility.

The Enhanced EIC pilot provides grant support along with grant in combination with equity investment. The Enhanced EIC funding can rapidly increase company's development and innovations that can create new markets. Further, it will assist the progress of development of innovation entities by giving them access to Business Acceleration Services.

The EIC Accelerator assists high-risk, high-potential innovative SME's which are eager to evolve and commercialise new products, services and business models that have the potential to increase economic growth and generate new markets or disrupt the current ones in Europe and all over the world. Full-cycle business innovation assistance is provided by the EIC Accelerator pilot.

EU FUNDED PCP/PPI

EC has recognised the importance of innovation procurement and more specifically PCP/PPI and several funding opportunities have been set in place in several funding schemes. In this context the EU's research and innovation programs FP7, CIP, EASME, and Horizon 2020, as well as the Horizon Europe have been funding projects in which groups of procurers from different countries around Europe are jointly implementing Pre-Commercial Procurement (PCP) or Public Procurement of Innovative Solutions (PPIs), as well as coordination and networking projects that prepare the ground for future PCP or PPIs. A limitation in some of the abovementioned funding opportunities may be the innovative procurement selection as it is predefined in several cases.

NATIONAL INITIATIVES

SWEDEN

In Sweden, there are established financial motives, in the form of grants, to motivate public procurers to engage more in innovation procurement and they can be used for all types of innovation procurement (both R&D procurement, incl. PCP, and PPI). Moreover, these grants are applicable to all types of public procurers in all sectors and levels of government. The monetary incentives are accessible for procurements that have been financed by EU funds and that are not eligible for EU co-financing. Nevertheless Sweden, has not activate specific funds for innovation procurement.

More precisely, under distinct programs, Vinnova since 2011, has financed innovation procurement. Vinnova provides financial assistance in contracting entities which are interested in all forms of innovation procurement. Currently, there is a specific programme called “Innovation procurement” that is created to provide monetary funds to strategic investments and applications, having access though only by invitation. During the years, the amount of money invested for innovation procurement differs, however, the total amount spend per year in average is approximately one million euros.

Among the projects receiving funding are PCPs, PPIs and coordination activities, pre-studies and procurements in pre-procurement purchasing groups. The motivation of research regarding public procurement and the advancement of qualitative and quantitative evolvement of innovation procurement, is driven through the Swedish Competition Authority (Konkurrensverket), together with the Council for Research. The two entities provide funding for research projects and seminars.

Vinnova by providing monetary funds is assisting the implementation of innovation procurement projects. Further, in a collaboration with the Swedish Association of local Authorities and Regions (SALAR), UHM and Vinnova promote innovation procurement at local level by providing funds and stimulating purchasing groups of local and regional authorities. Moreover, Kammarkollegiet assists innovation procurement through framework agreements for national, regional, and local authorities. Nevertheless, national authorities have to use national purchasing entities whereas regional and local authorities have the option to use them voluntary. VINNOVA assistance achieved to successfully generate the implementation of numerous PCP projects.

FINLAND

Currently, the main actor providing funds to innovation procurement is *Business Finland* (previously called Innovaatiohoiduskeskus Tekes), a publicly funded entity for providing funds to research, development, and innovation at national level, which allocates monetary funds for 40-50% of the project's total costs and providing funds to all types of innovation procurement (like PCPs and PPIs).

With a total budget of eleven million euros, seventy innovation procurement projects were funded covering a wide number of themes such as digitalisation, energy efficiency, transport, security, health, and environment via the Tekes Smart Procurement Programme, which run between 2013 and 2016. The programme motivated public buyers to implement procurements to address societal problems, renew public services and develop market access for new products and services. Business Finland through the funding that provides is creating a path for innovation procurement. The incentives schemes do not depend on the European structural and investment fund since they are being funded via national funds.

The competence centre for innovation procurement is KEINO and Business Finland since 2009 supports via financial incentives Finland's public procurers to engage in innovation procurement. Further, it assists in the participation of the cities of Vantaa and Oulu in the procurers' team of the first EU funded PCP project SILVER.

POLAND

In Poland, specific national financial assistance schemes have not been established in order to create motives for innovation procurement. Nevertheless, there are some resources dedicated for innovation procurement in several Polish operational programmes under ESIF (e.g., in the Digital Poland programme) but they are only in sectors set as specific priorities under ESIF and not designed for mainstreaming innovation procurement widely across all procurers and all sectors of public procurement activity in the country. EU funded ESIF budgets are linked to all innovation procurement in the country since there is no national funding.

NORWAY

The National Programme for Supplier Development was established to increase R&D and involvement of new products via the strategic implementation of public procurement, while simultaneously provide to new market opportunities for these innovations and increase procurers' competences regarding innovation procurement. It targets on new possibilities supporting both public procurers and suppliers via innovation procurement. The program which was created in 2010 for a period of five years and was launched again until 2019, is a combined cooperation from three entities representing both the public and private sector:

1. Agency for Public Management and eGovernment (Difi) assisting in the development of instruments and guidance on public procurement and especially on innovative procurement;
2. Norwegian Association of Local and Regional Authorities (KS) is acting as the linking point among local and regional procuring authorities and support actors towards innovation procurement. It assists in the provision of outcomes regarding strategic areas as a programme to follow (e.g., upcoming procurements which may have a significant potential for climate-smart solutions) and systematically shares lessons learned.
3. Confederation of Norwegian Enterprise (NHO) is the linking point with the private sector.

Buyers with a mutual needs and challenges are brought together by the programme in particular local authorities like cities and counties from across Norway. With the implementation of this, the demands are identified jointly and afterwards the market and relevant suppliers could jointly discuss on how to resolve this via joint procurement procedures.

The programme also is working as a broker and coordinator in joint procurement initiatives. It can assist in the progress of financial motivation for procurers for pilot innovation procurements. Top-up EU funds like ESIF are not implemented by the programme since its only use national funds.

Finally, in Norway there is a jointly force generation regarding 'green' innovation procurement whereas cities and municipalities are cooperating to challenge jointly the market to generate innovative green solutions. The group includes Oslo, Bergen, Kristiansand, Trondheim, Turku, Göteborg, Kaarina, Gladsaxe and Örebro.

GREECE

For innovation procurement, in Greece there are not any monetary funds or other types of incentives to motivate public procurers.

LITHUANIA

In Lithuania, the provision of financial incentives regarding innovation procurement is made through the LVPA, which is basically in charge of EU-related funding whereas MITA is providing incentives via national funds. Via EU ESIF funding schemes, Lithuania is promoting PCPs providing funds. The reception of funds is depending on the stage that each contracting authority starts PCP. LVPA is distributing the funds from ESIF. More precisely, with a budget of twenty-nine point thirty-six million euros, the measure "Pre-commercial procurement LT" ("Ikiprekybiniai pirkimai LT"), LVPA is providing the contracting authorities financial incentives for up to 90% of all eligible costs, and for a maximum project amount of two million euros. Projects receiving funds via the

aforementioned measure, are identified as state planned projects whereas the Ministry of Economy and Innovation and MITA are also taking place in the award process. However, in cases where the candidate's PCP value is exceeding one million euro, then the Council on R&D&I of the Government is participating also in the selection procedure. Since the financial incentives does not include all the types of innovation procurement and are not suitable for large scale procurements, only ESIF (no national) funds are being used for such cases.

The Lithuanian Agency for Science and Technology MITA (national competence centre for innovation procurement) provides financial assistance measures for innovation procurement in the country. The goal is to spend a 5% share of innovation procurement out of all public procurement in the country. Guidelines for PCP are developed from the Ministry of Economics whereas the MITA assisting Lithuanian procurers to begin PCP procurement via co-financing.

In 2016, the Ministry of Defence begun a PCP in order to generate a day/night surveillance device. Nevertheless, the action was not completed and paused on phase two due to the lack of available solutions that meet the end users' specific demands.

SPAIN

In Spain, financial motivations are only available to projects that can receive funding from the EU ESIF program, as in the priorities of the country and emphasises only on specific sectors such as health and security. Other types of public procurers and procurements in Spain do not receive financial incentives as well as projects that can receive funding from **Horizon 2020** and projects which are not eligible for ESIF funding. The domain of health has been more advanced in such procedures, and thus more innovation procurement have been implemented. Financial incentives are fostered under the INNOCOMPRA-FID programme and are funded via ESI funds through ERDF financed FID (Fostering Innovation through Demand).

For the implementation of innovation procurement at the national, regional, and local levels of public bodies, specific assistance has been created in the basis of grants or loans. Further, forecasting regarding innovation procurement is also a task of the Regional Smart Specialization Strategies (RIS3). Andalusia and Galicia are the two most active regions. Additionally, except the financial incentive, loans generated from national budget are offered to procurers in Spain. The amount covered by the loan are in the case of PCP maximum of 50-85%, and for other typed of innovation procurement maximum of 70%.

For financial incentives provision to public procurers regarding innovation procurement, the Spanish government in 2011, established a law enclosing PCP and PPI into the Spanish strategy for research and innovation. This action, contributed to multiple PPIs as well as several PCs to be implemented.

FRANCE

Regarding innovation procurement, in France there are not available any type of incentives either financial or personal to motivate public procurers to undertake further innovation procurement. Central government authorities are obliged to implement innovation procurement roadmaps based on the French approach whereas regarding public procurement spending of innovation procurement on national level target to 2%.

BELGIUM

In Belgium, there are only some incentives to motivate public procurers to implement more innovation procurement at regional level whereas at national there are not any kind of incentives. More precisely a 29% score for this indicator is generated due to the available incentives are not applicable for all procurers in Belgium and hence, substantial mainstreaming of innovation procurement cannot take place. Further, innovation procurement in the country is also mobilized through the available ESIF funds, whereas the Flemish region has established financial incentives in order to motivate public procurers to implement further innovation procurement activities. However, the score of this indicator proves that procurers in the country are not covered from financial incentives as well as personal incentives are not predicted.

The Flemish legislative framework for co-financing research and development is aligned with the Flemish financial support for innovation procurement. The PIO programme (the Programme for Innovation Procurement of the Flemish government) supports the necessary activities for the implementation of innovation procurement from the staffing procedures of external expertise, the procurement of R&D development services, the implementation of the testing procedures to the costs for the organisation of market consultations. The total budget of PIO annually is five million euros. There are not funds for the purchase of the innovative solution alone since the procurement funds are sponsored from public procurers. Further, there are local targets such as the Ghent city, which in 2014 set a goal to spend 10% of its annual ICT procurement budget to innovation.

NETHERLANDS

For innovation procurement in the Netherlands, there are not available national or regional financial incentives for all public procurers to apply for funding. Some financial incentives for public procurers in the sectorial High Water Protection programme have been set in place but they cannot be combined with other EU funds and are not available to any kind of public procurer in the country since they are available only to those related with the high-water field and finally, are not designed to incentivize large scale implementation of innovation procurement. The Ministry of Infrastructure and Water Management through the High-Water Protection scheme, definitely predicts financial incentives to motivate public procurers in the water sector to get involved into innovation procurement: for regular procurements, the co-finance offer is 90% whereas for procurements focusing on research and development is 100%.

ITALY

In Italy, financial incentives are only available at regional level since at national level there are not any kind of incentives to motivate public procurers to get involved in innovation procurement. A Funding Programme for PCP/PPI funded via the Cohesion Action Plan was established from the Inter-ministerial Directorial Decree (DD) number 437 of 13th of March 2013. Four convergence regions, Calabria, Campania, Puglia, and Sicily are covered via the intervention. In Lombardy and Sardinia, other relevant regional initiatives exist via the ESIF since both regions have established calls for interest to gather innovation demands from public procurers in the region.

As a result, in Italy financial incentives are not available in all the country and to all types of innovation procurement. In contradiction, financial incentives which are only funded via ESIF funds are applicable in some regions focusing mainly on innovation procurement under the health sector.

ROMANIA

For innovation procurement motivation, Romania has established financial incentives on the basis of grants to trigger public procurers. The financial incentives are available for all kind of innovation procurement both research and development procurement, including PCP and PPI and are applicable to all public procurers in any sector and level of government utilizing ESIF and national funds. However, the provision of incentives in large scale implementation of public procurement is not covered. In particular, the public procurers may undertake innovation procurements within the following programs:

- Competitiveness Operational Programme (co financed through ESIF);
- The National R&D and Innovation III Plan for the period 2015-2020 (co-financed through national budget).

ESTONIA

In Estonia, even though financial incentives are available to motivate public procurers to get involved further in innovation procurement, these are mainly funded through EU funds since national funds are not available for this purpose. Further, only a small amount of pilot projects is assisted and thus, wide scale implementation cannot be achieved. The Estonian wider Entrepreneurship Growth Strategy, which supports innovation procurement ('the public sector as a smart customer') is implemented by the Estonian Ministry of Economic Affairs and

Communications. Enterprise Estonia (EAS) was also assigned to coordinate a twenty million scheme, co-financed by ESIF in order to assist public procurers in the country to get involved further with innovation procurement. The aim of this measure was to motivate contracting entities to alter their procurement procedures to support innovation.

The twenty million supportive scheme was divided in two large groups of actions: 1) Around 2 million euro devoted to general awareness raising, knowledge sharing, workshops, consultations, etc. 2) The remaining 18 million euro provides co-financing for Estonian public procurers. The maximum amount of money which an innovation procurement project can receive, after meeting the criteria set, is 500,000 euros, whereas the maximum support in percentage of the project cost is 50%. All stages of the procurement procedure are assisted, from the identification of the demands until the completion of the contract.

Finally, in 2015 with the establishment of the strategy "Public Sector as a Smart Customer" established the role of EEA (Enterprise Estonia) as innovation procurement centre, which administrates a financial support program for Estonian public procurers to start PCPs and PPIs with funding also from the European Structural Funds.

GERMANY

There is not any financial assistance on a national level in Germany.

ZENIT GmbH has been active as a competence centre for public procurement of innovation in North Rhine-Westphalia (NRW) since 2012. It assists the Ministry to integrate PCP and PPI into the innovation and research strategy of the Land NRW and gives in-depth consulting services to public procurers. Furthermore, ZENIT GmbH offers support in cross-border innovation procurements between German procurers and procurers from other EU countries.

However, regional public procurers are assisted via the North-Rhine Westphalia approach to participate in EU funded PCP and PPI projects by being financed with up to maximum of 200.000 euros. Projects that are funded via **Horizon 2020** and ESIF funds in synergy, including PCP and PPI, are started from ZENIT appointed by the region.

PORTUGAL

In Portugal, there is no established formal political framework for the setup of innovation procurement requirements relating to financial support.

AUSTRIA

Austria is a country of research and innovation with great innovative capacity, ranking among the leading countries in Europe with another record research spending ratio of 3.19 per cent in 2018²².

Austria has set itself the ambitious goal of increasing the research spending ratio to over 3.7 per cent of GDP. Throughout 2012-2016, the R&D expenditure to GDP ratio in Austria was higher than in Germany and most other EU Member States.

A major task of the Federal Ministry of Labour and Economy is to provide funding for areas that are specifically in need of such support. These funding programmes are devised and managed in close cooperation with other ministries, the Austrian Council for Research and Technology Development as well as other funding entities. In addition, they are subject to periodic evaluation by independent experts to better focus the programmes on their relevant target groups.

²² <https://www.bmaw.gv.at/en/Topics/Innovation.html>

A successful research and technology policy consists not only of funding measures. Rather, it requires a number of accompanying actions to inform potential beneficiaries and help them implement innovative ideas, while supporting policy-makers in efforts to improve the RTI framework.

The competitive strength of companies and thus their potential for employment are a central subject in both Austria and Europe as a whole. These factors greatly depend on the quality of activities in research, technological development and innovation. Consequently, it is important for the Federal Ministry of Labour and Economy to further enhance investment in research, development and innovation and to establish the appropriate framework for strengthening Austrian businesses, in particular small- and medium-sized companies.

For this purpose, a coordinated portfolio of programmes, initiatives and networks has been made available.

The Austrian Research and Technology Report (RTR) pursuant to Article 8 of the Research Organisation Act (FOG) is prepared annually on behalf of the ministries responsible for research and technology, namely the Federal Ministry of Education, Science and Research (BMBWF), the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK), and the Federal Ministry of Labour and Economy (BMAW). Based on current data, it presents an outline of Austria's position in research, technology and innovation policy.

The Report offers an overview of the ongoing implementation of the RTI Strategy 2030, the RTI Pact 2021-23 and RTI-relevant sub-strategies. Statistics Austria's global estimate of R&D expenditure reaffirms the important role of public research funding in times of crisis. The contribution of the business sector decreased noticeably in the pandemic year 2020 but has been rising again since then. In 2022, almost two-thirds of total research expenditure in Austria (€ 9.36 billion) can be allocated to the business sector.

In addition to the performance in the European research programme Horizon Europe and Austria's position in the context of international RTI indicators, the report highlights forward-looking topics such as the support of research personnel from career entry to excellence, quantum research, the circular economy and artificial intelligence.

A core chapter addresses the monitoring of the ten central research and research funding institutions, pursuant to Article 8 of the Research Financing Act (FoFinaG).

