Regional guidebook on circular procurement

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LITHUANIAN INNOVATION CENTRE is a non-profit organization of public innovation support and consulting services, capable of consolidating the interests of business, science, politics, and society to increase the international competitiveness of the Lithuanian economy. Since 1996 LIC provides expert consultative assistance to institutions implementing innovation and technology development policy. LIC conducts research in priority areas of Lithuanian science, technology, and innovation policy, provides information, reports, insights, and recommendations in order to encourage evidence and experience based decision making.

For more information on circular public procurement project visit www.lic.lt

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Introduction

Lithuanian innovation centre together with international partners aims at promoting the transition to a more circular economy by increasing the implementation of the circular public procurement (CPP). The international consortium identified that main barriers that hinder the systematic implementation of the circular procurement are general lack of knowledge and expertise, procedural and legal barriers, and procurers´ preconceptions about applying, as well as lack of, advanced restoring and recycling processes that could prolong the life-cycle of products.

Therefore, LIC aims to develop a guide including Lithuania-specific overview and supporting material for the decision-makers, procurers and suppliers on circular procurement procedures and practices. The aim of the guide is to raise the awareness of the regional stakeholders regarding CPP and to provide tools and suggestions to them on how to implement the CPP in an effective and efficient way in the future also by boosting the involvement and participation of the regional companies in the circular procurement process.

1. Circular Procurement as an Emerging Concept in EU

In the EU Action Plan for the Circular Economy 2015 public procurement is recognized as a key driver in the transition towards the circular economy, and it sets out several actions which the European Commission will take to facilitate the integration of circular economy principles in Green public procurement (GPP). These include: emphasising circular economy aspects in new or updated sets of EU GPP Criteria, supporting a higher uptake of GPP among European public bodies, and leading by example in its own procurement and in EU funding[1].

In the new Circular Economy Action Plan 2020 public procurement maintains its importance in shaping sustainable and circular consumption in the public sector that represents around 14% of EU GDP.[2] In addition to guidance and dissemination activities of good practices, European Commission is planning to propose mandatory GPP criteria and targets in sectoral legislation together with phasing-in mandatory reporting on GPP that will come into effect as of 2021. Current EU approach clearly indicates GPP as the principle instrument implementing circular procurement. However, the complex format of the circular procurement requires the inclusion of innovation policy dimensions that would stipulate the creation of new circular solutions.

The objective of CPP is to greening public procurement in accordance with the principles of circular economy through the role of public authorities by promoting the purchase of goods, works and services that:

- have a reduced environmental impact;
- contribute to create closed material and energy loops within supply chains;
- minimise or avoid negative environmental impacts and waste creation throughout the whole life-cycle;
- promoting the replacement of products by services[3].

As such CPP can significantly stimulate demand for products and services that are made according to circular economy principles and support the new and innovative circular business models and related networks. Therefore, it

[1] European Commission: Public Procurement for a Circular Economy, October 2017

[2] https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1583933814386&uri=COM:2020:98:FIN

[3] https://www.circular-europe-network.eu/library/thematic-guidance-material/roadmap-circular-public-procurement/#1524821004181-d984db0a-b554

can be seen as a strategic instrument that plays important role in the transition towards circular economy.

1.1. The categories of circular public procurement

CPP has been realised in different forms and different sectors (e.g. construction, waste management, food and catering as well as certain product groups such as furniture textiles). It is possible to define different procurement categories or approaches to circular procurement. One is clear, a circular procurement process has a broader scope than just placing the order for a product. The focus of the circular procurement approach can shift from better quality in circular terms to new and innovative products and services, new business models and finally to the creation of circular ecosystems. The choice of the focus in the circular procurement depends on the procurement strategy, ambitions and priorities of the authority. Therefore, it is important that public organisation has defined its strategic view and ambition concerning the circularity and how it can be integrated into existing procurement practices before it starts with circular procurements. The procurers should also understand the critical points within the procurement process and what influence the public authority would like to have on bidders. This helps to define the scope of the procurement and choice of the procurement approach they would like to follow.

The approaches to circular public procurement can be grouped/categorised as follows (based on CIPRON, 2017) (Table 1):

1. **Procurement of improved products and services by adding GPP-based "circular criteria"**

   Circular procurement can be promoted by adding "circular criteria" (e.g. criteria for recyclability, use of recycled materials, reuse, etc.). This means buying circular products and services, such as paper made from 100% recycled material. Some of these criteria that support circular elements can be found in the GPP criteria palettes or eco-labels. This may be considered the simplest way or the first phase of circular purchase.

2. **Procurement of new and innovative products, services and materials promoting circular economy-based business**

   Public procurement could provide conditions that stimulate innovative solutions/products and create new business models and markets for new products. Such products are remarkably better in terms of recyclability, recycled materials, disassembly, long lifespan, etc. These are products/services that are commercialised but have not been on the market for a long time, or products that would be developed as a result of the procurement process. This approach highlights the procurer's ability to conduct an innovative procurement process. Examples of such

products are textiles with 100% recycled content or building components made of recycled plastic.

3. Procurement of services and new business concepts

This approach involves more performance-based procurement and procurement of services instead of products. Such procurements give the producers/service providers the possibility to retain greater control over the items they produce/offer and the embodied energy and materials, thus enabling maintenance, reconditioning and recovery. The procurers usually benefit from this type of procurements, as they only pay for the service they require and use, and often receive a better service as the producer/service provider has a greater interest in providing a product that lasts. Examples of such new business models are product-service systems, leasing concept, shared use, buy-per-use and buying and selling back. More traditional examples include furniture leasing and car hiring. New thinking is needed for buying services instead of products, e.g. lighting for the next 30 years instead of lamps.

