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METHODOLOGY ON CIRCULAR PUBLIC AND PRIVATE PROCUREMENT

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CONTENT

I. Introduction

The publication you are to read was prepared in order to present circular procurement and circular purchase. Its key topic is sustainable consumption because we all are consumers and the way we buy products matters a lot within sustainable development.

Circular public procurement represents one of the first steps to realise circular economy in practice. Public sphere should take the lead and make an example. In the light of the current challenges (climate change negative impacts, unsustainable primary/natural resource use, resource depletion, growing population), circular economy is considered as a key solution to these challenges and current problems. The main principle of circular economy is to maximise material usage (secondary sources), save primary resources and prevent waste production in general. That is why it is extremely important to change our consumption habits and find new ways to minimise our negative impacts on the global environment.

This methodology was created within the Erasmus+ project which involved Czech, Spanish and Slovak partners thus focusing on these specific countries. Its aim is to introduce the topic of circular public procurement and private purchase and to address public authorities as well as private companies or individuals and make them think in a circular and more sustainable way. We believe that our experience will help to trigger the needed systemic change of the common mindset. Also, it is well known that lack of information and of cases of good practices is very often the reason why people do not want to change the beaten tracks. Thus, this methodology should help not only the promoters of sustainable alternatives but also help those who are still in the process of searching or hesitation.

II. General introduction to circular economy

1. Current state of global and European environmental limits

State of Global limits

The rate of **global change** in nature during the past 50 years is unprecedented in human history. The direct drivers of change in nature with the largest global impact are: changes in land and sea use; direct exploitation of organisms; climate change; pollution; and invasion of alien species. Those five direct drivers result from an array of underlying causes – the indirect drivers of change – which are in turn underpinned by societal values and behaviours that include production and consumption patterns, human population dynamics and trends, trade, technological innovations and global governance.[1]

Over the past five decades, our **global population** has doubled, the extraction of materials has tripled and gross domestic product has quadrupled. During this time, we have not once experienced a prolonged period of stabilization or a decline in global material demand. From 1970 to 2017, the annual global extraction of materials grew from 27 billion tons to 92 billion tons, tripling in that time and continuing to grow.[2]

Moreover, the **extraction and processing of natural resources** has accelerated over the last two decades, and accounts for more than 90% of our biodiversity loss and water stress and approximately half of our climate change impacts.[3]

In the last decade, **greenhouse gas (GHG) emissions** have risen at a rate of 1.5 per cent per year, stabilizing only briefly between 2014 and 2016. Total GHG emissions, including from land-use change, reached a record high of 55.3 GtCO2e (gigatonnes of CO2 equivalent) in 2018.[4]

The atmosphere is warming, and the **climate is changing** with each passing year.[5] Nature across most of the globe has now been significantly altered, with the great majority of indicators of ecosystems and biodiversity showing rapid decline. Humans are estimated to have caused an observed warming of approximately 1.0°C by 2017 relative to pre-industrial levels, with average temperatures over the past 30 years rising by 0.2°C per decade. The frequency and intensity of extreme weather events, and the fires, floods and droughts that they can bring, have increased in the past 50 years, while the global average sea level has risen by between 16 and 21 cm since 1900, and at a rate of more than 3 mm per year over the past two decades. Climate change is a direct driver that is increasingly exacerbating the impact of other drivers on nature and human well-being. [6]

[1] IPBES (2019): Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.
[2] Global Resources Outlook 2019 : Natural Resources for the Future We Want: The International Resource Panel
[3] Global Resources Outlook 2019 : Natural Resources for the Future We Want: The International Resource Panel
[4] https://wedocs.unep.org/bitstream/handle/20.500.11822/30797/EGR2019.pdf?sequence=1&isAllowed=y
[5] Intergovernmental Panel on Climate Change, IPCC
[6] IPBES (2019): Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.