The Report is complemented by a "Factsheet", which provides a compact overview of the main findings on six pages.

BULGARIA

The Ministry of Labour and Social Policy (MLSP) manages the Operational Program for Human Resources Development in Bulgaria and, as an executive agency, assigns projects on the topic "Encouragement of Entrepreneurship" (Насърчаване на предприемачеството). This project is funding new enterprises. The whole amount of the grant is 67 227 768.06 BGN. The minimum amount of funding is 50 000 BGN. The maximum amount for funding is 200 000 BGN. The maximum amount of the money dedicated only from this grant to the new projects is 80% of the whole investment.

Annually, the Ministry of Economy implements the project „Техностарт 3- Насърчаване на иновационната активност на младите хора в България" ("Technostart 3 – Promotion of Innovation Activism of Young People in Bulgaria"). This project is implemented in line with the National Strategy for Small and Medium-sized Enterprises 2014-2020. The project aims to encourage young entrepreneurs – students, PhD and graduates in the earliest stage of the entrepreneurial cycle as the establishment of students' companies is funded under the project. In order to obtain the funding each applicant, after approval of his business plan, must register a company at the Registry Agency and provide his own contribution of 10% of the grant amount in the form of funds and/or assets or up to 2 200 lv for every successful business plan separately. Currently, this project is the single initiative in Bulgaria that is financed entirely with public funds and provides grants for start-ups with

business ideas in the field of industry and research and development. Although the initiative refers to entrepreneurship, innovative ideas and start-ups are also supported²³.

CROATIA

In the foreseeable future, Croatia will provide national funding schemes under the recovery and resilience facility that supports innovation and procurement.

CYPRUS

Cypriot regulation mandates the performance of R&D contracts on the territory of the country pursuant to "RESTART 2016-2020". The RESTART 2016-2020 Programmes constitute a multiannual framework of Programmes for Research, Technological Development and Innovation (RTDI) Support in Cyprus, co-funded by national and European funds and implemented in conjunction with other national initiatives and programs. The vision of the RESTART 2016-2020 Programmes is to enhance but also highlight the role of the RTDI sector as a key factor in the economic development of Cyprus, contributing to addressing the key economic and social challenges in a way that will bring about the necessary conditions for achieving sustainable development.

CZECH REPUBLIC

The Czech Republic actively promotes research, development and innovations through various financial instruments. These are provided either from national institutions and administered by them, or they come from the European Union with administration ensured either by Czech national entities (European Structural and Investment Funds) or by European entities (Horizon 2020)²⁴.

Foreign companies and research organizations can primarily access the funds targeted at international cooperation in research and development, such as the programmes Delta, Inter-excellence and Horizon 2020. There is also the possibility of receiving government incentives in the case of R&D related investments.

Funding of R&D in the Czech Republic is divided among a large number of providers²⁵:

- Ministry of Education, Youth and Sports - MEYS is responsible for R&D and international collaboration therein.
- Ministry of Industry and Trade - MIT is responsible for policies concerning innovations.
- Czech Science Foundation - CSF is a funding agency focused on basic research.
- Technology Agency of the Czech Republic - TACR is a funding agency focused on applied research.

The currently available programmes²⁶ for international collaboration in R&D, as well as some national programmes meant for institutions with an established legal entity in the Czech Republic are the DELTA Programme (Programme for bilateral cooperation in applied research and experimental development with selected partner institutions abroad), the Inter-excellence Programme (A multi-faceted programme focused on bilateral and multilateral collaboration in R&D, mobility or networking), the EPSILON Programme (Programme for Czech entities supporting applied research and experimental development focusing on collaboration between companies and research organizations) and the TRIO Programme (Programme for Czech entities supporting applied research and experimental development in Key Enabling Technologies as defined by the European Commission).

²³ <https://national-policies.eacea.ec.europa.eu/youthwiki/chapters/bulgaria/39-start-up-funding-for-young-entrepreneurs>

²⁴ <http://www.czech-research.com/rd-funding/>

²⁵ <http://www.czech-research.com/rd-funding/national-funds/funding-bodies/>

²⁶ <http://www.czech-research.com/rd-funding/national-funds/relevant-programmes/>

The Czech Republic must be ready to fill a €3 billion funding gap if the country stops receiving investment from the EU's Cohesion fund, due to its strong performance in research and innovation, according to Lukáš Levák of the Czech government's Department of Research and Development²⁷.

DENMARK

In Denmark, the Innovation Fund, as it is called, invests in a range of innovative projects, ranging from projects designed by emerging entrepreneurs or PhD students to innovations that target large societal challenges. The focus thus far is on private sector innovation. Public sector bodies are eligible to apply for funding depending on the alignment of project goals²⁸.

One of the key challenges raised regarding innovation in Denmark is the lack of consistent funding for innovation projects, particularly, funding that spans through all project phases (including implementation), and funding for longer-term innovation projects that utilise methods like mission-driven and anticipatory innovation. Most innovation projects are self-funded by individual organisations. Interviewees noted that while funding exists, it is often linked to shortterm budgetary or political cycles, and that it rarely provides funding for all stages of projects: from idea to implementation. In particular, there appears to be a lack of funding for future focused projects, high-risk projects and complex experiments that are more difficult to evaluate and are dealing with long-term outcomes. These budgetary pressures are particularly strong at the municipal and regional level where innovation funding consistently favours projects with short time horizons; that focus on immediate concerns over projects that span multiple budgetary cycles. For example, while the Free Municipality experiments are an excellent opportunity for experimentation, there is no dedicated funding through the program to support these experiments, and limited coordination to support municipalities in this process. Current budgetary processes tend to favour incremental and enhancement-oriented innovations driving forward innovations through yearly cuts and business cases for new public sector development projects. Furthermore, in the current funding system where public sector innovation is financed through similar measures to those of the private sector, the dominance of narrow, project-oriented funding streams do not support the evolution of ecosystems and broader innovation domains that are becoming increasingly critical in mission-oriented innovations. There is a diversity of public and private funds available to support innovative projects (e.g., Signaturprojekter, Fremfærd, Landdistriktspuljen); however, these funds are often designated to a specific topic area or jurisdiction and not specific to public sector innovation.

The Innovation Fund in Denmark is currently trying to tackle this in their mission-driven approaches, but it remains to be seen how successful they will be in building holistic cross-sectoral funding measures. The role of public procurement for innovation could play a large role here if strategically used.

HUNGARY

In Hungary, the NRD Office has set up a single funding system for the use of EU development funds for research, development and innovation (RDI) and domestic funds from the National Research, Development and Innovation (NRDI) Fund²⁹.

The NRD Fund, managed by the NRD Office, is a separate public fund under the Public Finance Act that provides public support for research, development and innovation from domestic sources and is used exclusively for this purpose. The innovation contribution paid by businesses and the complementary contribution from the central budget provide a significant part of the NRD Fund's resources.

According to the RDI Act, the annual detailed programme strategy of the NRD Fund, including both incentive and support programmes, is approved by the Government after consulting the National Science Policy Council.

²⁷ <https://sciencebusiness.net/widening/news/czech-republic-looks-prepare-ground-end-cohesion-funding>

²⁸ <https://oecd-opsi.org/wp-content/uploads/2021/03/Public-Sector-Innovation-Scan-of-Denmark.pdf>

²⁹ <https://nkfih.gov.hu/english-2017/rdi-policy/management-of-the-nrdi>

The NRDI Fund, established in 2015, provides predictable funding for RDI, with increasing resources every year.

The NRDI Fund's 2021 programme strategy already included calls for proposals with a total budget of more than HUF 182 billion, as detailed in Government Decision 1077/2021 (II. 27.).

In 2020, the NRDI Fund was split into two parts.

The Research Sub-fund finances socially useful research projects, programmes to support excellence in higher education and research institutions and individual researchers.

The Innovation Sub-fund supports business innovation and market-oriented R&D activities, partly carried out in business-academia cooperation, through programmes with an investor approach.

The NRDI Office evaluates proposals submitted to calls announced on the basis of the annual programme strategy in a multi-stage peer review system, in accordance with the rules of the NRDI Act and the Government Decree 380/2014 (XII. 31.) on the rules of operation and use of the National Research, Development and Innovation Fund.

The NRDI Fund has a role to play in complementing and balancing EU funding based on the specificities of the domestic RDI system. Operational programmes financed by the EU Structural Funds are primarily designed to help less developed regions catch up. RDI capacities and activities in Hungary used to be concentrated in the central region, and after its split, mainly in the capital.

The coordinated and effective use of the NRDI Fund resources will contribute greatly to enhancing Hungary's scientific performance and competitiveness, and to the effective integration of the research community into the European Research Area (ERA).

IRELAND

Ireland has what is named the "Our Public Service"³⁰. Our Public Service is the framework for development and innovation in Ireland's public service, led by the Public Service Transformation Delivery team at the Department of Public Expenditure and Reform(DPER). It was preceded by, and builds on, two public service reform plans, beginning in 2011. These plans have embedded a range of new approaches to governance, people management and service delivery, and have made the work of the public service more transparent, decision-making more accountable, and service delivery more effective.

Overall, the Public Service Transformation Delivery unit is responsible for driving and delivering the Government's program of public service transformation, innovation, and civil service renewal. It oversees policy and practice initiatives that provide for the continuous positive development of public services, that include:

- Implementation of actions contained in the Our Public Service framework, the Civil Service Renewal 2030 Strategy, and in national digital strategy;
- Innovation funding, services and supports;
- Networks that enable sharing of information, evaluation/analysis, collaboration and co-creation;
- Learning and development opportunities;
- Emerging technology tools;
- Monthly events, and high profile initiatives such as National Public Service Innovation Week and the Future Tech Challenge;
- The annual Civil Service Excellence and Innovation Awards;
- Coordinating Ireland's Open Government Partnership National Action Plan.

³⁰ <https://www.ops.gov.ie/>

- Coordinating Ireland's Technical Support Instrument, which provides tailor-made technical expertise to EU member states.

The Public Service Innovation Fund, under Our Public Service, is a competitive fund that aims to support innovative ideas from across public service organisations and turn them into a reality with funding available from €25,000 up to €60,000. It is important that projects have a strong focus on outcomes and impact. There should also be a focus on scalability, transferability and learning within the Public Service. Collaboration between public service organisations is encouraged.

LATVIA

There are a number of instruments supporting and funding industrial innovation in Latvia. It is worth noting that many of them were created fairly recently, therefore there is still a steep learning curve for the Latvian government and agencies about what works best.

The Latvian government had primarily developed innovation policy instruments based on tax incentives. The most important one is the general R&D tax allowance instrument, which provides tax incentives to R&D activities of Latvian firms. The scheme targets the acquisition of technology from outside the country as well and via foreign investors and entrepreneurs. Furthermore, in 2014, the scheme was enlarged, offering a deduction for other R&D expenditures such as remuneration of scientific and technical staff and research services provided by scientific institutions. Apart from that general tax incentive to R&D activities, another scheme directly focusing on start-up companies was created. That scheme came into force on January 1st, 2017 and gives a special employee taxation regime to start-ups. The overall target of the general tax reduction scheme was to increase business expenditure in R&D in the country, because Latvia had one of the lowest levels in Europe. However, this scheme had very little take-up among firms. One of the practical problems with the scheme was that firms – especially those not involved in R&D – generally did not know about it. Another practical problem was that, among the firms which knew about the scheme, many decided not to participate. The reason for nonparticipation was either because firms were uncertain about what type of activities were to be considered R&D, or because the practice of the tax authorities was to inspect any firm claiming the tax incentive. Like most R&D tax incentives, the Latvian scheme allows beneficiaries to offset allowable expenses against corporate tax (tax on company profits). Latvia's rate of corporate tax is only 15%. At that level, the incentive was not very attractive, given the administrative complexity of obtaining it. It was only of value to companies making fairly substantial profits. For others, there was little or no corporate tax against which expenses can be offset.

Given the limited success of the general R&D tax incentive scheme, the Latvian government changed the approach, moving away from tax exemptions for specific R&D activities, towards a more generic scheme that supports the capitalisation of firms. Many firms in Latvia have very low levels of equity⁶ and therefore have difficulty in borrowing from external sources. The Latvian scheme follows the model of Estonia, which has shown that company owners tend to capitalise their firms to a higher degree than before. This higher capitalisation in turn, allows companies to engage in further collaboration and/or R&D activities. This generic tax incentive scheme is easier to manage for the companies and the state. The new scheme was implemented in the beginning of 2018³¹.

This year, the Cabinet of Ministers approved the information report "On the Review of the Relevance of the Latvian Innovation and Technology Support Fund Initiative" prepared by the Ministry of Economics (MoE), which outlines a new model for better and structured cooperation and governance between the public sector, business, and the science sector. It aims to encourage greater development and implementation of innovation³².

The MoE report stressed the need for better governance of institutions and the Latvian Smart Specialisation Strategy. This will not only improve cooperation between the main institutions shaping and implementing

³¹ <https://www.izm.gov.lv/lv/media/4690/download>

³² <https://labsoflatvia.com/en/news/agreement-on-a-new-cooperation-model-to-foster-innovation>

research, development, and innovation policy, but will also enable better planning of funding investments in this area, as well as create a clear framework for cooperation between entrepreneurs, scientists, and the state to promote research, development, and innovation.

The National Research Programme “Innovation Fund: Sectoral Research Programme”, planned to start in 2022, intends to implement research that meets the technology needs of the Latvian industry, Europe, or globally, and contribute to solving societal challenges, as well as correspond to a specific, defined long-term technology development mission. This National Research Programme will receive 4 million euros of state budget funding each year for the next three years.

The funding of the National Research Programme will be used to implement practical, commercialisable research projects, in line with the two approved areas of the Latvian Smart Specialisation Strategy: biomedicine, medical technologies, pharmaceuticals, and photonics, and smart materials, technologies, and engineering systems.

LUXEMBOURG

The National Agency for Innovation and Research (Luxinnovation GIE) promotes innovation procurement in Luxembourg³³.

In 2015, it published the guide “Promote innovative solutions through public procurement” and regularly publishes innovative solutions carried out in Luxembourg on its website³⁴.

MALTA

Malta is one of the EU Member States with the lowest investments in R&D measured as GERD/GDP (0.55 % in 2017), whereas its investments in education are above the EU average. In addition, in 2017, Malta was the Member State with the lowest share of its total government expenditure going to R&D (0.53 % in 2017), which is not a credible level in line with its stated objective of becoming a knowledge-based economy. Malta is remarkably little cross-sectoral funding for R&D and a sizeable portion of funding for R&D comes from abroad, including private funding from multinational companies (MNCs), and public funding from the European and Structural Investment Funds (ESIF) and H2020. It should be noted that funding from abroad is by essence particularly volatile (e.g. in 2016 there was a drop of ESIF funding according to the cycle of investments from this funding source). The low investment of national public funds in R&D is partly compensated by the use of European and Structural Investment Funds (ESIF). In the current programming period (2014-2020), € 61 million are dedicated to research and innovation for the whole period (€ 56 million to Thematic Objective 1: Research and Innovation and € 5 million to Thematic Objective 3: SME competitiveness). A large share (60 %, € 37 million) of ESIF funding is dedicated to research infrastructure in the public sector.

SLOVAKIA

In 2019, approximately 776,5 million € was spent on R&D in Slovakia (0.83 % of GDP). 46,8 % came from private sources, 40,5 % from governmental sources, 2,1 % from other national and 10,7 % from foreign sources.

The system of R&D funding at a national level is governed by Act No. 172/2005 on Organisation of State Support for Research and Development. Subsidies for solving research tasks are granted to entitled applicants through grant agencies (in particular the Slovak Research and Development Agency) and state programmes for R&D support.

Since 2014, the Research and Innovation Strategy for Smart Specialisation of the Slovak Republic for 2014 – 2020 is in force (RIS3 SK). Its overall goal is to contribute to the strengthening of the key industry anchoring and to the diversification of the economy by a strong increase of research, innovation and creativity usage. Other aims and

³³ <https://www.luxinnovation.lu/>

³⁴ https://wbc-rti.info/object/document/21611/attach/KK0221251ENN_en_1_.pdf

principles include strengthening of excellence and of internationalisation of science and technology, research and development capacity building, innovation capacity in economic practice building, and promoting a business environment favourable for innovation and its internationalisation. The RIS3 SK strategy also defines priorities of research and development to be funded in the forthcoming years via national funding schemes but also via EU structural funds³⁵.

SLOVENIA

To support innovation or regular procurement, Slovenia makes use of EU Funding schemes. Persistent challenges in European Structural and Investment Funds (ESIF) management have resulted in multiple sanctions and financial penalties, including in 2013 and 2014. In response, Slovenia has intensified its efforts to improve capacity and reduce opportunities for corruption in the procurement system.

Since the approval of their Partnership Agreement in 2014, Slovenia has fully enacted the reforms laid out in its Action Plan related to the effective application of EU procurement rules, including the establishment of a special intergovernmental working group. As a result, they have now fulfilled all the ex-ante procurement conditionality criteria.