4. Procurement promoting industrial symbiosis and circular ecosystems

This approach addresses the investments and creation of specific circular cooperation networks, industrial symbiosis schemes and other circular ecosystems that call for commitment from different stakeholders. Circular ecosystems could be efficient platforms in supporting closed loops and creating networks in which the waste or excess energy from one actor would be used as a raw material/input for another. Examples include buses using locally produced bioenergy, or construction sites that utilise waste material from other processes.

Table 1. *Four approaches to circular public procurement (based on CIPRON, 2017)*

Procurement including GPP based "circular" criteria	Procurement of new "circular" products and materials	Procurement of services and new business concepts	Procurement promoting circular ecosystems
Better quality products ⇨	New products ⇨	Product service systems ⇨	Circular ecosystems
Improved products and services are procured by adding GPP and circular criteria to the tender competition:	New innovative circular products are procured and / or developed by innovative public procurement:	Product-service systems are procured, and new approaches are applied that promote circular aspects:	Procurement stimulates the development of industrial symbiosis and other circular ecosystems:
Prevention of waste Recyclability Share of recycled materials Reusability Avoidance of certain hazardous chemicals	Products that are significantly better in terms of recyclability, share of recycled materials, long lifespan, disassembly, etc.	Combined product service business models Leasing concepts Renting Shared use Buy-per-use	Develop or support closed loops Support industrial symbiosis based collaborative network Create new networks and alliances
Examples: Paper products (e.g. copying paper made from 100% recycled paper fibres) Office IT equipment and other ICT devices (e.g. avoidance of hazardous substances, product life-time extensions) Furniture (e.g. providing easy-to-disassemble, repairable and recyclable furniture) Cleaning products and services (e.g. avoidance of hazardous substances) Packaging (e.g. degrease the quantity of packaging)	Examples: Building components of recycled materials Textile products made of recycled materials Furniture (e.g. redesigned, reused, refurbished furniture and related services to prolong the life-time) Building and construction (e.g. use of recycled asphalt, circular reconstruction of buildings)	Examples: Leasing furniture instead of buying it Leasing football stadiums (artificial turf) instead of building and owning them Additional services that enable the prolonged life-time of used products and services	Examples: Buses running by locally produced biogas Locally managed and produced biomass based renewable energy production systems Construction projects with closed material loops

2. Circular procurement in Lithuania

Lithuanian law and legislative system have not defined CPP. However, there is number of strategies and frameworks that creates opportunities for its implementation. CPP can mainly be addressed from two sides: GPP and public procurement of innovations (PPI) (Figure 1).

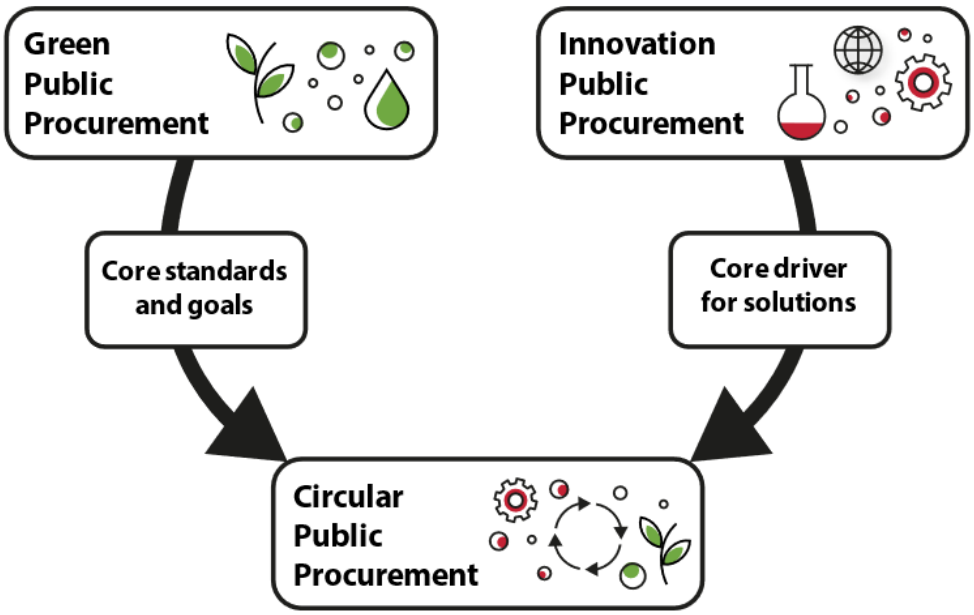

Figure 1. *Circular public procurement related policies*

2.1. Green public procurement

Lithuanian government has approved the National Program for the Green Public Procurement Implementation already in 2007. The aim of this program is to promote GPP and ensure that purchased goods and services would be as environment friendly as possible. In the frame of it the list of products and the environmental protection criteria which have to be applied for their procurement have been approved. Minimum environmental criteria must be applied on a mandatory basis, while extended environmental criteria are optional. At this moment, number of environmental protection criteria are in line with the principles of the circular procurement. Thus, some of the GPP may be considered as CPP. For example, from eco-design perspective Extensive environmental protection criteria for mobile phones and chargers state that design of a product should be easy to disassemble and separate different parts of materials, if it is possible to recycle plastic parts and accumulators in order to use them as a part of other operational part's materials.

According the Lithuanian Republic Government's decision on amendment of national green procurement implementation program in 2016, procuring organizations should apply green criteria at least in 40 % of their total procurements. However, at the moment, these goals are not achieved. In 2018, the full scope of Green public procurements constituted 9.3% of the scope in value (7% in number) of all public procurements. According to GPP annually reports from 2014-2018 period, GPP of highest value was performed by purchasing road works and road signs (433,8 mln. Eur). Moreover, the absence of progress (2017 GPP in value – 7.6%, in number – 3.4%; 2016 GPP in value – 10.2%, in number – 3.7%; 2015 GPP in value – 14.7%, in number – 3.3%) indicate insufficient and scattered policy implementation actions concerning GPP.