³⁵ <https://www.researchinslovakia.sk/en/main/research-and-funding/funding-opportunities/funding-at-national-level>

3. RECOMMENDATIONS FOR PROCUREMENT

3.1 EXAMPLE OF PROCUREMENT CASES

BENCHMARK CASES

The Benchmark Cases gathered from D4.1 are the following:

Procurement of government stamps in Sweden/2018

In 2018, the police authority in Sweden held a procurement of government stamps. It was an open procedure under the Law of Public Procurement. The agreement is valid for a total of 4 years, and it is valued at around 2.000.000 SEK.

Hardware and Software procurement in Greece/2020

In 2020, the IT Department of the Hellenic Police held Hardware and Software procurement. The aim of this procurement was to upgrade the infrastructure of the primary information system of e-mail to meet the needs arising from the implementation of security measures due to the COVID-19 pandemic. The contract was regulated by Law 4412/2016, and it took place in the three months following its signing. The value of the tender equalled 74.269,80 euros. The process was successful because of its short duration. In similar cases in the future good market research is required together with targeted technical specifications.

Problems in a public procurement process mostly arise when: contracting authorities during the design of the electronic competition choose incorrect parameters in the relevant fields of the online system forms; there is an irregularity conduct of the award procedure; economic and technical parameters related to the award procedure have changed substantially and the performance of the contractual object is no longer of interest to the contracting entity or the entity for which the contracted object is intended; force majeure appears and the normal performance of the contract is not possible and when the tender is deemed “not economically advantageous”.

Development of the National Ecosystem for the Recognition and Analysis of the Information Effect Phenomena (NAAS)-Lithuania / 2020-2023

In the years 2020-2023, General Jonas Zemaitis Lithuanian Military Academy together with Mykolas Romeris University is conducting the procurement titled Development of the National Ecosystem for the Recognition and Analysis of the Information Effect Phenomena (NAAS). The NAAS pre-commercial procurement aims to create an efficient and modern ecosystem of science and studies enabling higher education institutions to train public security specialists and carry out research activities, including information security, information, and hybrid threat analyses, integrated (Internet and kinetic) information space monitoring and analysis of potentially criminal content. The ecosystem will integrate a concept model, methodological base, and measures to implement the vision of modern studies, thus enabling a direct cooperation between education institutions and participants to those cooperative activities.

For this purpose, it is planned to develop the National Science and Studies Platform for the Recognition and Analysis of the Information Security and Information Threat (NAAS). The newly developed ecosystem integrating technological, software and methodological instruments is intended for training the specialists of integrated electronic and physical space analysis and scientific research. The ecosystem will contribute greatly to more effective mitigation of the impact of hybrid threats at the national and international levels and ensuring public security. The procurement is held under the Lithuanian national regulations. Its value equals 1.704.550 euros.

The procurement proved to be successful thanks to the communication between Contracting Authorities and suppliers. Constant organization of meetings with suppliers in order to give them the ability to discuss implementation of the PCP is very important.

Supply of Xray Scanner in Salerno Airport / 2019

In 2019, the Salerno Airport conducted public procurement of X-ray Scanners. The process was regulated by the Legislative Decree no. 50/2016 and some specific regulations, and it was under the procedure of Supply and Maintenance. The tender lasted five years and its value equalled 380.000 euros. The tender was successful as the company providing the solution was the only one offering equipment with required certifications. This case proves that investment in research and development enables production of the best solutions on the market.

PPI4HPC / 2020

PPI4HPC is a joint procurement project in which five research bodies aimed to buy innovative high-performance supercomputer and an innovative high-performance storage system for science and engineering applications. The goal was to achieve a significant upgrade of the European high-performance computing (HPC) infrastructure towards future systems.

The joint procurement led by GENCI, the French public company in charge of providing high-performance computing and processing data, was organised in four independent lots leading to the awarding of contracts for systems that have meanwhile or are being deployed at four different research sites throughout Europe. Drawing from several previous pre-commercial procurement (PCP) developments, this procurement resulted in an ongoing improvement of computing and therefore research capacity. By doing a joint procurement, the consortium was able to pose high demands on an evolving market and reap the outcomes of prior PCP processes.

MALMÖ SWEDEN/2019

The procurement was related to innovation in ICT procurement to promote sustainable and fair supply chains. City of Malmö found that the way they traditionally purchased ICT equipment did not meet their sustainability ambitions. They therefore looked for a strategic partner who could help improve their purchasing practices and leverage the City's spending power to drive changes in the ICT market.

Through a market dialogue procedure, they invited ICT resellers to propose a framework for ensuring any equipment purchased by the city met the highest sustainability standards. Bidders were also asked to propose solutions for the recycling of obsolete ICT. Finally, the tender criteria invited them to commit to take part in regular discussions with the city on the topic through a dedicated Sustainability Forum.

The exercise was successful, making the arrangement between Malmö and its strategic partner the first of its kind in Sweden. Thanks to this contract, the City now consistently purchases majority of certified ICT products and has recycled over 7,500 obsolete ICT objects. Malmö also takes part in their partner's advisory board, coming together with other ICT users to discuss ways to push the industry towards greater sustainability.

SHUTTLE

Shuttle is a Pre-Commercial procurement project aiming to develop an automated toolkit that would enhance the investigation from crime scenes. The project is currently at the end of Phase 2. The experience was of interest, since it is a joint procurement procedure among 6 Member States. Through this approach the contracting authorities managed to express their common interest and procure the development services for its creation. At the moment, the outcome seems promising. The problems met in the project are related in finding many suppliers (three bids were received) to develop the actual product and the coordination of the end users in order to express their common needs.

The Benchmark Cases gathered for the present deliverable are the following:

Procurement of extensive reconstruction work of a prefabricated building in CROATIA / 2018³⁶ ³⁷

Between 2018-2019, the City of Koprivnica in Croatia conducted a procurement for the Extensive reconstruction of the prefabricated “Loptica Kindergarten” building. The procurement year and title were 2018/S OF1-0006875, governed by the Croatian PP Act. The type of contract / Type of procedure was PIN/Competitive procedure with negotiation. The duration of the tender in total was 1 year and one 1 month, from 19th March, 2018 to 12th of April, 2019. The tender value was € 295.000.

Procurement of a Thyroglobulin Reagent, CYPRUS / 2022

The State Health Services Organization of Cyprus conducted the procurement of a Thyroglobulin reagent by the process of negotiation without prior publication, governed by article 29(2)(b)(ii) of Law 73(I)/2016. The procurement year and title were 2022/K.O.245/22. The duration and tender value were confidential. The goods were delivered without complications and on time, as was the training of at least one person.

Procurement of a Folic Acid Reagent. CYPRUS / 2022

The State Health Services Organization of Cyprus conducted the procurement of a Folic Acid reagent by the process of negotiation without prior publication, governed by article 29(2)(b)(ii) of Law 73(I)/2016. The procurement year and title were 2022/K.O.246/22. The duration and tender value were confidential. The goods were delivered without complications and on time, as was the training of at least one person.

PITFALL CASES

No responses of Pitfall Cases were given for the present deliverable, whereas the Pitfall Cases gathered from D4.1 are the following:

Smart operations management building, 2020

In 2020, the Ministry of Defence of Lithuania procured a smart operations management building. It was a pre-commercial procurement on creation of a smart operations management building. It was held under the national law and valued at 2.000.000 euros. The execution problem resulted from different interpretation of national laws and different understanding of requirements for PCP between related governmental organizations led to the termination of this PCP. This case proves that the national law should be clear and unambiguous.

SEA - Milan Airport

In 2020, the SEA Milan Airport conducted public procurement of Supply TRS (AUTOMATIC LINES FOR THE HANDLING OF HAND LUGGAGE DURING SECURITY CHECKS). In 2019, the Salerno Airport conducted public procurement of X-ray Scanners. The process was regulated by the Legislative Decree no. 50/2016 and some specific regulations and it was under the procedure of Supply and Maintenance. The tender lasted ten years and was valued at 4.000.000 euros. The problems resulted from the fact that during the installation, the customer asked for some unexpected changes or additions. To avoid this kind of pitfalls in the future an additional margin should be considered in order to manage those kinds of issues.

³⁶ <https://ted.europa.eu/udl?uri=TED:NOTICE:127271-2018:TEXT:HR:HTML>

³⁷ <https://eojn.nn.hr/SPIN/APPLICATION/IPN/DocumentManagement/DokumentPodaciFrm.aspx?id=2821949>

3.2. SUCCESS FACTORS

Following the input provided by the respondents and the online material available in both cycles of Task 4.1, the following factors were identified as the most commonly reported success factors in a procurement procedure:

- **Well defined specifications depending on the type of procurement**

In order to assist innovation in the public procurement, several studies reveal that functional rather than technical specifications provided the suppliers with more space to innovate and find new solutions meeting the end user's needs. However, the specifications included in the tender should be targeted enough in terms of describing the end users' needs. The image below summarises the four different options that public procurers have in the description of the tender specifications along with the level of freedom that they leave to the suppliers, the risk that they have and the amount of competition that they produce.

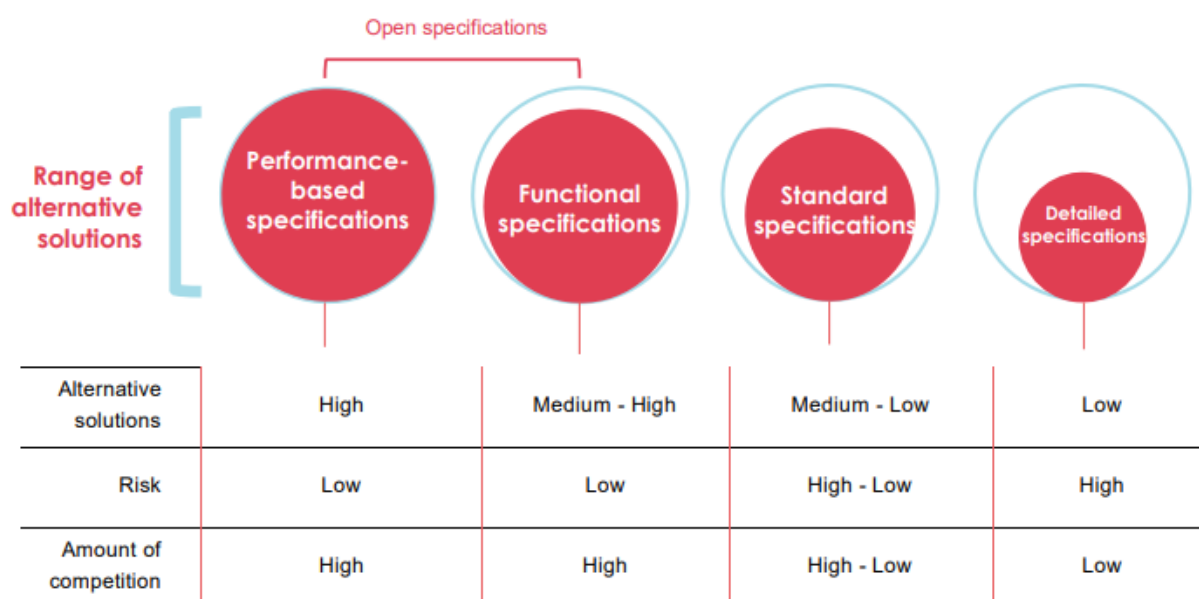


Figure 3: Range of alternative specification types³⁸

A competition with performance-based specifications is a procurement approach where the organisations articulate their needs in terms of functions, performance levels or performance targets rather than describe how those targets should be reached. So, instead of describing the need in terms of inputs, it is described in terms of outputs. Performance-based specifications are best suited for:

- A strategically important procurement connected to the core business as a means of opening up for new ways of solving key challenges;
- When there is little competition in the market in order to achieve greater competition by attracting more suppliers (from other sectors) with different views on how to solve the challenge set;
- In quickly evolving sectors, where the market experience and expertise are highly desirable;
- Where the baseline is well known, and the organisation sees that there is potential for change/innovation.

Technical requirements are detailed descriptions of how a contractor must conduct a service or deliver a commodity. They are formulated as detailed characteristics of the products or services being purchased.

³⁸ https://www.innovasjon Norge.no/globalassets/0-innovasjon Norge.no/subsites/hipnorway/innovation-friendly-procurement-tools_02062020.pdf p. 27

Performance-based requirements make it easier for both the contracting authority and the supplier to put their unique skills to work. The contracting authority can use its expertise to identify the need that must be fulfilled, and the supplier can use its expertise to determine which solutions are better suited to the buyer's specified requirements. Instead of restricting suppliers to the organization's assumed best solution, this type of specification encourages a process where the best solutions can be provided. Performance-based specifications are often used alongside technical specifications in tenders, although they are not mutually exclusive.

Standard specifications are specifications based on standards whereas detailed specifications describe specific details of the product or services to be procured.

- **Extensive market analysis prior the tender release**

One important step before the actual implementation of the procurement was considered the organisation of a market research. This way, the contracting authorities could have enough information about the available solutions as well as the industry's capabilities in the sector under discussion. Moreover, through this analysis relevant standards and IPRs need to be examined and taken into account in the subsequent procedure. To avoid the risk of distorting competition and to encourage good feedback from the market, below there is a list of recommendations:

- Procurers needs to proactively communicate their needs, requirements and planned procurement set-up to all participants in the open market consultation activities;
- The participation of potential bidders in the open market consultation must not affect competition in the future tender procedure. This should be made clear to any communication related to the open market consultation activities.
- Legal assurances must be ensured for the participants' intellectual property rights (IPRs) and trade secrets will be protected;
- It is important to inform potential bidders that the procurement procedure is conducted separately, after the open market consultation, and that all potential bidders are treated equally in those terms. No advantage is given to the Open Market Consultation participants.

It is apparent that both user involvement and market dialogue are important activities in the preparation phase of a procurement procedure, which is explorative process. During the said period, the contracting authorities envisage the desired solution, its exploitation and added value in the organisation compared to an application already available on market. Workshops with supply side can e.g., provide support to the technical dialogue, feasibility check and market scanning for existing solutions. However, few public authorities have well defined models for implementing all the aforementioned steps in the preparatory phase.

- **Highly skilled personnel involved in the procurement procedure**

In this context, modernizing public services via innovation requires a new mix of skills for the involved organisations regarding innovation management alongside the EU procurement. This practically means that the mix of skills involve legal, technical, and economic expertise to develop the business case, conduct the market and the technology assessment, the IP management and the contracting as well as public services performance measurement.

- **Time and money margins should be considered. Piloting should be adequate**

Successful cases of innovation procurement also report that they considered additional margins, both in time and money, in order to manage issues that may arise. It is also important to provide the market with adequate time and more lead-in to consider and prepare challenging offers. By doing so, companies are able to research and develop new products which meet the innovative specifications in a sustainable manner. Finally, with specific regards to piloting, it is highly recommended to conduct extensive testing of the newly developed solutions

leaving adequate time to the end users to evaluate its usage to their daily activities as well as to industry to develop their solution up to the required level.

- **Frequent procurer-supplier communication and collaboration**

During the contract implementation, effective collaboration and communication between the Contracting Authorities and suppliers has also been considered as one of the factors that can enhance the procurement procedure. In this regards, regular meetings with suppliers are recommended to give them ability to discuss about implementation and development of their innovative solution, as well as resolve quickly any potential problems that may arise.

3.3. JOINT PROCUREMENT PROCEDURE ANALYSIS

From a legal point of view, it is important to highlight that following the responses received in both cycles of Task 4.1, it seems that there are no legal obstacles in national legal procurement frameworks preventing procurers from implementing innovation procurement. The directives also contain provisions to facilitate joint procurements between contracting authorities from different EU Member States.

In cases where the need is shared among several national organisations across Europe, the joint procurement is recommended and actually considered one of the success factors of the procurement procedure since several advantages can be witnessed. Several studies reveal that cross-border procurement activity can act as a driver in technological standardization and create better understanding of national differences and how to solve these. Indeed, joint procurement creates economies of scale enabling participating contracting authorities to witness substantial cost savings. On the demand side, joint procurement create the conditions for European SMEs access to a wider market. The advantages of the joint procurement initiatives can be also seen when compared with the national innovation procurement. A study on this matter has been conducted over the TED, revealing significant gains (column indicator) as shortly included in the image below.