Targets for GPP are also set in the National progress program which is the main strategic document for the development of Lithuania up to 2030. Principle of sustainable development is identified as one of the three main horizontal principles together with innovation and equal opportunities. And it will be measured by the progress of applying GPP. It is planned to reach 50 % of GPP in 2025 and 55% in 2030.

In this case, GPP provisions serve as a first approach of circular procurement – the acquisition of better quality products. This approach is the least complex out of four and requires smallest resources, so it could be broadly applied in public institutions. The understanding of GPP peculiarities is an important part of the implementation of circular procurement, as both concepts can share the same criteria, evaluation methods, goals, etc. Having strong tradition in GPP application, contributes to less difficult recognition of CPP.

However, contracting authorities are expressing their doubts about green procurement, because procuring the goods through green procurement criteria is leading to the increase in the price. Thus, it is important to reinforce the capacity in setting the green criteria and deciding the scenario where green procurement is effective and efficient in achieving both of economic and environmental purpose[4].

In addition, there is a strong need to review significantly the environmental criteria which are listed, as at the moment, the criteria are very specific and detailed covering only a limited scope of environmental protection requirements. Environmental protection requirements of a more general nature are rarely foreseen in the narrow definition.

Therefore, the definition of green procurement, which would not be limited to requirements for green products, but would allow taking into consideration broader environmental requirements, would satisfy the best integration of environmental protection requirements and circular economy principles into the

[4] https://www.oecd.org/governance/public-procurement/publications/C1-improving-lithuania-public-procurement-system.pdf

public procurement. If a narrow definition of green public procurement continues to dominate in Lithuania, there is a danger that green procurement will remain a formal instrument. It is suggested to encourage more frequent use of advanced environmental criteria, gradually moving to the exclusive implementation of these criteria[5].

Some of the GPP criteria are also out of date and are needed to "lift up" to another level. For example, the GPP criteria for IT equipment (computers, laptops) define the requirements, which became a norm these days and it would be even hard to find the computers which do not meet these requirements.

At the moment the GPP is not seen as a tool to achieve broader goals of the organizations and is not integrated into the organizational strategies and plans.

2.2. Public procurement of innovations

One of the pillars of Lithuanian national progress programme is the innovative public procurement, as innovations are explicitly mentioned as one of the horizontal priorities which has to be applied in all the policies. It also sets quite ambitious targets to reach 20% of the innovation public procurement of all the public procurement in 2030, whereas at the moment the percentage is less than 1%. It aims to encourage innovation development and adjustment to public sector in order to supply public sector needs and to help new products to enter the market. The Ministry of Economy and Innovation published Guidelines on Innovative Public Procurement. These guidelines describe how public procurers can buy goods, services or works of better quality, more adapted to their needs, services or goods that could enhance performance of public procurers and quality of their services, and increase demand for innovation on the market.

Ministry of Economy and Innovation has drafted and the government of Lithuania in 2015 has established the law of pre-commercial procurement (PCP). It has followed the 4-step model proposed by the European Commission. PCP might be treated as innovation procurement, however, not as the public procurement as it is understood under the Law on Public Procurement of Lithuania, because the object of such a procurement is not final products or services but the R&D services. It has to be implemented when there is no innovative product on the market which the contracting authority needs or there is no evidence that market players in the nearest future (in less than a year) will produce such a product.

Three other approaches to CPP (Procurement of new "circular" products and materials; Procurement of services and new business concepts; Procurement

[5] RudauskienėR. (2019) "The Definition of Green Public Procurement in Lithuanian Legal Regulation", *Teisė*, 1100, pp. 103-118. doi: 10.15388/Teise.2019.110.6.

promoting circular ecosystems) are multidimensional and require integrated solutions. These kind of procurement are aimed at the creation of new products, services, business models or relations (ecosystems) that would feature improved characteristics of existing linear alternatives. Therefore, demand-oriented innovation and innovation procurement policies are extremely important complement to GPP as they create more interactive relation and co-operation between the procurer and supplier while carrying out the procurement.

PPI is relatively new in Lithuania and is not often use by the contracting authorities because of several challenges related to it. Firstly, there are additional risks related with acquisition of innovative solutions and contracting authorities tend to keep the status quo situation and use the methods which have been tested and tried before in order to avoid uncertainties. Secondly, they lack competences and experience in this kind of procurement. While there are no legal obstacles to conduct innovative procurement, traditional practice of using the lowest price as a single criteria for awarding contracts is dominating. Even if contracting authority has strong arguments in conducting innovative procurement, they face pressures to prove that their choice is made without any intention to restrict competition and is not corrupt (OECD 2017, p. 127-128). Thus, education and training which would increase the capabilities of contracting authorities and will also change their mind-sets towards more innovative approaches are very important in order to use the potential of this instrument for supporting circular public procurement.

2.3. Key stakeholders and their role in circular procurement

The Ministry of the Economy and Innovation acts as the legislative and regulatory authority of public procurement in Lithuania. However, the Ministry of the Economy and Innovation is not involved in the implementation or control of public procurement. It is also a responsible institution for formulating and implementing innovation policy and is a main body for promoting innovation public procurement.

Ministry if Environment is a responsible institution for formulating and implementing the policy regarding the GPP in Lithuania. It adopted the policy guidelines and provided the list of goods to which environment protection criteria must be applied and sets out the targets of GPP.

The Public Procurement Office (PPO) is an independent governmental agency which is in charge of the overall implementation of the public procurement policy set by the Ministry of the Economy and Innovation. PPO has its autonomy in its decision-making. The PPO's functions include providing methodological assistance to the contracting authorities, administering the central e-procurement portal, preventing infringements, controlling contract-

ing authorities' compliance with the law and coordinating and monitoring public procurement procedures together with partner ministries and other State authorities.[6]

The Central Purchasing body (CPO) conducts centralised procurement on behalf of contracting authorities, including the central administration and its territorial branches, as well as local authorities. It aims to ensure the rational, transparent and efficient use of public funds and administrative resources through centralised public procurement. It negotiates framework agreements for a wide range of products, services and public works, which contracting authorities can browse and order online using an e-catalogue. It also initiated the more frequent use of GPP by developing green public procurement specifications for certain categories such as IT products and mobile phones.

As PCPs are regulated by the separate law (not a subject of Law on Public Procurement of Lithuania), Agency for science, innovation and technology (MITA) is a coordinating authority for it. MITA assesses documents, takes part in the meetings of the commission of contracting authority, consults (contracting authorities and bidders), organizes trainings, monitors, collects, systematises and analyses data on accomplished and ongoing PCPs.

As CPP is in a crossroad of several policy measures, it has a broad range of stakeholders involved without one institution that would be solely responsible for it. Policy measures such as PCP and GPP are very important in fostering CPP. Lithuania has made a considerable progress in the field while forming the right regulatory framework.

However, in most cases, procurement is still considered an administrative task rather than a professional one and much more has to be done in capacity building and mind-set change among the representatives of contracting authorities in order to use procurement to achieve broader policy objectives, the so-called strategic use of public procurement.[7] Responsibilities are shared between the Ministry of Economy and Innovation and the Ministry of Environment. Close coordination among the two ministries is needed in order to organize trainings, provide right training materials and other means in order to foster the practical use of these instruments.

[6] Public procurement – Study on administrative capacity in the EU Lithuania Country Profile https://ec.europa.eu/regional_policy/sources/policy/how/improving-investment/public-procurement/study/country_profile/lt.pdf

[7] https://www.oecd.org/governance/public-procurement/publications/C1-improving-lithuania-public-procurement-system.pdf

2.4. Support measures for circular procurement

2.4.1. Financial support

The existing financial support framework in Lithuania does not include specific provisions for the GPP or CPP. However, the CPP can be funded using the general innovation support measures.

Most important policy initiative regarding innovation public procurement has started in 2015. Measure “Pre-commercial procurement LT” was designed under the first priority of Lithuanian Operational programme. It was designed to encourage innovation development and the creation of new products and services. Policy measure was developed specifically for the public institutions to procure R&D services rather than actual already existing goods or services. The total budget allocated for this support measure was 20 mln EUR. “Pre-commercial procurement LT” in the context of Lithuania is a unique support measure as it is the only one demand-side innovation support scheme.

A support scheme encourages public institutions to adopt a PCP mind-set by significantly reducing risk. The programme provides funding up to 85% of the PCP with the remaining 15% to be financed by the contracting authority. The programme can support PCP at different stages:

- creation and approval of the concept of innovative products (stage I);
- creation of a prototype of an innovative product (stage II);
- pilot of innovative product, which may include the purchase of an innovative product (stage III).

Supported activities include the creation of new, non-existing products, services, materials, processes or substantial upgrade of an existing product, services, material, process, addressing societal and economic challenges of public interest.

Main beneficiaries of this measure are public sector institutions and businesses. Public sector institutions can improve their services, make it more cost or environmentally effective. On the other side, business have an opportunity to develop new products and services that are not yet available on the market or make major improvements to the existing products/services.

However, measure “Pre-commercial procurement LT” is not very attractive for the procuring organization because it has a few relevant shortcomings. For example, to be fully involved in the procurement process, the procuring organisation should be well aware of innovation and R&D concepts which sometimes can be a matter of discussion. Also, the measure itself is quite

specific and the project selection and evaluation process become more complex and time-consuming than usual because of the involvement of three institutions.[8] Having in mind the intricacy of circular procurement conception, additional burdens are only repelling organizations from being involved in these processes.

CPP in Lithuania can be supported only in the thematic fields, which are involved into the Lithuanian smart specialization strategy.

The Smart specialization priorities of Lithuania are:

- Energy and a sustainable environment;
- Health technologies and biotechnologies;
- Agro-innovation and food technologies;
- New production processes, materials and technologies;
- Smart, clean, integrated (linked) transport;
- Information and communication technologies;
- Inclusive and creative society.

Among priorities of smart specialisation circular economy is not mentioned, however this strategy makes indirect opportunities to create products, processes or technologies which could contribute towards circular economy. It could be achieved by various development areas of smart specialisation, especially through “Energy and sustainable environment” and „New production processes, materials and technologies”. The priorities of this area can be used, for example, for the production of electrical appliance components, energy production, textile industry and many other areas, in this way creating opportunities for new circular solutions.

At the beginning of 2020 there were 18 PCPs announced, out of them 2 procurements could be considered as contributing to the circular economy: procurement of nano bitumen which aims to ensure circular economy principles in road construction by creating bitumen with extended lifetime and better durability and the procurement of the assessment model, which should increase the recovery of the resources from the landfills.

2.4.2 Capacity building initiatives

The capacity building measures are included in the Implementation of green procurement plan 2016–2020 by the Ministry of Environment.[9] The measures

[8] Lithuanian innovation centre (2020). Innovation public procurement in Lithuania: how to improve forward? 10 steps guide
[9] https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/a9ab58c0928611e59c9a8f8c9980906b/asr

aiming to strengthen the capacity of contracting authorities to carry out green procurement are allocated into four distinct groups:

- revision and renewal of GPP training programme;
- organization of GPP trainings for procuring entities and suppliers;
- preparation and distribution of guidance and training material on GPP for procuring entities and suppliers together with the dissemination of good GPP practises;
- implementation of consultancies on GPP related questions.