Status December 2019	EU funded joint PCPs (TED published / EU wide promoted)	National PCPs (TED published / EU wide promoted)	National PCPs (not TED published or EU wide promoted)	Indicator for
Comparing the effect of EU wide promotion of the call for tender and the effect of joint cross border procurement	167 contracts €69M	254 contracts €108M	2634 contracts €662M	
Average Nr of offers received	16,6	13,9	9,0	Level of interest of suppliers to participate
% of procurements that receive only 1 offer	0,0%	2,4%	3,4%	Level of interest of suppliers to participate Degree of competition in bidding
% of procurements that award contracts to single versus multiple vendors	0% to < 3 vendors 7% to 3 vendors 93% to > 3 vendors	10% to 2 vendors 14% to 3 vendors 76% to > 3 vendors	12% to 2 vendors 17% to 3 vendors 71% to > 3 vendors	Degree of competition in product development Resilience to prevent supplier lock-in Safeguard for obtaining better value for money
% of vendors winning a contract for the first time with the procurer	85%	60%	45,0%	Opportunities for suppliers to find new customers Ability to mitigate integrity risks in procedure
% of total value of contracts awarded to suppliers from another country	33,1%	12,6%	0,6%	Cross-border growth opportunities for suppliers Access to wider / better value for money product pool
% of tendering procedures stopped i.e. no contract awarded	0,0%	0,0%	2,1%	Degree of difficulty for procurers to setup the procurement and for companies to make offers
% of total value of contracts that is awarded directly to SMEs	61,5%	58,0%	64,6%	Facilitating direct access of SMEs to the market, not as subcontractor but for their own product strategy
% of total number of contracts that is awarded directly to SMEs	73,5%	71,6%	72,6%	Facilitating direct access of SMEs to the market, not as subcontractor but for their own product strategy
% of number of Startups < 10 years old that are awarded contracts	59,8%	58,9%	63,1%	Facilitating access of Start-ups to the market Degree of disruptive innovation involved
% of winning tenders with university / non profit research center in it	30,5%	10,2%	10,1%	Degree of upstream R&D involved Degree of stimulating new further research
% of contract activities performed in EU Member States or Associated Countries	99,7%	97,0%	97,0%	Creating growth and jobs in Europe Strategic autonomy / technological sovereignty

* The figures reflect the status of all awarded national and EU funded pre-commercial procurements up to December 2019

Figure 4: Comparison of the national and EU funded PCPs³⁹

³⁹ Figure taken from the presentation *Update on results from completed and ongoing FP7 and Horizon 2020 funded Pre-Commercial Procurements (PCPs)* made by Lieve Bos, DG CONNECT F3 unit ("Digital Innovation and Blockchain")

However, and despite the significant advantages that joint procurement can offer, several challenges exist. The main issue is related to the service adoptability and interoperability issues that may arise. It is advisable to base connectivity, interoperability, and scalability requirements on international open standards. In addition, the coordination of all involved stakeholders/ contracting authorities deems joint procurement as a complex procedure. Finally, linguistic barriers among contracting authorities or suppliers are also one of the obstacles that exist in such procedures. Participation of technical representatives should be strong in the phase of defining requirements and specifications. As the implementation of a joint innovation procurement entails more challenges, especially if different countries are involved, the selection of a qualified Lead Procurer having strong management and legal skills much facilitates the overall process.

3.4. BARRIERS/ PITFALLS

The topic related to the problematic areas of a public procurement procedure has been analysed in multiple documents and reports. More specifically, based on the literature review conducted and the answers received in both cycles of T4.1, it seems that problems in a public procurement process mostly arise when:

- Procurers choose poor quality as a mean to lower procurement costs;
- Tender provides Unclear Specifications & Requirements;
- Before starting the procurement procedure, the contracting authorities have not conducted an adequate Supplier Assessment & market analysis;
- Lack of Transparency into the procedure, especially for the award procedure;
- Contracting authorities during the design phase choose incorrect parameters for the tender;
- Potential objection may arise in the award decision. Based on the answers received and the review of the national procurement legislation major delays are expected in such case;
- Economic and technical parameters related to the award procedure change substantially during the course of the project and the performance of the contractual object is no longer of interest to the contracting entity or the entity for which the contracted object is intended;
- During the contract execution, force majeure appears mainly due to external parameters and the performance of the contract is not possible;
- The tender is deemed “not economically advantageous”.

It is obvious that most of the above problems could be avoided, if special attention is paid to the design phase of the tender. More specifically, the design of a robust award procedure seems to play a pivotal role in a successful procurement outcome.

Besides the barriers that could arise in the procurement procedure in general, the focus of the current deliverable is centred in the innovation procurement. In order to better understand these potential problems, one should first address the sources of the associated risks. The image below summarises potential risks of an innovation procurement mapped in the different source types and stages of the procurement.



Figure 5: Potential risks of an innovation procurement

In short, the technological risks, in a procurement procedure are the ones that lead to severe implications related to the procured service or product and can be caused by technical operations. Such implications may be the non-completion, under-performance or false performance of the solution. The selection of an immature or suboptimal technology (it does not work as expected or is not fit for purpose, does not match standards, etc.), the failure to incorporate the related technological capabilities and standards from suppliers or failing to deliver the described in the tender solution can be listed as the most frequent factors related to problems in the procurement procedure.

- Solution is not feasible;
- Evaluation procedure is not adequate for the technology selected;
- Lack of complementarities with standards;
- High costs for maintenance and upgrade;
- Vendor lock in, which is the situation where a customer is dependent on a vendor for products and services, unable to use another vendor without substantial switching costs.

Market risks derive from situations where the public sector demand does not respond to the extent necessary or expected to the solutions prepared by the industry. In this context, markets are characterised as fragmented or there is a lack of companies delivering the desired innovations. The main reason could lie in the radical innovation required which cannot be delivered by the industry. Moreover, market concentration is considered unappealing for innovation procurement since it will most probably lead to vendor lock in situations.

- Unavailability of capable solution providers;
- Deficient supply chain;
- No spill over to private markets;
- Competition distortion due to limited number of suppliers.

Organisational/Institutional risks are related to the failure or the non-delivery of the end product from the procurement for procurer inter-organisational reasons. Indeed, the public administrators set a number of goals in modern public procurement that range from cost savings, transparency up to enhanced sectoral policies (e.g., environmental, energy, industrial, etc.). The problem arises when these goals contradict each other. This can potentially lead to resources misallocation, where agency goals conflict with wider policy goals. In this context, the procurer organisations are also confronted with the dilemma of low-cost contracts effectiveness versus the high cost that derive from procuring innovation.

The procurement for innovation is also a costly and time-consuming procedure. It requires strong coordination and collaboration among stakeholders and continuous evaluation and learning that are all accompanied by transaction costs, which have to be taken into account when implementing the process. It should be noted that expensive coordination failure is another aspect that should be taken into account when procuring an innovative solution. Therefore, under the current circumstances related to public procurement, cost savings may still be perceived as the ultimate goal.

- Failure to define needs;
- Changes in regulations and misalignment with the procurement strategy;
- Adaptation risks by end users;
- No adoption by policy makers.

In addition, there are several societal risks that are related to a lack of acceptance and uptake by the users of the new or changed service delivered within society. Financial risks are also an important aspect of innovation procurement which can be translated to the uncertainty of meeting target costs and the ability to secure the funds needed in the first place.

- Financial planning risks- innovation far beyond initial budget;
- Financial market risks - not enough resources to procure the solution;
- Poor cost monitoring.

Finally, large-scale projects/procurements are characterised by turbulence risks that are mainly a range of unforeseen events that lead various actors in the whole process to re-assess their priorities and to change their expectations. Such kind of risks may occur within organisations, but often are a result of the interplay of various actions and actors within the whole project.

Having identified the risks that derive in the overall cycle of the implementation of innovation procurement procedure, the answers received revealed several additional areas for attention:

- There is a knowledge gap and low understanding regarding innovation procurement. This mainly derives from the lack of a clear definition in the national legislation for innovation procurement. Clarifications are required and further training on what Public Procurement of Innovation really means. The confusion mainly derives from the broad range of different concepts, each with their own associated rationales and approaches, used in literature and practice to describe the stimulation of innovation through public procurement.
- Innovation procurement cannot be implemented without an (effective) involvement of the real end-user who can explicitly define their needs.
- Several innovation procurements run independently from the R&D/innovation agencies or experts, without a concrete procurement plan. This can undermine the successful enhancement and implementation of such a procedure.
- The public sector fragmentation witnessed in several countries represents a barrier that has stifled the widespread and virtuous use of R&D&I procurement in Europe. Especially, this is apparent in implementing innovation procurement in the defence and security sector.

4. SPECIFIC RECOMMENDATIONS FOR EU-HYBNET UPTAKE STRATEGY

The following recommendations have been formulated as the most important ones:

1. **Market Consultation.** Prior to initiating ICT's public procurement process, it is recommended that public institutions consult the market to identify state-of-the-art and commercial solutions. Transparent market engagement is considered important in order to identify the feasibility of the tender by assessing their needs, identifying what standards and other technical specifications to use as well as to look for existing solutions that might be re-used, without having to "reinvent the wheel". On a European level there are several repositories that could be consulted in relation to identify the aforementioned points such as Joinup, the European Federated Interoperability Repository (EFIR) and the European Interoperability Framework (EIF)⁴⁰
2. **Available templates.** Officials responsible for drafting public procurement specifications and documents would be very much facilitated in case they use as a starting point readily available template. Generally regular procurement templates can be found in TED⁴¹, whereas for innovation procurement public entities could consult the EAFIP toolkit.⁴² At a national level also several initiatives have been set in place. Indicatively, in Poland, Public Procurement Office is the responsible body for drafting public procurement policies and regulating and coordinating the national public procurement system. In addition, the PPO is in charge of the preparation of standardised tender documents, as well as guidance material. Similar initiative has been set in Luxemburg, the Business Process Management Office (BPMO) which provides several tools and templates to assist contracting authorities in the tender preparation.
3. **Skilled personnel.** It is highly recommended to involve in the procedure, experts from IT department. Their involvement is crucial in the needs' identification, the development of the technical specifications, the monitoring of the development of the solutions and their testing to ensure that expertise in cybersecurity aspects is considered. In this context cybersecurity threats should be considered when planning the procurement of a new system or service while threat identification should be continuous in the whole procurement lifecycle.
4. **Adequate vulnerability assessment.** Vulnerabilities should be considered before procuring new products or services and that vulnerabilities of existing products/services are monitored throughout their lifecycle. Moreover, the procuring organisation should establish a minimum set of security tests to be performed on acquired products or system, depending on the product/system type. It is also important to note that a newly acquired or newly configured product must undergo a penetration test in its actual installed environment. In the same way, remediating action taken must be online with the operational parameters of the actual environment.
5. **IPR provisions.** The way in which ICT solutions are licensed may affect their possibility to be shared and re-used. To ensure that the procured solution can be re-used by other public authorities or redistributed in any other way it is important to include the right IPR provisions in the procurement documents. This is especially important while procuring ICT solutions that citizens and businesses have access. An option is to include in the tender documents requirements that could ensure maximum public access for citizens and businesses. This can be covered by requesting access to the procured solution by several diverse systems, without being limited by the use of specific branded products or application. Accessibility needs for people with disabilities should also be taken into account.

⁴⁰ https://ec.europa.eu/isa2/sites/default/files/isa_annex_ii_eif_en.pdf

⁴¹ <https://simap.ted.europa.eu/standard-forms-for-public-procurement>

⁴² <https://eafip.eu/>

6. **Open requirements.** The requirements should be presented in an open manner. When procuring ICT solutions, there might be the tendency to request very specific solutions in order to ensure that what is requested will do exactly what the procuring entity is expected to do. However, such an approach hides several risks and disadvantages. First, customised solutions are generally more expensive than standard 'off-the-shelf' options. In addition, they are more difficult to be reused. Finally, suppliers who develop and manage custom-made systems can retain all the information about the system and make it very difficult to migrate to another supplier or to maintain or upgrade the system in the future. Excessive customisations may lead to supplier dependence and thus should be avoided. This aspect has been covered earlier in the document, however, below are some specific instructions related to the procurement of ICT technologies:
 - a. Benchmarks should be used to indicate that products should meet or exceed overall performance ratings;
 - b. Use functional requirements or performance to ensure that the procurement specifies functional requirements in a vendor-neutral manner;
 - c. Refer to standards and technical specifications: to avoid mentioning a specific process or referring to a specific trademark;
 - d. Use specific references only exceptionally when there are no other possible descriptions that are both sufficiently precise and intelligible to potential tenderers.
7. **Compatibility with legacy systems.** A common mistake that contracting authorities generally make is not to request compatibility with previously purchased proprietary solutions or as they called legacy systems. It is recommended to request for their interoperability of the new solution with the existing ones. As discussed in the literature, public authorities can be inefficiently constrained in their purchase of ICT by the existence of legacy systems, or by being locked-in to existing ICT products and services. ICT lock-in is a widely known concept, which has negative implications for the procuring organisations. Its alleged causes are the lack of interoperability, the lack of compatibility as well as high switching costs. Some countermeasures have been implemented, first and foremost the adoption of open source and open standards and the creation of some guidelines. In this context in order to ensure also that the purchased solutions can be further used to deliver trans-EU services, it is recommended to support solutions that use standards and no proprietary elements. Public procurements should include only standards that are supported by the market and that are recognised by a formal standardisation organisation, or a technical specification that has been identified by the Commission or by a national organisation. Moreover, functionalities to make data transfer effective should be requested meaning the setting of gateways to keep legacy systems/machines connected. Another approach in order to avoid lock in is to include exit costs in the procurement.
8. **Open procurement procedure is recommended.** Open procurement procedures are generally recommended when procuring ICT goods and services. Indeed, it can be seen that different procedures are chosen for different reasons: for instance, restricted procedures are preferred when procuring services requiring special features provided by one operator only (military purposes, personal data protection, public connectivity services, specific activities in strategic sites ...), as well as when too many vendors could be involved. On the contrary, negotiated procedures can be better when there exist some time boundaries, or a supplier's services uniqueness; finally, there were some opposite comments on competitive dialogue in relation to the cost effectiveness it can bring.
9. **Standards adoption.** Cost considerations, quality control concerns, supplier's expertise and the need of direct control are driving factors behind "make-or-buy" decisions. Similarly, these factors should be used

as "motivational drivers" to promote the adoption of ICT standards that indeed support the cost reduction and ensure a good level of quality.

4.1. DISINFORMATION

While procuring solutions to counter disinformation, two legislative initiatives proposed by the EC to upgrade rules governing digital services within the EU must be considered. During this regard, the Digital Services Act (DSA) and therefore the Digital Markets Act (DMA), should be taken into consideration in a very potential procurement of a tool to counter disinformation. The DSA and DMA have two main goals:

- to create a safer digital space within which the basic rights of all users of digital services are protected;
- to establish A level playing field to foster innovation, growth, and competitiveness, both within the European Single Market and globally.

While some behaviours are prohibited by the law at EU or national level (see definitions for illegal content and illegal goods), other behaviours could potentially lead to diverse forms of harms, without being illegal intrinsically. A case in point is coordinated disinformation campaigns which can result in societal impact or individual harm under certain conditions. Some content also can be particularly damaging for vulnerable categories of users, like children, but not for the final public. Such notions remain, to a particular extent, subjective and will be considered carefully.

4.2. CYBER AND QUANTUM SECURITY (INFORMATION SHARING)

The current section will go in more depth in relation to the Cyber Threat Intelligence legal specific requirements and considerations. Ambiguity in laws and regulations often breeds litigation and the costs of litigation may be significant enough to deter entities from engaging in CTI sharing. This section analyses the current legal requirements that need to be taken into account and examines whether theses could have an impact on the uptake strategy creation.

There is a consensus among the existing laws and regulations and the current discussion among practitioners that cyber threat sharing can be performed lawfully. However, organisations that wish to participate in CTI sharing among themselves would have to consider issues that could arise from the disclosure of personal information, breaches of contractual terms and disclosure of sensitive or classified information. In this regard, a good number of laws and regulations have been proposed in the EU over the years to promote the sharing of Cyber Threat Intelligence (CTI). The most relevant of these are Directive (EU) 2016/1148 of 6 July 2016, also known as the network and information systems (NIS) Directive; the General Data Protection Regulation (GDPR) (Regulation (EU) 2016/679 of 27 April 2016); and the EU Cybersecurity Act (Regulation (EU) 2019/881 of 17 April 2019).²⁸

The **Network and Information Security Directive (NISD)** 2016/1148/EU, which came into force in May 2018, has two main goals: the implementation of minimum-security requirements and the establishment of cybersecurity notifications for both Operators of Essential Services and Digital Service Providers. The Directive goes beyond implementation of security requirements, as it gives power to the regulatory bodies to audit the Operators of Essential Services to ensure the level of cybersecurity in the organization is acceptable and as per the provisions of the Directive. The NIS Directive can be considered the first EU-wide cybersecurity legislation. It aims to enhance cybersecurity across the EU. The directive encourages the sharing of CTI for the protection of critical infrastructure by providing an enabling environment for setting up ISACs which will foster the sharing CTI within and between the EU member states. Following the adoption of the NIS directive in 2016, it became an EU Directive requiring that every member state adopt national legislation which follows or 'transposes' the directive.

In general, the NIS Directive has three main parts:

- National capabilities: EU member states must have certain national cybersecurity capabilities such as a national CSIRT and must perform cyber exercises, etc.
- Cross-border collaboration: Cross-border collaboration between EU countries, including the operational EU CSIRT network and the strategic NIS cooperation group.
- National supervision of critical sectors: EU member states must supervise the cybersecurity of critical market operators in their country: ex-ante supervision in critical sectors (energy, transport, water, health and finance), ex-post supervision for critical digital service providers (internet exchange points, domain name systems, etc).