Overall, listed measures are proper approach to the capacity building objective, but practical implementation of them is lacking consistency and initiative, especially when it comes to closer engagement and cooperation with procuring organizations.

The Environmental Protection Agency (EPA) until 2020 was the institution responsible for providing training regarding the GPP in Lithuania taking into account the circular aspects of it as well. However, during the last three years the capacity building activities have been implemented quite poorly. Recently, the responsibility was moved to the Ministry of Environment. So far, an NGO sector is trying to fill this gap and promote GPP in Lithuania. For example, Baltic Environment forum organizes ad hoc seminars for public procurers regarding the GPP using the GPP training toolkit provided by the European Commission, which also covers the topics of CPP.

Lack of capacity building initiatives is one of the key challenges hindering the broader use of GPP and CPP. Even though a suitable action framework is in the place, but actual incentives from relevant authorities are rather uneventful.

Capacity building initiatives for CPP from the innovation procurement side were developed in order to promote the instrument for PCP and to provide the procurers with knowledge and skills needed to use it. Project “InoSpurtas” under the innovation support measure “Inogeb LT” was initiated, with the main objective to increase innovation capacity of enterprises and to encourage them to implement R&D activities more actively in the field of smart specialization by providing innovation consulting and support services. Implementation of this project took place from March of 2017 until March of 2020 (36 months), while the total budget for all activities was 3,8 million EUR. Among all other innovation support services planned under this project, expertise and methodological assistance for companies and/or contracting authorities have been provided with the objective to stimulate the demand for innovation, by encouraging PCP.

Capacity building programme was very needed as it reduced the complexity and uncertainty associated with PCP. Consultation services were provided to the both public and private sectors in a form of information events, group or

individual consultations by the experts of Agency for Science, Technology and Innovation and Lithuanian innovation center.

Overall, the innovation-based capacity building experience is more successful than the one related to the strengthening of GPP competencies. However, one of the main barriers for the implementation of CPP is the general lack of knowledge and expertise together with procurers´ preconceptions about complex circular economy-related production and service systems. To overcome this challenge, it is crucial to establish CPP oriented capacity building measures that would be based on think tanks and reach large proportion of procuring organizations.

3. Guidance for more systematic and efficient use of CPP

This chapter aims to provide a template on how to create an operating environment that enables more systematic and efficient implementation of the circular public procurement practices. It is based on the provisions of EU directives and Lithuanian national procurement laws.

The following guidance is based on procurement phases which are the following:

- Phase 1 – Pre-award stage;
- Phase 2 – Functional/Technical specifications and labels;
- Phase 3 – Market analysis;
- Phase 4 – Preparatory stage;
- Phase 5 – Exclusion grounds and selection criteria;
- Phase 6 – Award procedures;
- Phase 7 – Award criteria;
- Phase 8 – Contract performance terms and conditions.

3.1. Phase 1 – Pre-award stage – needs analysis, zero waste design, risk assessment

This pre-award stage is the starting stage and its appropriate implantation is vital for finding the right approach for the CPP implementation. One of the first practical steps in this stage is to consider how CPP can be integrated into the existing procurement practices and systems of the organization. Creating a circular procurement policy or incorporating circular economy principles into existing GPP or SPP policy can be an effective first step to ensuring it is visible as a priority.

There are three types or *levels* of models for implementing circular procurement:

1. system level;
2. supplier level;
3. zero waste design.

Procurers get to know the market (products, suppliers, manufacturers, service providers, etc.) to help them develop a greater understanding of what is already available and what is possible.

Engaging with the market can help to:

- change and improve the procurement plan and management;
- gathering information on how the market is structured and how it operates;
- increase your trust and credibility with suppliers and improving relationships with them;
- create the market conditions needed to deliver the best solution;
- help agencies to identify opportunities for sustainability and innovation;
- identify risks related to the specific subject matter.

By summarizing, especially three elements of procurement need to change or be in focus in order to promote more circular solutions:

- focus on service instead of products;
- focus on the product's design, use phase and end of life;
- focus on market dialogue.

3.2. Phase 2 – Functional/Technical specifications and labels

EU legal background

EU Directive 2014/24, Art. 42-44
EU Directive 2014/25, Art. 60-62

The organizations should identify whether a technical or a functional approach would be more appropriate for innovation procurement and for achieving a circular result.

Functional (or 'output/ performance-based') criteria describes the desired result and which outputs (for example, in terms of quality, quantity, and reliability) are expected. Functional specification is also required for Pre-Commercial procurement PCP and for PPI.

In ordinary procurement the contracting authority defines technical specifications that have two main functions:

- they describe the contract to the market so that companies can decide whether it is of interest to them. In this way they help determine the level of competition;
- they provide measurable requirements against which tenders can be evaluated. They constitute minimum compliance criteria. Standards have a major role in influencing the design of products and processes, and many standards include environmental characteristics such as material use, durability or consumption of energy or water.

Labels and Eco-labels can be used by contracting authorities that wish to purchase works, supplies or services with specific environmental, social or other characteristics, provided that the requirements for the label are linked to the subject-matter of the contract, such as the description of the product and its presentation, including packaging requirements.

According to Lithuanian procurement law…

when procuring goods, services or works with special environmental, social or other characteristics, the contracting authority when drawing up technical specifications, setting tender evaluation criteria or performing contract conditions may require the use of a special label as a proof that the goods, services or works comply with the prescribed requirements if all these conditions are met.

3.3. Phase 3 – Market analysis: Methodology for involving economic operators in the circular procurement process

EU legal background

EU Directive 2014/24, Art. 40-41
EU Directive 2014/25, Art. 58-59

Circular procurement is most effective if there is a clear understanding of what it is and the reasons for its application. Market analysis can be useful to determine whether appropriate alternatives are available which can reduce environmental impact. To keep the stakeholders involved in circular procurement transparency has a crucial role.