The NIS Directive observes that the responsibilities in ensuring the security of network and information systems lie, to a great extent, with operators of essential services. It does differentiate between sectors, placing higher burdens on critical infrastructure operators. The implication of this is that private entities that provide essential services (critical infrastructure operators) are obliged to ensure the protection of their network and information systems. The NIS Directive encourages a culture of risk management, which include risk assessment and the implementation of appropriate security measures for the protection of network and information systems within the critical infrastructure sector. Among these measures is the sharing of CTI.

The **General Data Protection Regulation (GDPR)** came into force on 25 May 2018. It sets the rules for the processing and free movement of personal data and applies to all domains of the public and private sector; however, some specific derogations are defined for data concerning health, aiming at protecting the rights of data subjects and confidentiality of their personal health data and at the same time preserving the benefits of data processing for research and public health purposes. GDPR treats health data as a "special category" of personal data which are considered to be sensitive by nature and imposes a higher standard of protection for their process.

Organizations processing health data have the following obligations (among others):

- to implement appropriate technical and organisational measures to ensure security of the processing systems, services and personal data,
- to perform data protection impact assessment, and
- to report data breaches which are likely to result in a risk to the rights and freedoms of individuals within 72 hours after having become aware of. Article 4 (12) of the GDPR defines a "personal data breach" as a breach of security leading to accidental or unlawful destruction, loss, alteration, unauthorised disclosure of, or access to, personal data transmitted, stored or otherwise processed; It has to be noted that if a data breach incident impacts the continuity of the health services as well, then it has to be reported according to the NIS Directive.

Regulation (EU) 2016/679,33 or GDPR as it is better known, has been hailed as the model for data protection and privacy laws both in Europe and beyond. The goal of the Regulation is to harmonise data and privacy laws across Europe, to increase the levels of protection for EU citizens and to give them greater control over their personal data. The regulation 'protects fundamental rights and freedoms of natural persons and in particular their right to the protection of personal data'. It has also redefined the way organisations across Europe and how those who offer goods and/or services to EU citizens around the globe, process personal data. GDPR contains provisions and requirements that are related to the processing of personal data of individuals (data subjects) inside the European Economic Area (EEA). These provisions and requirements include the provisions that cover the scope, application and objectives of the data protection regulations and the implementing arrangements.

Having the above into consideration, as a minimum requirement contracting authorities should define a policy for systems, services or devices processing GDPR's categories of personal data. Such information must be always encrypted (whenever stored or transmitted). For the other personal data categories, encryption is required when

the data are distributed outside the organisation. It needs to be made clear that this requirement does not always fall under the responsibility of the supplier.

- Whenever the system, device or service under consideration processes large volumes of special categories of information, a data protection impact assessment (DPIA) must be conducted;
- Document the need for any given supplier to process personal data and limit the data to whatever is necessary;
- Fully document the type of data that needs to be processed by a new product/system and apply limitations in the RFP requirements.

The **EU Cybersecurity Act's** main objective is to provide a permanent mandate for the ENISA and to establish a cybersecurity certification framework. It strengthens ENISA through the provision of more resources and a legal framework to improve cybersecurity capabilities at Union level, among member states, Union institutions, bodies, offices and agencies and relevant private and public stakeholders on matters related to cybersecurity. Among the provisions of the EU Cybersecurity Act, the provision that is most relevant to this study is Article 6(2), which states that 'ENISA shall support information sharing in and between sectors, in particular in the sectors listed in Annex II to Directive (EU) 2016/1148, by providing best practices and guidance on available tools and procedures, as well as on how to address regulatory issues related to information-sharing'.

Another issue likely to be addressed in the requirements is the civil liability that may arise from breaches of contractual terms. The disclosure of sensitive or classified information could make the legal and regulatory requirements difficult to address, because such information may cause serious injury to the national interest. A reference framework could be developed. The development of a reference framework would require the extraction of the legal requirements from the applicable laws that would add up to the functional and non-functional specifications of the tender related to the solutions architecture. These requirements need then to be translated into rules inside the organisations that use the solution. Such a framework would allow organisations to satisfy the legal requirements for CTI sharing and would also encourage private entities to join such a schema.

4.3. TRAINING ON MEDIA LITERACY

Technology and human development have substantially affected the field of war and conflict. The information environment has undergone tremendous changes recently, as the nature of mass communication has changed from "a single authorized speech and many listeners" to "many speeches for many listeners." Social media have a prominent role in the information flow. Social networks have the ability to disseminate large amounts of content at high speed over a short period of time. Therefore, the time dimension is used as an effective tool for hybrid threats to influence and change public attitudes, opinions, and behaviours in order to achieve certain goals. Under the above circumstances, media literacy can be useful in protecting society from the possible negative influence of the media. Media literacy is defined as the ability to access, analyse, evaluate, create, and act using all forms of communication⁴³. In its simplest terms, media literacy builds upon the foundation of traditional literacy and offers new forms of reading and writing. Media literacy empowers people to be critical thinkers and makers, effective communicators and active citizens. It provides a framework for accessing, analysing, evaluating and creating messages in many forms, from print to video and the Internet, deepening the understanding of the role of the media in society and the inquiries and self-expression skills necessary for citizens of democratic countries. The core principles of media literacy education are the following:

- Media Literacy Education requires active inquiry and critical thinking about the messages we receive and create.

⁴³ <https://medialiteracyweek.us/resources/media-literacy-basics/>

- Media Literacy Education expands the concept of literacy to include all forms of media (i.e., reading and writing).
- Media Literacy Education builds and reinforces skills for learners of all ages. Like print literacy, those skills necessitate integrated, interactive, and repeated practice.
- Media Literacy Education develops informed, reflective and engaged participants essential for a democratic society.
- Media Literacy Education recognizes that media are a part of culture and function as agents of socialization.
- Media Literacy Education affirms that people use their individual skills, beliefs and experiences to construct their own meanings from media messages.

The term “media literacy” is often used interchangeably with other terms related to media and media technologies. To clarify what is meant when referring to media literacy, the National Association for Media Literacy Education (NAMLE) offers these definitions:

- Media refers to all electronic or digital means and print or artistic visuals used to transmit messages.
- Literacy is the ability to encode and decode symbols and synthesize and analyse messages.
- Media literacy is the ability to encode and decode the symbols transmitted via media and the ability to synthesize, analyse and produce mediated messages.
- Media education is the study of media, including ‘hands-on’ experiences and media production.
- Media literacy education is the educational field dedicated to teaching the skills associated with media literacy.

The literature review revealed that in the procurement of a training application on media literacy there are no specific recommendations to be considered. ICT technologies can be an important facilitator in the implementation of such a solution, without excluding other traditional methods.

5. EU-HYBNET UPTAKE STRATEGY – FOUR MOST PROMISING INNOVATIONS

Of the innovations identified in WP3, the four most promising innovations are:

- i. Mobile application to pinpoint acts of harassment/violence on the street and online
- ii. AI enhanced Disaster Emergency Communications
- iii. Media Pluralism Monitor
- iv. Starlight Disinformation-Misinformation toolset

In reference to the aforementioned nine recommendations of the EU-HYBNET uptake strategy (Section 4), where applicable, an analysis focusing on the following three elements will be carried out for each of these innovations:

- Identifying the features each innovation possess which are relevant for the procurement process.
- Analysis of the EU and country landscape in order to answer whether public procurement instruments actually allow procurement of the kind of innovations that were identified in WP3. In this context, one of the important conclusions will be that either the existing procurement instruments and funding are sufficient, otherwise recommendations will be provided.
- Practical recommendations regarding features of the innovations revealed in WP3.

Many of the recommendations mentioned separately for each innovation may, in varied degree and with various modifications, apply to all four of the innovations.

5.1. MOBILE APPLICATION TO PINPOINT ACTS OF HARASSMENT/VIOLENCE ON THE STREET AND ONLINE

Attacks on societal structures and cohesion, both in the form of online harassment and spread of violence, are both a current trend, but also a future trend in hybrid threats that need to be challenged. In order to be challenged successfully, the first signs of such occurrences should be noted in order to provide situational awareness if not to also provide an early warning. In that case, the responsible law enforcement agencies can react in a timely manner in both virtual and physical space and accordingly use their resources wisely for the situation at hand. Should the situation still escalate, the response from rescue services may be needed as a precaution or to assist possible victims.

Involving the public serves multiple purposes. Firstly, it allows to save on expensive resources, such as online monitoring systems or CCTV, as well as on street patrols. Secondly, it diminishes the required time for discovering and locating occurrences of the mentioned threats. Thirdly, it helps in building societal resilience in itself by allowing everyone the option to participate in creating more security – especially the youth.

The aim of this specific innovation is to utilize readily available, widely used technology – i.e. smartphones – to record and geolocate acts of harassment and violence (or calls for violence) in physical space and acts of harassment and calls for violence online. Such acts may occur in the form of physical actions on the street, but also as graffiti and/or leaflets in physical space and/or online.

Smartphones integrate three important technologies for conducting such activities: the clock, which provides a timestamp on the occurrence; the camera, which allows the recording of the action or written text as photographic, video or as audio evidence; the geolocation to pinpoint the occurrence on the virtual map. In addition, integrating the option to report similar occurrences online gives the users – law enforcement agencies – the opportunity to monitor evolving situations in real time and note the correlations in physical space, as well as online. The application would be especially useful in crisis situations like riots, if used by a large number of users.

The relevant EU directives that govern public procurement

Public procurement in the EU is governed by a comprehensive legal framework that aims to ensure transparency, non-discrimination, and equal treatment of suppliers across member states. These directives include:

- Directive 2014/24/EU: This directive governs the procurement procedures for public contracts by entities operating in the fields of water, energy, transport, and postal services. It establishes procedures for the award of contracts, including open, restricted, competitive dialogue, and innovation partnerships.
- Directive 2014/25/EU: This directive regulates procurement procedures for entities operating in the utilities sector, including water, energy, transport, and postal services. It establishes similar procedures to Directive 2014/24/EU but with specific adaptations for the utilities sector.
- Directive 2014/23/EU: This directive governs the award of concession contracts, which are long-term contracts granted by public authorities to private operators for the provision of services or the exploitation of public assets. While less directly relevant to the procurement of a mobile application, it may apply to certain aspects of the project.
- Directive 2014/55/EU: This directive promotes the use of electronic invoicing in public procurement processes to streamline administrative procedures and facilitate cross-border trade.

These directives provide a framework for conducting procurement procedures in the EU, including the procurement of digital services such as mobile applications. Entities within the EU, including government agencies, municipalities, and public utilities, are required to follow these directives when procuring goods, services, or works above specified financial thresholds.

When procuring a mobile application to address acts of harassment/violence on the street and online, relevant EU directives and national procurement laws would apply. Procurement procedures typically involve advertising the opportunity, issuing tender documents, evaluating bids, and awarding contracts in accordance with the principles of transparency, equal treatment, and competition.

It is crucial for procuring entities to familiarize themselves with the specific requirements and procedures outlined in the relevant EU directives and national legislation governing public procurement to ensure compliance and successful execution of the procurement process. Additionally, they may seek guidance from legal experts or procurement specialists to navigate the complexities of EU procurement rules.

Market Consultation.

A thorough market consultation could result in the identification of state-of-the-art and commercial solutions, suitable vendors, gathering valuable insights, and laying the groundwork for a successful procurement process. In the case of procuring the “Mobile application to pinpoint acts of harassment/violence on the street and online”, a structured approach to market consultation should ideally entail:

- A clear definition of Objectives and Scope of the mobile application, its intended functionalities, and the problem it aims to address (e.g., reporting harassment/violence incidents). Define the target audience and any specific requirements.
- Identification of potential suppliers, who specialize in developing similar mobile applications or have experience in related fields such as safety apps, community platforms, or crime reporting systems.
- Conducting of information sessions, or workshops where interested vendors can learn about the project requirements, objectives, and scope, as well as the provision of background information on

the issue of harassment/violence and explain how the mobile application will contribute to addressing it.

- Collection of feedback from vendors regarding the project concept, including any challenges they foresee and suggestions for improvement, by asking specific questions about their capabilities, experience, and proposed solutions.
- A review of existing solutions from similar projects developed by vendors, to evaluate their features, user interface, success metrics, and user feedback to identify best practices and potential areas for innovation.
- Discussion of technical requirements, such as platform compatibility (iOS, Android), data security, scalability, and integration with existing systems or databases. Ensuring in this way that vendors understand any specific technical constraints or preferences.
- Encourage vendors to propose innovative features or approaches that could enhance the effectiveness of the mobile application. Consider emerging technologies such as artificial intelligence, geolocation, or real-time data analytics.
- Evaluation of costs and timelines, taking into account factors such as development, testing, deployment, maintenance, and ongoing support.
- Assessing legal and ethical considerations: Discuss legal and ethical considerations related to data privacy, consent, anonymity, and responsibility for content moderation. Ensure that vendors comply with relevant regulations and industry standards.
- Document Feedback and Insights: Document all feedback, insights, and recommendations gathered during the market consultation process. Use this information to refine your project requirements, evaluate vendor proposals, and make informed decisions moving forward.

Available templates.

As mentioned above (Section 4), officials responsible for drafting public procurement specifications and documents would be very much facilitated in case they use as a starting point readily available templates. Generally, regular procurement templates can be found in TED⁴⁴, whereas for innovation procurement public entities could consult the EAFIP toolkit⁴⁵. In the case of procuring the “Mobile application to pinpoint acts of harassment/violence on the street and online”, templates should encompass several key components to effectively communicate the project requirements and expectations to potential vendors. Such templates should include:

- Project Overview: a brief introduction to the project, highlighting the purpose and objectives of developing the mobile application.
- Scope of Work: a clear definition of the scope of the project, outlining the features and functionalities expected in the mobile application. This should include specifics such as reporting capabilities, geolocation services, support resources, and any other essential components.

⁴⁴ <https://simap.ted.europa.eu/standard-forms-for-public-procurement>

⁴⁵ <https://eafip.eu/>

- **Technical Requirements:** the technical specifications and requirements for the mobile application, including platform compatibility (iOS, Android), backend infrastructure, data storage, security measures, and any other relevant technical considerations.
- **User Interface/Experience (UI/UX) Requirements:** the desired user interface and experience, emphasizing ease of use, accessibility, and intuitive design. Provide any design guidelines or preferences to ensure alignment with user expectations.
- **Reporting and Incident Management:** the functionality required for users to report incidents of harassment/violence, as well as the process for incident management and communication with relevant authorities or support services.
- **Support and Resources:** the types of support resources and services that should be integrated into the application, such as helplines, counseling services, legal aid, and community support groups.
- **Data Privacy and Security:** data privacy and security requirements, including compliance with relevant regulations (e.g., GDPR, CCPA), data encryption, user authentication, and measures to protect sensitive information.
- **Timeline and Milestones:** a proposed timeline for the project, including key milestones such as design completion, development phases, testing, deployment, and ongoing maintenance.
- **Budget and Payment Terms:** the budget available for the project and any preferred payment terms. This may include fixed-price or time and materials contracts, payment schedules, and cost breakdowns for different project phases.
- **Evaluation Criteria:** an outline of the criteria that will be used to evaluate proposals from potential vendors. This may include factors such as technical expertise, experience, cost-effectiveness, timeline adherence, and quality of past work.
- **Submission Instructions:** instructions for vendors to submit their proposals, including the deadline for submissions, preferred format (e.g., electronic submission), and contact information for inquiries or clarifications.
- **Legal and Contractual Considerations:** any legal or contractual requirements that vendors must adhere to, such as non-disclosure agreements, intellectual property rights, indemnification clauses, and termination conditions.

Skilled personnel.

In the case of procuring the “Mobile application to pinpoint acts of harassment/violence on the street and online”, developers of applications for both iOS and Android devices, steeped in the technical requirements and capabilities is highly recommended in the needs identification, the development of the technical specifications, the monitoring of the development of the solutions and their testing to ensure that expertise in cybersecurity aspects is considered. In this context cybersecurity threats should be considered when planning the procurement of a new system or service while threat identification should be continuous in the whole procurement lifecycle.

Adequate vulnerability assessment.

Conducting an adequate vulnerability assessment is crucial to ensure the security, resilience, trustworthiness and integrity of the application for its users. The vulnerability assessment steps to be followed, in the case of procuring the “Mobile application to pinpoint acts of harassment/violence on the street and online”, should involve:

- **Threat Modeling:** Begin with the identification of potential threats and vulnerabilities that the mobile application may face. Consider both technical threats, such as data breaches or malware attacks, and non-technical threats, such as misuse of the application's features for harassment or stalking.

- **Risk Assessment:** Evaluation of the likelihood and potential impact of each identified threat. Prioritizing threats based on their severity and likelihood of occurrence. This will help focus efforts on addressing the most critical vulnerabilities first.
- **Security Requirements, Security Architecture and Code Review:** Definition of security requirements that the mobile application must meet to mitigate identified threats. This may include requirements related to data encryption, authentication mechanisms, access control, secure communication protocols, and secure storage of sensitive information. Also, perform a review of the mobile application architecture to identify any design flaws or vulnerabilities that could compromise its security. Assurance that security best practices are followed throughout the development process, from design to implementation. Additionally, conduct a thorough code review to identify potential security vulnerabilities in the application's source code. Look for common security flaws such as injection attacks, authentication bypass, insecure data storage, and inadequate input validation.
- **Penetration Testing:** Performance of penetration testing or ethical hacking to simulate real-world attacks on the mobile application. This involves attempting to exploit vulnerabilities in the application's security controls to gain unauthorized access or manipulate sensitive data.
- **Data Privacy Assessment:** Assessment of the application's handling of user data to ensure compliance with relevant data privacy regulations, such as GDPR or CCPA. Evaluation of how user data is collected, stored, processed, and shared, and implementation of appropriate measures to protect user privacy.
- **User Safety Considerations:** Consideration of potential risks to user safety, especially in cases where the mobile application involves reporting incidents of harassment or violence. Implementation of features to protect user anonymity, provide clear guidance on safety measures and establish mechanisms for reporting abusive behaviour.
- **Third-Party Components Review:** Review any third-party libraries or components used in the mobile application to ensure they are up-to-date and free from known security vulnerabilities. Monitor security advisories and updates for these components to address any newly discovered vulnerabilities.
- **Continuous Monitoring and Improvement:** Security is an ongoing process, so establishment of mechanisms for continuous monitoring and improvement of the mobile application's security posture is vital. Implementation of regular security audits, updating security controls as needed and staying informed about emerging threats and vulnerabilities.

Intellectual property rights (IPR) provisions.

Intellectual property rights (IPR) provisions play a critical role in protecting the interests of both the procuring entity and the developers/vendors involved and also in mitigating the risk of disputes or infringements related to IPR. A comprehensive provision of IPR might be addressed by following the steps below:

- **Ownership of Intellectual Property:** Clearly define the ownership of intellectual property rights related to the mobile application. Specify whether the procuring entity will retain full ownership of the application and its associated intellectual property, or if there will be shared ownership with the developers/vendors.
- **Licensing and Usage Rights:** Determine the scope of licensing and usage rights granted to the procuring entity for the mobile application. Specify the permitted uses of the application, including any restrictions on modification, distribution, or sublicensing.

- **Protection of Proprietary Information:** Include provisions to protect proprietary information and trade secrets shared during the development of the mobile application. Require developers/vendors to sign non-disclosure agreements (NDAs) to safeguard sensitive information from unauthorized disclosure or use.
- **Assignment of Rights:** Clarify whether developers/vendors are allowed to assign or transfer their rights and obligations under the contract to third parties. Include provisions to ensure that any such assignment is subject to the procuring entity's approval and does not adversely affect its interests.
- **Indemnification for Intellectual Property Infringement:** Require developers/vendors to indemnify the procuring entity against any claims of intellectual property infringement related to the mobile application. This includes indemnification for copyright infringement, patent infringement, or unauthorized use of third-party intellectual property.
- **Open Source Software Compliance:** Ensure compliance with open source software licenses and avoid any violations of third-party intellectual property rights. Require developers/vendors to disclose all third-party components and dependencies used in the mobile application, along with their respective licenses.
- **Innovation and Inventions:** Address ownership and rights related to any new inventions, innovations, or improvements developed during the course of the project. Specify whether such inventions will be owned by the procuring entity or shared with the developers/vendors.
- **Dispute Resolution Mechanisms:** Include mechanisms for resolving disputes related to intellectual property rights, such as arbitration or mediation. Specify the applicable jurisdiction and governing law for resolving such disputes.
- **Termination and Transition:** Outline procedures for the termination of the contract and the transition of intellectual property rights upon termination. Specify whether the procuring entity will have continued access to the mobile application and its source code after termination.
- **Review by Legal Experts:** Finally, ensure that the IPR provisions are reviewed by legal experts familiar with intellectual property law to ensure compliance with relevant regulations and best practices.

Open requirements.

Compatibility with previously purchased proprietary solutions or legacy systems should be straightforward and easily achievable, in the case of procuring the “Mobile application to pinpoint acts of harassment/violence on the street and online”, since smartphone technology has been around for a long enough span of time. Moreover, the standards required for the adoption of this innovation are readily available in both operating environments (iOS and Android) and strongly supported by the market. The negative implications for procuring organisations and public authorities associated with ICT lock-in can be mitigated, since the technology and software – application development tools for both operating systems - behind the innovation is a widely known concept. Reducing the compatibility risk further can be achieved through the adoption of open source and open standards, as well as the creation of some guidelines, which the innovation lends itself to. Exit costs can also be included in the procurement of this innovation, to avoid lock-in.

Open procurement procedure is recommended.

When procuring the “Mobile application to pinpoint acts of harassment/violence on the street and online” through open procurement procedures, it's essential to ensure fairness, transparency, and competition among potential vendors, so as to ultimately select a vendor that best meets the requirements and objectives of the application. The following approach could be followed:

1. Preparation Phase:
 - i. Define the requirements: Clearly outline the technical, functional, and security requirements of the mobile application.
 - ii. Develop procurement documents: Prepare tender documents such as a Request for Proposals (RFP) or Invitation to Tender (ITT), including specifications, terms of reference, evaluation criteria, and contractual terms.
 - iii. Determine budget and timeline: Establish a budget for the procurement and define the timeline for the entire process, including submission deadlines and evaluation periods.
2. Advertising and Tendering:
 - i. Advertise the opportunity: Publish the procurement notice in relevant publications, websites, and platforms to reach a wide audience of potential vendors.
 - ii. Provide access to tender documents: Make the tender documents available to interested vendors, ensuring equal access and transparency.
3. Clarification and Communication:
 - i. Address vendor inquiries: Respond promptly and comprehensively to any questions or requests for clarification from potential vendors regarding the procurement documents or requirements.
 - ii. Conduct pre-bid meetings: Organize meetings or conference calls with interested vendors to provide additional information and clarify any ambiguities.
4. Submission of Bids:
 - i. Receive and evaluate bids: Establish a secure mechanism for vendors to submit their bids within the specified deadline. Ensure that all bids are treated confidentially until the evaluation process begins.
 - ii. Enforce compliance: Verify that all bids comply with the requirements outlined in the procurement documents. Disqualify any bids that fail to meet the mandatory criteria.
5. Evaluation Phase:
 - i. Establish evaluation criteria: Define clear and objective criteria for evaluating the submitted bids, including technical capabilities, proposed solution, experience, pricing, and compliance with requirements.
 - ii. Form evaluation committee: Create an evaluation committee comprising qualified individuals with expertise in relevant areas such as technology, security, and procurement.
 - iii. Evaluate bids: Review and assess each bid based on the established criteria, scoring them objectively and consistently.
 - iv. Shortlist or select vendors: Identify the highest-scoring bids and shortlist or select the most suitable vendors for further consideration or negotiation.

6. Negotiation and Contracting:

- i. Conduct negotiations: Initiate negotiations with shortlisted vendors to finalize contractual terms, pricing, and other details.
- ii. Sign contracts: Execute contracts with selected vendors, clearly outlining the rights, obligations, deliverables, and timelines for the procurement.

7. Implementation and Monitoring:

- i. Monitor implementation: Oversee the development and implementation of the mobile application by the selected vendor, ensuring compliance with the contractual terms and requirements.
- ii. Address issues: Address any issues or concerns that arise during the implementation phase promptly and effectively.
- iii. Monitor performance: Continuously monitor the performance of the mobile application and the vendor's adherence to contractual obligations.

8. Closure and Evaluation:

- i. Close the procurement process: Officially close the procurement process once the mobile application has been successfully developed and deployed.
- ii. Evaluate the procurement process: Conduct a post-procurement review to assess the effectiveness and efficiency of the procurement process, identifying any lessons learned or areas for improvement.

Standards adoption.

The standards required for the adoption of this innovation are readily available in both operating environments (iOS and Android) and the technological features of all contemporary smartphones provide a more than adequate set of technical standards upon which to apply the technical requirements of the innovation.

5.2. AI ENHANCED DISASTER EMERGENCY COMMUNICATIONS

Social structures are fundamental access doors to influence societies on the short and long run. Hospitals and health care services in general is to be considered as one of such structures. During recent years hospitals have experienced several cyber-attacks. At the same time, the increasing number of natural disasters, experience of handling pandemic related matters, clearly indicates vulnerabilities present in health sector. In the context of hybrid threats trust in healthcare systems and proper functioning of service provision during crisis periods is essential. This threat is focused on the abilities of hospitals to provide proper services in the case of patient afflux. Such phenomena can occur in different circumstances:

- It can be natural (objective) consequences of natural (e.g.: earthquake, flood, etc.) or industrial (e.g.: leakage of hazardous substances, explosions, transport accidents, etc.) disasters as well as man made incidents (e.g.: terrorist attack, riots, etc.).
- It can be purposefully designed (subjective) to direct extensive crowds to hospitals as a stand-alone event or part of a more sophisticated hybrid attack aiming to undermine trust in local or national healthcare system or even democracy in general.

There might be a variety of tools, methodologies and processes that can deal with different aspects of such afflux despite its nature. Those can include simulation tools, contingency planning, communication with local society, early warning, crisis management, fast mobilization of resources and many others.

Our proposed focus is made on enabling hospitals at afflux risk by any nature to make an early assessment of the situation. This can be done by having remote capabilities able to provide relevant information from the scene of action. Having initial triage, even if the afflux is purposefully designed, will allow hospitals or all parties involved in the incident handling understand that kind of incident it is and get better prepared, faster apply for resources in need and reduce direct and cascading effects.

This does not lead to the predisposition that such solution would solve all patient afflux related problems but can add capabilities in real incident handling as well as prevent afflux use in hybrid context.

During major crisis the number of emergency calls has proven to be exponential, from 1 per minute to over 100 per minute, becoming impossible to sort out by emergency dispatchers, especially with the average emergency call lasting from 3 to 15 minutes dealt by just a few emergency dispatchers. Creating a massive telephonic congestion, the population is no longer capable to reach by phone the emergency services, report their positions and the evolution of their situation. This lack of communication increases the workload of Search & Rescue, which in the aftermath have to go place by place instead of focusing on population's reported positions.

The company HighWind has developed and patented the first Artificial Intelligence that can assess a patient's emergency priority level in less 100 millisecond thanks to Computer Vision and Deep learning using a crossed analysis on traumatology (nature of the wounds), emotions (pain, fears, etc.) and contextual elements (fire, smoke, etc.). Applied to major disasters, and encompassed within an smartphone "Disaster Mode" app for the population (downloaded or emulated by text-message link), it gives the emergency responders the ability to immediately visualize who are the persons most at risks on a map, prioritize search & rescue efforts to the most vulnerable persons, avoid the emergency calls congestion and facilitate patient referrals to hospitals based on the severity of their injuries, thereby mitigating the potential influx of patients in hospitals.

Instead of taking one by one, lengthy emergency calls due to stressed persons, the emergency dispatch centre can perform several actions at once: send a "Disaster Mode" notification to the population, receive an accurate view on the emergency requests critical levels and positions on a map in few seconds, to better coordinate SAR efforts.

Leveraging on basic smartphone features, the AI is capable to immediately sort out victims, saving hours for the SAR teams and significantly increasing chances of survival. The "Disaster Mode" is also capable to take decisions to optimize communication based on available networks quality (no data, 2G to 5G).

The analysis of the application of the **"9 Specific Recommendations of the EU-HYBNET uptake strategy"** focuses on:

- Identifying those features the Innovation possesses which are relevant for the procurement process.

Introduced within the past year, this cutting-edge technology stands as an unparalleled innovation globally, as attested by assessments from the esteemed ADIT intelligence agency. Leveraging robust foundations in Computer Vision and AI, HighWind's AI undergoes meticulous training utilizing proprietary algorithms applied to extensive medical databases, encompassing both in-hospital and out-of-hospital scenarios. This training regimen is designed to effectively address three pivotal criteria for emergency detection: Traumas, Context, and Emotions.

The potential applications of this innovation are manifold, particularly within the realm of emergency response infrastructure across the European Union. HighWind's AI technology represents a significant departure from traditional practices, a fact duly acknowledged and celebrated at CES 2023, where it garnered acclaim as one of the most disruptive technologies serving the public interest.

Reports from the ADIT intelligence agency and the European Patent Office affirm the singular nature of HighWind's initiative, with no comparable endeavors evident on a global scale, spanning entities ranging from research institutions to startups and major corporations. While the primary cost drivers revolve around human resources, including AI engineers and legal professionals, substantial expenses are also incurred in AI training for the prototype, encompassing CPU/GPU computation time. The anticipated total budget for achieving a market-ready solution is estimated to approach 150,000 EUR.

In light of potential threats posed by complex cyberattacks orchestrated by state actors targeting critical infrastructure, including emergency services, ongoing efforts in advancing security measures aim to continually mitigate such risks.

- Identifying whether public procurement instruments of the EU landscape actually allow procurement of the kind of selected innovation. In this context, one of the important conclusions will be that either the existing procurement and funding instruments are sufficient, otherwise recommendations can be provided.

As reflected in the “Guidance on Innovation Procurement” by the European Commission in 2021, the procurement of innovative solutions in markets where the main buyers are public buyers can help boost the EU’s resilience, competitiveness and strategic autonomy. Additionally, the health sector, which this innovation has the ability to reinforce (along with the security sector) is specifically mentioned as an area that can benefit from public procurement, further aligning the political direction of the public procurement instruments with the innovation. Since the innovation is a disruptive technology with a path to commercialization and a partnership between two European SMEs, the current procurement landscape seems to be fitting.

All prerequisites have been fulfilled, setting the stage for collaboration between two Small and Medium Enterprises (SMEs): HighWind from France and GAGDPR from Greece. Their partnership aims to develop a product ready for use by end users and for market penetration. This strategic partnership entails the fusion of their respective resources, specialized knowledge, and cutting-edge technologies, culminating in the creation of a market-responsive product ready for commercialization.

- Practical recommendations regarding features of the selected innovation.

HighWind should get in touch with public procurement bodies in their respective countries to understand how to use the innovation procurement tools for their advantage and exploit once they have reached a higher TRL level. Additionally, as there is no other tool in the market that provides the same service as them, HighWind should also reach out to practitioners involved in the crisis management or healthcare sectors to provide demonstrations of their prototype in order get early adopters and potential investment from end-users to finalise development as quickly as possible. Additionally, there are two pieces of legislation that may be of concern for this innovation: the GDPR and the AI Act. As the concerned innovation deals with AI, the recently approved AI Act will lay out certain rules for the use of AI, which will need to be complied with. The GDPR will also be concerned, as personal data, mainly medical data, will be transferred in mere milliseconds to the authorities. Consent and the protection of data will need to be ensured before this innovation can enter into market, so it is advised that the proper legal analysis is done for the innovation.

5.3. MEDIA PLURALISM MONITOR

The Media Pluralism Monitor (MPM) is a European Union initiative aimed at assessing and monitoring the degree of media pluralism within EU member states. Using an indicator-based approach, the MPM evaluates several aspects of the media landscape, including media ownership, independence of journalists, market access and content diversity. The data collected is analyzed to assess the level of media pluralism in each country and in the EU as a whole. The MPM provides crucial information to identify challenges and good practices in the field of media pluralism and to develop policies aimed at promoting a diverse and democratic media landscape. Analysis of the application of the **Specific Recommendations for EU-HYBNET** uptake strategy to the appointed / selected Innovation, specifically:

Market Consultation.

Regarding the market consultation phase in the context of a public procurement process, the Media Pluralism Monitor is recommended to adopt an inclusive and transparent approach to involve relevant stakeholders. Here are some specific tips:

- **Identification of key stakeholders:** Before launching the market consultation, the Media Pluralism Monitor should clearly identify key stakeholders in the media sector, including representatives of the media themselves, civil society organisations, industry experts and public authorities. This will ensure full involvement of stakeholders who may be influenced or involved in the media pluralism monitoring process.
- **Clear communication of objectives:** During the market consultation, the Media Pluralism Monitor should clearly communicate the objectives of monitoring media pluralism and the role of stakeholders in the process. This will allow stakeholders to fully understand the context and importance of monitoring and make meaningful contributions.
- **Flexible ways of participating:** The Media Pluralism Monitor should offer different ways of participation for stakeholders, for example through public consultation meetings, online questionnaires, workshop sessions or individual consultations. This will allow stakeholders to participate based on their needs and preferences, ensuring broad and representative involvement.
- **Actively listening to opinions and feedback:** During the market consultation, the Media Pluralism Monitor should engage in active listening to the opinions, concerns and feedback of stakeholders. This can include creating safe and inclusive spaces for open discussion and the exchange of ideas, allowing stakeholders to freely express their opinions and suggestions.
- **Transparency and accountability:** The Media Pluralism Monitor should ensure the transparency and accountability of the market consultation process, providing clear information on the outcomes of the consultation and the actions taken in response to the feedback received. This will help maintain stakeholder trust in the process and ensure the integrity and effectiveness of media pluralism monitoring.