The success of any procurement exercise will ultimately be determined by how the market responds to the request. Effective engagement with potential suppliers prior to tendering has several purposes:

1. identify potential bidders and/or solutions;
2. build capacity in the market to meet the requirement(s);
3. inform the design of the procurement and contract.

The key steps for engagement of economic operators, resilience and interest raising towards participation in circular procurement tenders are:

awareness raising – resilience, life cycle costing, impact and benefits of CP;

networking – experience sharing, best practices;

market engagement – consulting on available capacity;

consulting – assist on tendering documents preparation.

According to Lithuanian procurement law…

the contracting authority in order to prepare for the procurement and inform suppliers of its procurement plans and requirements may consult with independent experts, authorities or market participants if such consultations do not distort competition or infringe the principles of non-discrimination and transparency. The contracting authority, having decided to publish a call for consultations, shall publish this call in the Central Public Procurement Information System in accordance with the procedure established by the Public Procurement Office.

In Lithuania, it is an opportunity and not an obligation to carry out market consultation, which means that the implementation of these kind of consultations is not mandatory.

3.4. Phase 4 – Preparatory stage – defining requirements and procurers needs, subject matter

EU legal background

EU Directive 2014/24, Art. 18(2)-70
EU Directive 2014/25, Art. 36(2)-87

In defining the best procurement strategy, the organization should consider at what stages it will be able to apply CPP criteria or considerations. This activity starts from exploration of the market and choosing the procedures. Before releasing the tender, it conducted market engagement, and completed a Life-Cycle Impact Mapping exercise to identify areas to focus on with regards to environmental and socio-economic risks and opportunities. A useful way to prioritize potential actions is by means of the 'Procurement Hierarchy', which is based on the European Waste Hierarchy: reduce, reuse, recycle and recover.

Challenges include extending circular thinking beyond a „financing option", the commitment risk on part of the buyer, a lack of competition (especially within public tenders) and also improving inter-organizational collaboration. In most cases the shift in business model was simply the formalization of the collaboration.

3.5. Phase 5 – Exclusion grounds and selection criteria

EU legal background

EU Directive 2014/24, Art. 56-64
EU Directive 2014/25, Art. 76-80

The selection of tenderers consists in assessing the tenderers on the basis of the exclusion grounds and the selection criteria set out in the procurement documents. These rules aim to ensure a minimum level of compliance with environmental law by contractors and sub-contractors (see also EU Directive 2014/24, Artt. 59, 60, 61 - 62 - 63 - 64 on European Single Procurement Document, Means of proof, Online repository of certificates (e-Certis), Reliance on the capacities of other entities, Quality assurance standards and environmental management standards, Official lists of approved economic operators and certification by bodies established under public or private law). Techniques such as life-cycle costing, specification of sustainable production processes, and use of environmental award criteria are available to help contracting authorities identify environmentally preferable bids.

It is possible to exclude companies that have breached environmental law or have other serious defects in their environmental performance, although they must also be given the opportunity to "self-clean" and cannot be excluded for more than three years on this basis.

Exclusion grounds are provided by EU Directives. Some of them are mandatory for all EU Member States other are voluntary implemented at national level by choice of EU Member States. National contracting authorities are obliged to use them as provided at national level.

Selection criteria may be used by a contracting authority to establish whether an economic operator is qualified to perform a specific contract:

- personal situation of the economic operator (mandatory grounds for exclusion/optional grounds for exclusion);
- suitability to pursue the professional activity;
- economic and financial standing;
- technical and/or professional ability.

Violations of environmental law can also be used as grounds to refuse to award a contract to an operator, to reject an abnormally low tender, or to require replacement of a subcontractor.

Specifications can be categorised as Functional, Performance, or Technical. It is common though to use the term “Technical Specifications” to refer to specifications in general. Functional specifications can refer to performance requirements.

3.6. Phase 6 – Award procedures

EU legal background

EU Directive 2014/24, Art. 26-33
EU Directive 2014/25, Art. 43-51

EU Directives on public contracts shall only apply to specific public service contracts for research and development services provided two conditions are fulfilled:

- 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.

R&D can cover activities such as solution exploration and design, prototyping, up to the original development of a limited volume of first products or services in the form of a test series. "Original development of a first product or service may include limited production or supply in order to incorporate the results of field testing and to demonstrate that the product or service is suitable for production or supply in quantity to acceptable quality standards". R&D does not include commercial development activities such as quantity production, sup-

ply to establish commercial viability or to recover R&D costs, integration, customisation, incremental adaptations and improvements to existing products or processes.

Research and development (EU Directive 2014/24, Art. 14; EU Directive 2014/25, Art. 32) including eco-innovation and social innovation, are among the main drivers of future growth and have been put at the center of the Europe 2020 strategy for smart, sustainable and inclusive growth. Public authorities should make the best strategic use of public procurement to spur innovation and circular procurement (EU Directive 2014/24, Recital No. 47; EU Directive 2014/25, Recital No. 57).

Pre-commercial Procurement is intended to describe an approach to procuring R&D services other than those where "the benefits accrue exclusively to the contracting authority for its use in the conduct of its own affairs, on condition that the service provided is wholly remunerated by the contracting authority. PCP can be used when there are no near-to-the-market solutions yet that meet all the procurers' requirements and new R&D is needed to get new solutions developed and tested to address the procurement need. PCP can then compare the pros and cons of alternative solutions approaches and de-risk the promising innovations step-by-step via solution design, prototyping, development and first product testing. PCP is a public procurement of R&D services that does not include the deployment of commercial volumes of end-products.