Available templates.

Regarding the availability of templates in the context of a public procurement process, it is recommended that the Media Pluralism Monitor develop and implement standardized and customizable templates for the collection and analysis of data relating to media pluralism. Some specific recommendations:

- **Developing clear and adaptable templates:** The Media Pluralism Monitor should develop clear and well-structured templates for collecting data relating to media pluralism, including questionnaires, interview guides and scorecards. These models should be designed to be adaptable to specific national needs and contexts, allowing countries to customize them according to their own media and institutional characteristics.
- **Inclusion of meaningful indicators:** Models should include a full range of meaningful indicators to assess media pluralism accurately and comprehensively. This may include indicators related to media ownership, independence of journalists, content diversity and market access, among others. Ensure that the templates reflect international best practices and recommendations in the field of monitoring media pluralism.
- **Customization of templates:** Templates should be designed to allow easy customization by participating countries, so that they can be adapted to specific national needs and priorities. This may include the ability to add or remove indicators, modify questionnaire questions, and adapt data collection methodologies to suit local circumstances.

- **Technical support and training:** The Media Pluralism Monitor should provide technical support and training to public buyers and national stakeholders on the use and adaptation of available models. This may include online or in-person training sessions, informational webinars, operational guides and dedicated technical assistance to address participating countries' questions and needs.
- **Periodic updating and review:** The templates should be subject to periodic review and updating to ensure that they reflect the latest trends and developments in the field of media pluralism. The Media Pluralism Monitor should establish a formal mechanism to regularly review the models and incorporate any new recommendations or guidelines emerging from relevant international sources.

Skilled personnel.

With regards to qualified personnel in the context of a public procurement process, the Media Pluralism Monitor is recommended to ensure that it has a highly competent and multidisciplinary team to successfully conduct media pluralism monitoring. Some specific recommendations:

- **Multidisciplinary skills:** Ensure that the Media Pluralism Monitor team includes professionals with multidisciplinary skills, including experts in journalism, media law, social sciences, statistics, communications and information technologies. This diversity of expertise will enable the team to comprehensively and thoroughly address the multiple dimensions of media pluralism.
- **In-depth industry knowledge:** Ensure that Media Pluralism Monitor staff have in-depth knowledge of the media industry, including understanding market dynamics, journalistic challenges and emerging trends in information and communications. This will allow the team to accurately and contextualised the media landscape of each country.
- **Analytical and research skills:** Media Pluralism Monitor staff should possess strong analytical and research skills, including data collection, analysis and interpretation skills. This is critical for conducting quantitative and qualitative assessments of media pluralism and making evidence-based recommendations.
- **Communication skills and stakeholder engagement:** Ensure that Media Pluralism Monitor staff have effective communication and interpersonal skills to engage relevant stakeholders in the media pluralism monitoring process. This may include the ability to clearly and accessibly communicate research findings and to establish collaborative relationships with journalists, civil society organisations, public authorities and other key actors.
- **Continuous professional development:** Promote continuous professional development of Media Pluralism Monitor staff through participation in conferences, workshops, training courses and professional development activities. This will ensure that the team is always up to date on the latest trends and methodologies in the field of media pluralism monitoring and can keep their skills high.

Adequate vulnerability assessment.

With regards to adequately analyzing vulnerabilities in the context of a public procurement process, it is recommended that the Media Pluralism Monitor integrate a thorough vulnerability assessment into its media pluralism monitoring framework. Some specific recommendations:

- **Identification of vulnerabilities:** The Media Pluralism Monitor should conduct a comprehensive analysis to identify and understand potential vulnerabilities in the context of media pluralism. This could include

assessing threats to press freedom, the safety of journalists, concentration of media ownership and manipulation of information, among other factors.

- **Assessment of the impact of vulnerabilities:** Once identified, the Media Pluralism Monitor should assess the impact of the identified vulnerabilities on media pluralism and democracy as a whole. This assessment should take into account both the direct and indirect effects of vulnerabilities on media functioning and freedom of expression.
- **Measuring the severity of vulnerabilities:** The Media Pluralism Monitor should develop indicators and metrics to measure the severity of identified vulnerabilities. This will allow the Media Pluralism Monitor to systematically and comparably assess the level of risk that vulnerabilities pose to media pluralism in different national contexts.
- **Regular monitoring and updating:** The Media Pluralism Monitor should integrate vulnerability assessment as an integral part of its ongoing media pluralism monitoring process. This requires constant monitoring of emerging threats and periodic review of identified vulnerabilities to ensure monitoring remains relevant and updated over time.
- **Developing mitigation strategies:** The Media Pluralism Monitor should work with relevant stakeholders to develop and implement effective mitigation strategies for identified vulnerabilities. This could include adopting legislative and regulatory measures, establishing protection mechanisms for journalists and promoting transparency and accountability in the media sector.

Intellectual property rights (IPR) provisions.

Regarding the provisions on intellectual property rights in the context of a public procurement process, below are some recommendations:

- **Clarity on provisions relating to intellectual property rights:** The Media Pluralism Monitor should clarify in a transparent and detailed manner the provisions relating to intellectual property rights for all data, information and materials collected, processed or produced in the context of media pluralism monitoring average. This may include defining who owns the intellectual property rights to the data and reports produced, as well as the conditions for their use, sharing and distribution.
- **Respect for the intellectual property rights of third parties:** The Media Pluralism Monitor should ensure that it respects the intellectual property rights of third parties in the course of its media pluralism monitoring activities. This means obtaining the necessary permissions to use data, information and materials protected by copyright or other intellectual property rights and complying with any limitations or restrictions imposed by the rights holders.
- **Appropriate licenses and agreements:** The Media Pluralism Monitor should enter into appropriate licenses and agreements to regulate the use, sharing and distribution of data and materials collected in the course of monitoring media pluralism. This may include adopting open licenses or other ways of sharing data that allow broad and free access to the information collected.
- **Protection of sensitive data:** The Media Pluralism Monitor should take appropriate measures to protect sensitive data collected in the course of monitoring media pluralism from unauthorized access, misuse or unauthorized disclosure. This may include adopting cybersecurity measures, pseudonymizing data and limiting access to authorized personnel only.

- **Transparency and accessibility:** The Media Pluralism Monitor should promote the transparency and accessibility of information and materials produced in the course of monitoring media pluralism, ensuring that they are easily accessible to the public and relevant stakeholders. This can be achieved by publishing reports, data and other resources online and adopting open licensing or other ways of sharing data that allow for free and non-discriminatory use.

Open requirements.

Regarding open requirements in the context of a public procurement process, the Media Pluralism Monitor is recommended to adopt an open requirements policy that promotes transparency, accessibility and fair participation of all interested actors. Some specific recommendations:

- **Clear definition of requirements:** The Media Pluralism Monitor should clearly and with details define the requirements for participation in the public procurement process, including selection criteria, evaluation procedures and expectations relating to expected results. This will allow potential suppliers to fully understand expectations and prepare competitive and relevant proposals.
- **Promoting competition and innovation:** The Media Pluralism Monitor should design requirements to promote competition and innovation in the industry by enabling participation from a wide range of vendors and solutions. This can be achieved through the adoption of open requirements that do not favour a particular vendor or technology approach, but instead encourage diversity and creativity in meeting the needs of the public buyer.
- **Transparency and accessibility of requirements:** The Media Pluralism Monitor should ensure that requirements are published in a transparent and accessible way to all interested parties, providing clear and detailed information on selection criteria, evaluation procedures and how to submit proposals. This will allow all potential suppliers to participate in the process fairly and without discrimination.
- **Stakeholder involvement:** The Media Pluralism Monitor should actively involve relevant stakeholders in the requirements definition process, allowing them to provide feedback and contributions to improve the relevance and effectiveness of the requirements. This may include public consultation, the involvement of civil society organizations and industry experts, and the creation of opportunities for discussion and exchange of ideas.
- **Regularly updating and reviewing requirements:** The Media Pluralism Monitor should establish a formal mechanism for regularly updating and reviewing requirements, ensuring they remain relevant and aligned with the public buyer's evolving objectives and needs. This may include regularly evaluating stakeholder feedback, analyzing international best practices, and adapting to regulatory and technological changes.

Compatibility with legacy systems.

Regarding compatibility with legacy systems in the context of a public procurement process, the Media Pluralism Monitor is recommended to adopt an approach that allows the effective integration of new tools and data collected with the systems existing. Some specific recommendations:

- **Preliminary assessment of legacy systems:** Before proceeding with procurement, the Media Pluralism Monitor should conduct a thorough assessment of existing legacy systems used for the collection, analysis and management of media pluralism data. This will help identify any challenges or limitations that may affect the integration of new tools and data.

- **Defining Compatibility Requirements:** Based on the preliminary assessment, the Media Pluralism Monitor should clearly define the compatibility requirements that new tools and collected data must meet to integrate effectively with existing legacy systems. These requirements should include, for example, interoperability standards, compatible data formats and supported communication protocols.
- **Collaboration with vendors:** The Media Pluralism Monitor should actively collaborate with vendors of legacy systems and new tools to ensure design and implementation that takes integration needs into account. This may include the participation of suppliers in joint planning and development sessions, as well as the establishment of agreed technical specifications and data exchange protocols.
- **Testing and validation:** Before completing the implementation, the Media Pluralism Monitor should conduct extensive testing and validation to verify the effective compatibility and interoperability of the new tools and data with existing legacy systems. This may include integration testing, load testing, and compatibility testing to ensure smooth operation in the production environment.
- **Training and support:** The Media Pluralism Monitor should provide appropriate training and support to staff involved in using the new tools and integrating with existing legacy systems. This may include specific training sessions, detailed training materials, and dedicated technical support to address any issues or questions during the integration process.

Open procurement procedure is recommended.

To ensure an open procurement procedure in the context of the Media Pluralism Monitor. Some key recommendations:

- **Total transparency:** Ensure that the entire procurement process is completely transparent, with all phases and decisions publicly accessible. This includes the clear and timely dissemination of all procurement-related information, including selection criteria, evaluation methods and final decisions.
- **Open Participation:** Encourage open and inclusive participation of all potential qualified suppliers. This can be achieved by disseminating procurement opportunities on public platforms and explicitly inviting participation from national and international suppliers.
- **Fairness and non-discrimination:** Ensure that the procurement process is conducted in a fair and non-discriminatory manner, without favoring any supplier or group of suppliers. This requires an objective and impartial evaluation of the proposals submitted, based exclusively on the selection criteria established in advance.
- **Transparency in selection criteria:** Clearly set out the selection criteria used to evaluate and evaluate supplier proposals. This will allow suppliers to understand which aspects of their service or product will be evaluated and on what basis decisions will be made.
- **Monitoring and reporting:** Implement a monitoring and reporting system to follow the entire procurement process and ensure compliance with the principles of openness and transparency. This may include designating a responsible body to oversee the process and publishing regular reports on progress and decisions made.
- **Access to documents:** Provide easy and complete access to procurement-related documents, including technical specifications, terms of reference and proposals submitted by suppliers. This will allow greater transparency and a better understanding of the process by all interested parties.

Standards adoption.

To ensure the adoption of effective standards in the context of a public procurement process for the Media Pluralism Monitor, here are some recommendations:

- **Research and evaluation of best standards:** Before proceeding with procurement, the Media Pluralism Monitor should conduct research and evaluation of the best standards available in the field of media pluralism monitoring. This may include recognized international standards, guidelines issued by accredited organizations and best practices developed by industry experts.
- **Adoption of open and interoperable standards:** The Media Pluralism Monitor should prioritize the adoption of open and interoperable standards that enable interoperability and data exchange with other systems and platforms. This will allow the Media Pluralism Monitor to easily integrate its tools and data with other initiatives and initiatives in the field of media pluralism.
- **Customizing standards to specific needs:** If necessary, the Media Pluralism Monitor should customize or adapt existing standards to meet the specific needs of its operational context. This may include adding new indicators, changing evaluation criteria, or adapting data collection and analysis methodologies to respond to the unique characteristics of each country's media landscape.
- **Stakeholder involvement in the adoption of standards:** The Media Pluralism Monitor should actively involve relevant stakeholders, including representatives of the media, civil society organizations and public authorities, in the process of adopting the standards. This can help ensure that adopted standards meet the needs and expectations of all stakeholders and enjoy broad support and acceptance.
- **Regularly updating and reviewing standards:** The Media Pluralism Monitor should establish a formal process for regularly updating and reviewing adopted standards, ensuring that they remain relevant and aligned with developments in the field of media pluralism monitoring. This may include regularly evaluating stakeholder feedback, analyzing international best practices, and adapting to regulatory and technological changes.

5.4. STARLIGHT DISINFORMATION-MISINFORMATION TOOLSET

Due to huge significant of the social platforms, external to the EU actors are known to invest in special instruments which leverage algorithms of platforms to promote specific content to attack democracies by manipulating online content. Such content is targeted to justification of war, sowing distrust in democratic governments and promoting all kinds of destructive theories under disguise of free speech. Artificial amplification is one of techniques applied and it has a potential to promote this usually marginal content and expose it to wide auditorium giving the impression that this is important and legitimate “other opinion”. Artificial amplification can be used many different circumstances (e.g.: by organised crime aiming to money laundering, etc.), but it is a clear vector of hybrid attacks, providing a necessary spread of information.

Social platforms (social networks and user generated content platforms like YouTube or mass messaging like Telegram) become key instruments for public debate and interaction. They in many aspects overcome traditional media companies by impact and become default communication media in various cases.

Russia’s war against Ukraine provides a new context of significance of these platforms – actual information wars are happening on the social platforms, bots spreading information and disinformation. Significant efforts and investments are observed by Russia trying to reach out to the western societies to impact their will to support Ukraine.

Artificial amplification can be carried out in many ways. Identification of artificial amplification is among the tasks of practitioners in hybrid threats and other fields. An example can be the elections phase where certain politicians use artificial amplification instruments to gain extensive electoral.

It is also needs to be noted that current legislation is not restricting artificial amplification in a straightforward way.

There are technological solutions for identification of bot reposts, clickbait, SPAM and other means of amplification. At the same time, social platforms seek after methodologies and tools to make them more resilient for this phenomenon.

The solution presented for this particular threat is about the complex evaluation of the content in social platforms providing access to deeper analysis of information on platforms and tools to identify artificial amplification. There are several solutions listed that can be viewed as standalone as well as integrated comprehensive solution.

The Starlight Disinformation-Misinformation solution aims to deliver an easy deployable toolset to address various needs of LEAs and other security practitioners with respect to a variety of threats linked to disinformation and misinformation. The innovation brings together a selection of different applications enabling deep access of information in social platforms and tools to detect different misleading aspects of the information.

Version 1 of the Starlight Disinformation-Misinformation toolset consists of the following modules:

Telegram Crawler, which analyses Telegram content (groups, posts, text, media);
DeepFake detection, which analyses changes in images and videos;
Forbidden Symbol Detection, which analyses forbidden symbolics;
Geolocalization, which analyses location;
Toxicity, which analyses toxic, offensive content, comments, hateful language;
Story Clustering, which analyses reposting chains;
Twitter Crawler, which analyses Twitter content (groups, posts, text, media);
Bot Detection, which analyses if posts were published by a bot;
Clickbait detection, which analyses if posts are clickbaits;
SPAM Detection, which analyses if posts are SPAM;
Sentiment Analysis, which provides semantic analysis of the post content based on basic emotions model;
Fake content Meta Detection Engine, which determines fake content on the basis of posts' URL analysis.

The innovation is integrated within one interface and its contents is planned to expand. The Starlight solution is generally multi-lingual, with only several modules in one (English or German) language.

At this point of time the Starlight project is developing solutions for LEAs, but it can be developed further for different target groups and serves as a good example of what is needed to handle artificial amplification complexity in information dissemination.

In reference to T4.1. and specifically D4.3, the focus of the deliverable will be on analyzing the application of the Specific Recommendations for EU-HYBNET uptake strategy (Section 4) of the Starlight Disinformation-Misinformation toolset and its uptake, with the focus on:

- Identifying the features the Innovation possesses which are relevant for the procurement process.
- Identifying whether public procurement instruments of the EU landscape actually allow procurement of the kind of appointed / selected innovation. In this context, one of the important conclusions will be that either the existing procurement and funding instruments are sufficient, otherwise recommendations can be provided.
- Practical recommendations regarding features of the appointed / selected innovation.

Analysis of the Starlight toolset (hereinafter: Starlight) against the Specific Recommendations for EU-HYBNET uptake strategy

Market Consultation. Prior to initiating ICT's public procurement process, it is recommended that public institutions consult the market to identify state-of-the-art and commercial solutions. Transparent market engagement is considered important in order to identify the feasibility of the tender by assessing their needs, identifying what standards and other technical specifications to use as well as to look for existing solutions that might be re-used, without having to "reinvent the wheel". On a European level there are several repositories that could be consulted in relation to identifying the aforementioned points such as Joinup, the European Federated Interoperability Repository (EFIR) and the European Interoperability Framework (EIF)⁴⁶.