PCP "deals with the procurement of those R&D services not falling within the scope of this Directive. Those models would continue to be available, but this Directive should also contribute to facilitating public procurement of innovation and help Member States in achieving the Innovation Union targets" (EU Directive 2014/24, Recital No. 47(2)). "Pre-commercial procurement" regards a R&D activity which has the aim of reaching the development of a prototype and a different set of agreement can be provided for the Intellectual property of the prototype that could be developed (not only for CA but also permitting the private company to use it), that's way pre commercial procurement can be awarded without the payment of all the research activity and cost less to CA because of the common effort to develop a solution that satisfy the need of CA and potentially can become the new solution also for others.

Public Procurement of Innovative solutions (PPI) can be used when challenges of public interest can be addressed by innovative solutions that are nearly or already in small quantity on the market. PPI can thus be used when there is no need for procurement of new R&D to bring solutions to the market, but a clear signal from a sizeable amount of early adopters/launch customers that they are willing to purchase/deploy the innovative solutions if those can be delivered with the desired quality and price by a specific moment in time. PPI may still involve conformance testing before deployment.

Innovation procurement refers to any procurement that has one or both of the following aspects:

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

In the first instance, the public buyer buys the research and development services of products, services or processes, which do not exist yet. The public buyer describes its need, prompting businesses and researchers to develop innovative products, services or processes to meet the need. In the second instance, the public buyer, instead of buying off-the-shelf, acts as an early adopter and buys a product, service or process that is new to the market and contains substantially novel characteristics.

Innovation partnership can be established if a certain product or service is not currently available on the market. Innovation partnership is a new type of public procurement procedure provided for in Directive 2014/24/EU (EU Directive 2014/24, Art. 31. See also Art. 65 and 66 below; See also EU Directive 2014/25, Art. 49).

The main feature of the innovative partnership is that the innovation occurs during the performance of the contract. In most other procedures, the public buyer already knows what type of solution it is buying: innovation occurs in the pre-contracting phase and usually ends with the conclusion of the contract when the exact features of the solution are agreed. In an innovation partnership, the public buyer is entering into a contract with the best potential supplier(s) of innovation. The supplier(s) is (are) expected to create the innovative solution and ensure its real-scale implementation for the public buyer. The public buyer's needs should be described with sufficient precision to allow potential tenderers to understand the nature and scope of the challenge and have sufficient information to decide whether or not to participate.

The innovation partnership process takes place in three phases:

- the selection phase occurs at the very beginning of the procedure, when one or more of the most suitable partners are selected on the basis of their skills and abilities. The contracts establishing the innovation partnership are subsequently awarded based on the best price-quality ratio proposed. This phase is similar to a restricted procedure;
- in the next phase, the partner(s) develop the new solution in collaboration with the public buyer. This research and development phase can be further divided into several stages designated for evaluating concepts, developing prototypes and/or testing

performance. During each stage the number of partners may be reduced on the basis of predetermined criteria;
- in the commercial phase, the partner(s) provide the final results.

The other procedures applied by procurers are as follows (EU Directive 2014/24, Art. 26; EU Directive 2014/25, Art. 44):

- in an **open procedure**, any operator may submit a tender (EU Directive 2014/24, Art. 27; EU Directive 2014/25, Art. 45);
- in a **restricted procedure**, the environmental technical capacity in a prior stage can be assessed and also limit the number of operators invited to tender (EU Directive 2014/24, Artt. 28, 65 and 66; EU Directive 2014/25, Art. 46);
- the **competitive procedure with negotiation** and competitive dialogue procedures can be used by public authorities for purchases which require an element of adaptation of existing solutions; design or innovation; or in certain other circumstances (EU Directive 2014/24/EU, Art. 29).

The **competitive dialogue**, in which any economic operator may submit a request to participate in response to a contract notice by providing the information for qualitative selection that is requested by the contracting authority. In this case contracting authorities have to provide information on needs requested. Competitive dialogues may take place in successive stages in order to reduce the number of solutions to be discussed during the dialogue stage by applying the award criteria laid down in the contract notice (EU Directive 2014/24, Art. 30; See also EU Directive 2014/25, Art. 48).

Only in exceptional situations (e.g. where extreme urgency brought about by events unforeseeable by the contracting authority concerned that are not attributable to that contracting authority makes it impossible to conduct a regular procedure even with shortened time limits), contracting authorities should have the possibility to award contracts **by negotiated procedure without prior publication** (EU Directive 2014/24, Art. 32; See also EU Directive 2014/25, Art. 47 and 50).

Moreover, **framework agreements**, can be award with an open procedure--- has been widely used and is considered as an efficient procurement technique (not an award procedure) throughout Europe. Its use can favour innovation and access to the relevant markets (EU Directive 2014/24/EU, Art. 33; See also EU Directive 2014/25, Art. 51). Framework agreements may be concluded according to five different models. With one or more economic operators by establishing all the terms of the agreement to be signed, or vice versa, without establishing all the terms providing a reopening of competition

(so-called “mini-competition”) so that contracting authorities may tailor the requests to their needs in the purchasing phase. The 2014/24 Directive provide for a mixed or hybrid model “closed but with the possibility to reopen the competition” (EU Directive 2014/24/EU, Art. 33(4b)). The hybrid model allows public entities can purchase directly through the framework agreement (as in the “closed” model) or reopen the competition among the economic operators party to the FA (this is possible only if allowed by the terms and conditions indicated in the procurement documents). It is the contracting authority that needs to use FA which decides whether it might be convenient to reopen the competition among the economic operators inside the master contract.

The main difference between technical specifications and award criteria is that whereas the former are assessed on a pass/fail basis, award criteria are weighted and scored so that tenders offering better environmental performance can be given more marks.

3.7. Phase 7 – Award criteria

EU legal background

EU Directive 2014/24, Art. 26-33
EU Directive 2014/25, Art. 43-51

The evaluation of tenders should be carried out by an evaluation committee according to:

- lowest price, in which only price is evaluated;
- most economically and advantageous (MEAT) in which is evaluated the price (using a cost-effectiveness approach, such as life-cycle costing) and technical performance indicated in the contract notice with their relative weighting (EU Directive 2014/24, Art. 67; EU Directive 2014/25, Art. 82).

According to Lithuanian procurement law…

The contracting authority may select the most economically advantageous tender in accordance with price or cost-quality ratio. The evaluation shall take into account price or costs and criteria related to the subject matter of the procurement, including qualitative, environmental and / or social criteria, such as technical merit, aesthetic and functional characteristics, accessibility, suitability for all users, social, environmental and innovative characteristics, fair trade conditions.

Life Cycle Costing

When focusing on resource efficiency, products tools like Total Cost of Ownership (TCO) or Life Cycle Costing (EU Directive 2014/24, Art. 68; EU Directive 2014/25, Art. 83) becomes relevant.

Many different backgrounds and disciplines have been interested in calculating the optimal allocation of budget by estimating the costs that incur during the whole life cycle of a product, service, project, investment, etc. The main cost categories that can be included in an LCC analysis are those related to the following five different life cycle stages: Research, development and design; Primary production; Manufacturing; Use; Disposal.

The awarding phase is not the only relevant moment for using LCC in the procurement. Analyzing the whole life-cycle costs of a product or service can be useful at different stages (Adell et al., 2011):

- *at the preparatory stage*: to assess the LCC of the current situation;
- *before tendering*: to roughly assess different proposals to help guide market engagement activities before tendering, or to narrow down the different technological solutions to be considered;
- *during tendering:* to compare the LCC and the anticipated CO2 emissions of different offers, during the evaluation phase;
- *after tendering*: to evaluate and communicate the improvements of the purchased product in comparison to the current situation and/or other products and to communicate results.

One of the recommendations of the European Commission working group on Life Cycle Costs in Construction is to carry out LCC at early design stage, where the opportunities for modifying the costs of a project are greatest.

There are many external factors that can affect enormously the outcomes of an LCC analysis:

- market price variability of products and services;
- electricity, water and gas prices;
- taxes, subsidies and incentives;
- inflation, discount rate and other economic elements;
- waste disposal regulations.

Thus, the final result of an LCC can be highly dependent on these external factors, which usually are not related at all with the environmental quality of the product or service analyzed. The conclusions highlighted that the final costs (and thus the LCC results) depends highly on the tax policy of the different Member States.

LCC analysis would be then just one piece of a wider number of elements to take into account when preparing and evaluating a public procurement process. Environmental impacts, as well as social conditions or innovation could be other additional issues to take into account in the procurement process.

Variants

Public buyers may allow tenders with variants: one or more alternative solutions usually based on alternative technologies or processes, can accompany the offer that closely matches the technical specifications. Suppliers can propose, alongside a traditional "safe" solution, a more innovative solution (EU Directive 2014/24, Art. 45; EU Directive 2014/25, Art. 64). This may attract the attention of public buyers because of the potential for better-than-expected results in terms of cost, quality or flexibility. Public buyers may even require the submission of variants only (complying with the minimum requirements).

The use of variants is most efficient when combined with functional requirements and award criteria that enable to compare various solutions in terms of their performance, efficiency, cost effectiveness, versatility or durability. Without these parameters, it is difficult to compare the variants.

3.8. Phase 8 – Contract performance terms and conditions

EU legal background

EU Directive 2014/24, Art. 70-73
EU Directive 2014/25, Art. 87-90

Contract performance clauses are used to specify how a contract must be carried out. Environmental considerations can be included in contract performance clauses (EU Directive 2014/24, Art. 70; EU Directive 2014/25, Art. 87).

Compliance with contract clauses should be carefully monitored during the execution phase, with responsibility for compliance and reporting clearly indicated in the contract. In case of modification of the contract during its execution EU limits should be respected (EU Directive 2014/24, Art. 72; EU Directive 2014/25, Art. 89). In order to discourage breaches of environmental commitments, adequate sanctions should be provided under the contract (EU Directive 2014/24, Art. 73; EU Directive 2014/25, Art. 90).

According to Lithuanian procurement law…

The contracting authority may lay down special conditions for the performance of the contract, relating to economic, innovation, employment, social and environmental requirements, provided that such conditions: 1) relate to the subject of the procurement; 2) are specified in the procurement documents.

4. Lessons learnt: Identification of obstacles while applying CPP

The section provides an overview of the analyses on the identification of the common obstacles from the cases studies which faced the procurers while applying the CP approach for the procuring different format goods, works and services. The investigations show that the procurers from different case studied identified the following common obstacles:

- identification of priorities and principles to be clarified at the beginning of the procurement;
- market engagement to ensure transparency and the confidence of suppliers, and to understand the potential challenges of certain solutions;
- engagement of technical and environmental experts for identifying the right approach and choosing the right solutions;
- the complexity of the sector to structure the tender on the basis of a needs;
- the question of subdivision of the tender into the lots to promote accessibility to small and medium-sized enterprises sometimes can be tricky and have an opposite result.

The solutions and recommendations on how to meet, overcome and/or mitigate these obstacles provided in the next section though step by step guidance on how to implement CP, how to increase the circularity of regional companies and boost their participation in CP.

Based on the outcomes after the tenders evaluation the recommendations for the drafting of future tenders with high energy performance of buildings were as following:

- the use of comparable systems for assessing the environmental sustainability of buildings, in order to verify the correspondence with pre-established requirements, as tangible evidence of correspondence with the technical specifications;
- the proven experience of builders in the construction of energy-efficient buildings, demonstrated through a brief curriculum vitae;
- the preparation of a Handbook of Use of the building, easy to understand that describes the technical characteristics and above all the actions necessary for the correct functioning of the same.