- *Features of innovation relevant for procurement process.*
Starlight is one of many solutions in the market for automated analysis of dis- and misinformation and with time, the number of similar products will possibly grow. This translates into a need for a market consultation in order to select a solution that would fit the needs of the ordering organisation. Depending on those needs, an appropriate tender procedure will have to be selected, although with Starlight being in TRL-8 level and expected time-to-market being 1-2 years, principal tender procedures will possibly apply. Also, Starlight's value is bound to be above the European threshold, confirming the need of such a procedure.
- *Do EU procurement instruments allow for actual procurement of innovation?*
Yes, Starlight may be procured under the current procurement instruments. The selection will be based on individual legal circumstances available in respective countries.
- *Recommendations regarding innovation.*
Purchase and maintenance costs have to be determined, also with respect to future development of the innovation.

Available templates. Officials responsible for drafting public procurement specifications and documents would be very much facilitated in case they use as a starting point readily available template. Generally, regular procurement templates can be found in TED⁴⁷, whereas for innovation procurement public entities could consult the EAFIP toolkit⁴⁸. At a national level, several initiatives have been set in place also. Indicatively, in Poland, Public Procurement Office is the responsible body for drafting public procurement policies and regulating and coordinating the national public procurement system. In addition, the PPO is in charge of the preparation of standardised tender documents, as well as guidance material. Similar initiative has been set in Luxemburg, the Business Process Management Office (BPMO) which provides several tools and templates to assist contracting authorities in the tender preparation.

- *Features of innovation relevant for procurement process.*
The description of Starlight does not contain any information of guidance to assist contracting authorities in the tender preparation.
- *Do EU procurement instruments allow for actual procurement of innovation?*
N/A
- *Recommendations regarding innovation.*
To expedite the procurement process, a set of specifications and information necessary for contracting authorities to draft tender data could be advantageous.

⁴⁶ https://ec.europa.eu/isa2/sites/default/files/isa_annex_ii_eif_en.pdf

⁴⁷ <https://simap.ted.europa.eu/standard-forms-for-public-procurement>

⁴⁸ <https://eafip.eu/>

Skilled personnel. It is highly recommended to involve in the procedure, experts from IT department. Their involvement is crucial in the needs' identification, the development of the technical specifications, the monitoring of the development of the solutions and their testing to ensure that expertise in cybersecurity aspects is considered. In this context cybersecurity threats should be considered when planning the procurement of a new system or service while threat identification should be continuous in the whole procurement lifecycle.

- *Features of innovation relevant for procurement process.*
There is no data in the description on the skills of IT department, technical specifications etc. necessary to uptake the innovation.
- *Do EU procurement instruments allow for actual procurement of innovation?*
N/A
- *Recommendations regarding innovation.*
To expedite the procurement process, a set of specifications and information necessary for the IT side of the contracting authorities could be advantageous. This is key especially in the case of LEAs, who may have very specific requirements and/or limitations/expectations in this regard.

Adequate vulnerability assessment. Vulnerabilities should be considered before procuring new products or services and that vulnerabilities of existing products/services are monitored throughout their lifecycle. Moreover, the procuring organisation should establish a minimum set of security tests to be performed on acquired products or system, depending on the product/system type. It is also important to note that a newly acquired or newly configured product must undergo a penetration test in its actual installed environment. In the same way, remediating action taken must be online with the operational parameters of the actual environment.

- *Features of innovation relevant for procurement process*
The innovation operates in the internet, which results in it being prone to any external malicious activity. Vulnerability issues are one of key factors for LEAs when assessing the appropriateness and usability of a new solution in daily operations.
- *Do EU procurement instruments allow for actual procurement of innovation?*
N/A
- *Recommendations regarding innovation.*
Develop safeguards and thoroughly test the innovation, with respect to external and internal (user-originating) threats.

Intellectual property rights (IPR) provisions. The way in which ICT solutions are licensed may affect their possibility to be shared and re-used. To ensure that the procured solution can be re-used by other public authorities or redistributed in any other way it is important to include the right IPR provisions in the procurement documents. This is especially important while procuring ICT solutions that citizens and businesses have access to. An option is to include in the tender documents requirements that could ensure maximum public access for citizens and businesses. This can be covered by requesting access to the procured solution by several diverse systems, without being limited by the use of specific branded products or application. Accessibility needs for people with disabilities should also be taken into account.

- *Features of innovation relevant for procurement process.*
There is no information on IPR in the innovation description.
- *Do EU procurement instruments allow for actual procurement of innovation?*
N/A
- *Recommendations regarding innovation.*
Develop IPR provisions, taking into account that data linked with search history, operational interests and results is not available to any party except the client.

Open requirements. The requirements should be presented in an open manner. When procuring ICT solutions, there might be the tendency to request very specific solutions in order to ensure that what is requested will do exactly what the procuring entity is expected to do. However, such an approach hides several risks and disadvantages. First, customised solutions are generally more expensive than standard ‘off-the-shelf’ options. In addition, they are more difficult to be reused. Finally, suppliers who develop and manage custom-made systems can retain all the information about the system and make it very difficult to migrate to another supplier or to maintain or upgrade the system in the future. Excessive customisations may lead to supplier dependence and thus should be avoided. This aspect has been covered earlier in the document, however, below are some specific instructions related to the procurement of ICT technologies:

- a. Benchmarks should be used to indicate that products should meet or exceed overall performance ratings;
 - b. Use functional requirements or performance to ensure that the procurement specifies functional requirements in a vendor-neutral manner;
 - c. Refer to standards and technical specifications: to avoid mentioning a specific process or referring to a specific trademark;
 - d. Use specific references only exceptionally when there are no other possible descriptions that are both sufficiently precise and intelligible to potential tenderers.
- *Features of innovation relevant for procurement process.*
At this stage, there is no concrete data on how customized the system can be, depending on the client.
 - *Do EU procurement instruments allow for actual procurement of innovation?*
N/A
 - *Recommendations regarding innovation.*
Keep the system as open as possible. Enable the internal client’s IT department to customize the application.

Compatibility with legacy systems. A common mistake that contracting authorities generally make is not to request compatibility with previously purchased proprietary solutions or as they called legacy systems. It is recommended to request for their interoperability of the new solution with the existing ones. As discussed in the literature, public authorities can be inefficiently constrained in their purchase of ICT by the existence of legacy systems, or by being locked-in to existing ICT products and services. ICT lock-in is a widely known concept, which has negative implications for the procuring organisations. Its alleged causes are the lack of interoperability, the lack of compatibility as well as high switching costs. Some countermeasures have been implemented, first and foremost the adoption of open source and open standards and the creation of some guidelines. In this context in order to ensure also that the purchased solutions can be further used to deliver trans-EU services, it is recommended to support solutions that use standards and no proprietary elements. Public procurements should include only standards that are supported by the market and that are recognised by a formal standardisation organisation, or a technical specification that has been identified by the Commission or by a national organisation. Moreover, functionalities to make data transfer effective should be requested meaning the setting of gateways to keep legacy systems/machines connected. Another approach in order to avoid lock in is to include exit costs in the procurement.

- *Features of innovation relevant for procurement process.*
No data in the description.
- *Do EU procurement instruments allow for actual procurement of innovation?*
N/A
- *Recommendations regarding innovation*
Enable interoperability with most popular LEA analysis tools and information exchange systems.

Open procurement procedure is recommended. Open procurement procedures are generally recommended when procuring ICT goods and services. Indeed, it can be seen that different procedures are chosen for different reasons: for instance, restricted procedures are preferred when procuring services requiring special features provided by one operator only (military purposes, personal data protection, public connectivity services, specific activities in strategic sites ...), as well as when too many vendors could be involved. On the contrary, negotiated procedures can be better when there exist some time boundaries, or a supplier's services uniqueness; finally, there were some opposite comments on competitive dialogue in relation to the cost effectiveness it can bring.

- *Features of innovation relevant for procurement process.*
No data in the description. However, there seems to no limitations to hold any type of procurement procedure with this solution.
- *Do EU procurement instruments allow for actual procurement of innovation?*
N/A
- *Recommendations regarding innovation.*
Prepare for various types of procurement procedures.

Standards adoption. Cost considerations, quality control concerns, supplier's expertise and the need of direct control are driving factors behind "make-or-buy" decisions. Similarly, these factors should be used as "motivational drivers" to promote the adoption of ICT standards that indeed support the cost reduction and ensure a good level of quality.

- *Features of innovation relevant for procurement process.*
Planned accreditation is an expected "motivational driver".
- *Do EU procurement instruments allow for actual procurement of innovation?*
N/A
- *Recommendations regarding innovation.*
Ensure the ability of the solution provider and his team to obtain any facility and personnel security clearances. Be able to provide expertise history with entities from LEA sector.

5. CONCLUSIONS

In this document, the current procurement landscape in the EU has been analytically described whilst special attention has been given to innovation procurement that EU-HYBNET activities are mainly involved with.

For D4.1 of the 1st cycle, under the scope of its relevant task (T4.1), a specific questionnaire was prepared and circulated in order to collect the requested input regarding the procurement legislative background of each country participating in the project. For D4.2 of the 2nd cycle, the same questionnaire was targeted at the remaining 13 EU Member States, so as to more fully cover the European procurement landscape. The input gathered in both cycles was analysed at both the national and European level. Specifically, the different innovation friendly procurement types were defined, as well as the financial tools used to support innovation procurement through these surveys, along with a review of the existing procurement and policy practices.

In more detail, from the answers received and the literature review conducted by all the task participants, recommendations for procurement procedures were derived, as described in Section 3. The document additionally includes specific recommendations for the procurement of the sectors under which the solutions identified as priorities by WP3 *“Surveys to Technology, Research and Innovation”* fall into.

Overall, mapping of the EU procurement landscape was achieved at a high level since the analysis prepared was based on all available material including legal regulations, procedures and guidelines, and served as extremely useful feedback for recommendations to T4.2 regarding formulation of benchmark cases for innovation uptake.

Subsequently, specific recommendations for the EU-HYBNET uptake strategy were outlined and presented in Section 4. In this cycle and specifically in D4.3, task participants focused in more depth on applying these recommendations to the four most promising innovations which were identified in WP3. The analysis of the recommendations applied separately for each innovation may, in varied degree and with various modifications, apply to the procurement of all four of these innovations.

6. FUTURE WORK

This deliverable, carrying on from the work performed in D4.1 and D4.2 provides an overview of the procurement landscape at the EU level and recommends procurement steps for the four most promising innovations. The legislative background of all EU Member State countries are analysed, along with the procurement procedures followed and the tools used. The work performed is of high importance in the project's proceedings and feeds information into T4.2 – Strategy for Innovation uptake and industrialisation and T4.4. – Policy Briefs, Position Papers, Recommendations on Uptake of Innovations and Knowledge. Moreover, under the activities of Task 4.1., several examples of procurement cases have been identified. Following the analysis of these cases, the pitfalls that could be avoided and the success factors have been listed. These aspects play an important role in the development of the uptake strategy providing recommendations on procedures to be followed and areas in which further attention is needed. T4.1. deliverables developed specific recommendations for the sectors where each one of the four most promising innovations belong to.

Moreover, under the activities of Task 4.1., special attention has been given on the incorporation of innovation procurement as well as the types of innovation friendly procurement procedures. EU has identified that innovation procurement procedures are a facilitator to the innovation uptake.

Lastly, the importance of T4.1 to the future project's work is highlighted since it was the initial step on the uptake strategy creation. An analytical application of these recommendations to the rest of the innovations identified in WP3, but also on other future innovations that are relevant to the core themes of the project could form the basis for future work.

ANNEX I. GLOSSARY AND ACRONYMS

Table 1 Glossary and Acronyms

Term	Definition / Description
CPV	Common Procurement Vocabulary
CPP	Central Public Procurement
CSIRT	Computer emergency response team
DPIA	Data Protection Impact Assessment
EAFIP	European Assistance For Innovation Procurement
EASME	Executive Agency for Small and Medium-sized Enterprises
EC	European Commission
EIC	European Innovation Council
FP7	Funding Programme No 7
GDPR	General Data Protection Regulation
GPA	Government Procurement Agreement
ICT	Information Communications Technology
IPR	Intellectual Property Rights
LEA	Law Enforcement Agency
MS	Member States
NATO	North Atlantic Treaty Organization
NIS	Network and Information Systems
OECD	Organisation for Economic Co-operation and Development
PCP	Pre-Commercial Procurement
PPI	Public Procurement of Innovative Solutions
PPP	Public-Private Partnerships
TED	Tender Electronic Daily
TFEU	Treaty on the Functioning of the European Union
VAT	Value-Added Tax
WTO	World Trade Organization

ANNEX II. REFERENCES

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ANNEX III. QUESTIONNAIRE

EU-HYBNET/iLEAD Innovation Procurement Mapping QUestionnaire

Fields marked with * are mandatory.



Dear *EU-HYBNET/i-LEAD Consortium Partner,*

One of the goals of the projects is to perform a vast review of the EU procurement environment in order to share good practices, foster joint procurement actions and stimulate innovation uptake accross Europe.

Thus, we kindly ask you to fill the questionnaire on (innovation) public procurement.

Mapping current procurement processes

- * 1. Please briefly describe the public procurement process in your country (practices followed, legal background, national software tool used etc)?

- * 2. Does your national Public Procurement legislation regulate the deployment of market consultations (dialogue with the industry) in preparation of a procurement?

- * 3. Do you foresee major delays for the procurement procedure if one of the bidding companies would challenge the award decision in court (e.g. due to long duration of courts proceedings)?

- 4. Is there a Central Purchasing Body in your country involved in procurement processes? Please provide relevant information regarding its involvement in the procedure.

- 5. Do you have any limitations (security constraints for example) on the participation in the procurement to companies from countries affiliated to the WTO Government Procurement Agreement (GPA)?

The 15 Parties to the GPA are: Armenia, Canada, the European Union (and its 28 Member States), Hong Kong China, Iceland, Israel, Japan, the Republic of Korea, Liechtenstein, the Netherlands with respect to Aruba, Norway, Singapore, Switzerland, Taiwan (Chinese Taipei), and the United States.

Innovation procurement - Relevant policies

- 6. Is innovation procurement regulated in your national Public Procurement legislation? If yes, please provide an outline of the legislative provisions.

- 7. Are there any specific mandatory legal provisions that could limit the procurement approach under an innovation procurement procedure?

Please take into account the following aspects in your answer: Standards IPRs, exclusion grounds, limit the subcontracting, time limits for receipt of tenders, standstill period, obligatory Letters of Guarantee, any foreseen

obstacles related to the publication of the documentation on your e-procurement platform software tool (for example not support English language), economic eligibility criteria, problems in the Phased approach of the PCP procurement.

- *8. Is there a national/regional/local policy or standards in place to set targets/stimulate innovation procurement?**

- *9. Is there any national regulation/policy that restricts your freedom to purchase technologies owned by companies from specific countries? If so, please detail or provide text of the provisions**

- *10. Is there any regulation/policy that mandates the performance of R&D contracts on the territory of your country?**

- *11. Do you foresee any other legal obstacles in the deployment of an innovation procurement that are not addressed in the questions above?**

Joint cross-border procurement

- * 12. Does your national Public Procurement legislation allow joint procurement with procurers from other countries?

- * 13. Do you see any legal obstacles to participate in a joint procurement procedure?

Procurement under the defense and security procurement rules

- * 14. Does your national Public Procurement legislation exempt from its scope of application the innovation procurement in the security area? What are the conditions for the application of the security procurement process in your country (in particular related to the involvement of classified information)?

- * 15. Do you foresee any (legal) obstacles in the participation of contractors from other countries to the procurement procedure (security clearances for example) or in joint procurement procedure on security solutions?

Economic aspects

• 16. Are there any funding schemes that support innovation or regular procurement?

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• 17. Do you foresee difficulties in economic transactions with suppliers located in other EU countries or in non-EU countries that are caused by your VAT legislation? Please provide a description of the provisions of your VAT legislation.

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Benchmark cases or Pitfalls

Please report at least one benchmark case of national or cross-national public procurement.
(If you have Innovation Procurement experience you may report this)

	Answer:
• Title of procurement/ Year:	
• Contracting Authority/ Type:	
• Short description:	
• Applicable law:	
• Type of contract / Type of procedure:	
• Duration of the tender:	
• Value of tender:	

Specific questions concerning the process of public procurement:

	Answer:
• Please elaborate on the items that prove it successful?	
• Lessons learned: any good practices that would you suggest to be followed?	

Please report at least one pitfall case of national or cross-national public procurement.
(If you have Innovation Procurement experience you may report this)

	Answer:
• Title of procurement/ Year:	
• Contracting Authority/ Type:	
• Short description:	
• Applicable law:	
• Type of contract / Type of procedure:	
• Duration of the tender:	
• Value of tender:	

Specific questions concerning the process of public procurement:

	Answer:
• Did you face any issues for the execution of the procurement?	
• Lessons learned: any suggestions on how these pitfalls could be avoided?	

Please provide any relevant reports, papers, policy documents, recommendations, literature on the topic.

Thank you very much for filling the questionnaire!



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