State of EU limits

Today in the EU, each person consumes 16 tons of materials annually, of which 6 tons are wasted, with half going to landfill. Businesses are facing rising costs for essential raw materials and minerals, their scarcity and price volatility are having a damaging effect on the economy. Sources of minerals, metals and energy, as well as stocks of fish, timber, water, fertile soils, clean air, biomass, biodiversity are all under pressure, as is the stability of the climate system.[7]

The EU's industry has started the shift but still accounts for 20% of the EU's greenhouse gas emissions. It remains too 'linear', and dependent on a throughput of new materials extracted, traded and processed into goods, and finally disposed of as waste or emissions. Only 12% of the materials it uses come from recycling.[8] This can be observed by looking at the Eurostat **Sankey diagram of material flows** (Figure 1),[9] that represents the flows of materials as they pass through the EU economy until they are eventually discharged back into the environment. Just a small amount of them are re-fed into the economic processing.

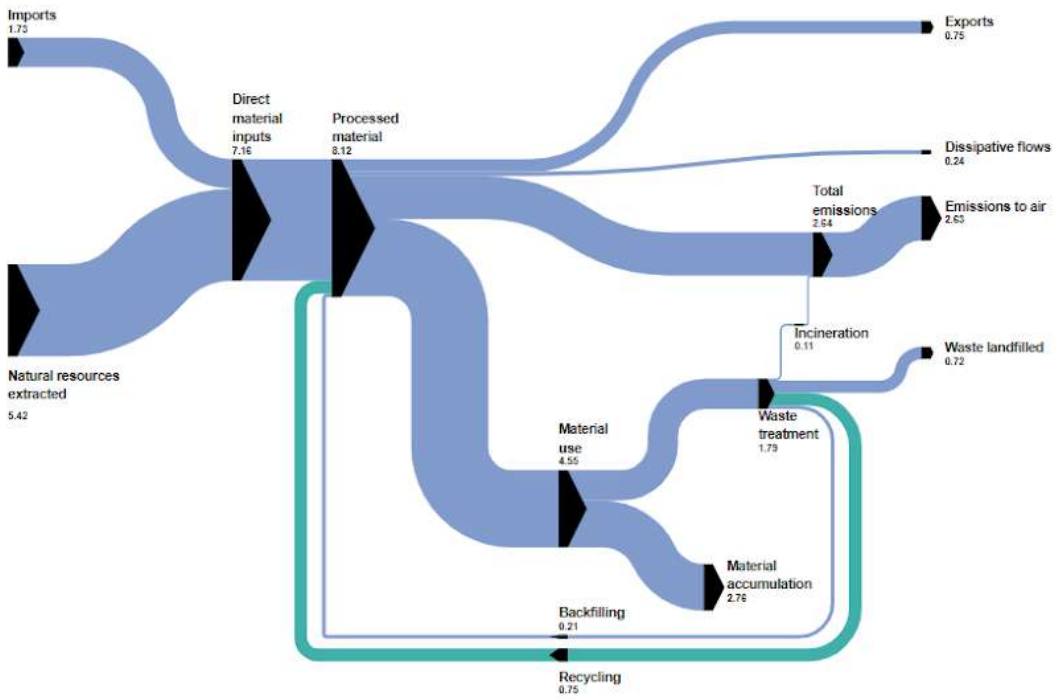

Figure 1. Sankey diagram of flows of material in the EU-27 economy in 2018.

"**Take-make-dispose**" is the pattern of our current economic model based on a linear economy. In practical terms, this linear system entails a chain that begins with companies harvesting and extracting the materials that will be needed to manufacture products which

[7] COM(2011) 571

[8] https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=cei_srm030&plugin=1

[9] https://ec.europa.eu/eurostat/cache/sankey/circular_economy/sankey.html?geos=EU27&year=2018&unit=G_T&materials=TOTAL&highlight=0&nodeDisagg=0101100100&flowDisagg=false&translateX=200&translateY=70&scale=0.7&language=EN&xyz=89&material=TOTAL

are sold to customers on a later stage, and kept until they are no longer needed, when they are then disposed of (Ellen MacArthur Foundation, 2013).[10]

The current system generates **large amounts of waste** that are unevenly distributed in the different types of economic activities. As it is represented in Figure 2, in the EU-27 in 2018 construction contributed 36.0 % of the total in 2018 and was followed by mining and quarrying (26.2 %), manufacturing (10.6 %), waste and water services (9.9 %) and households (8.2 %); the remaining 9.1 % was waste generated from other economic activities, mainly services (4.2 %) and energy (3.5 %)[11]. There is a great potential for waste reduction in sectors like construction, mining and quarrying and manufacturing.

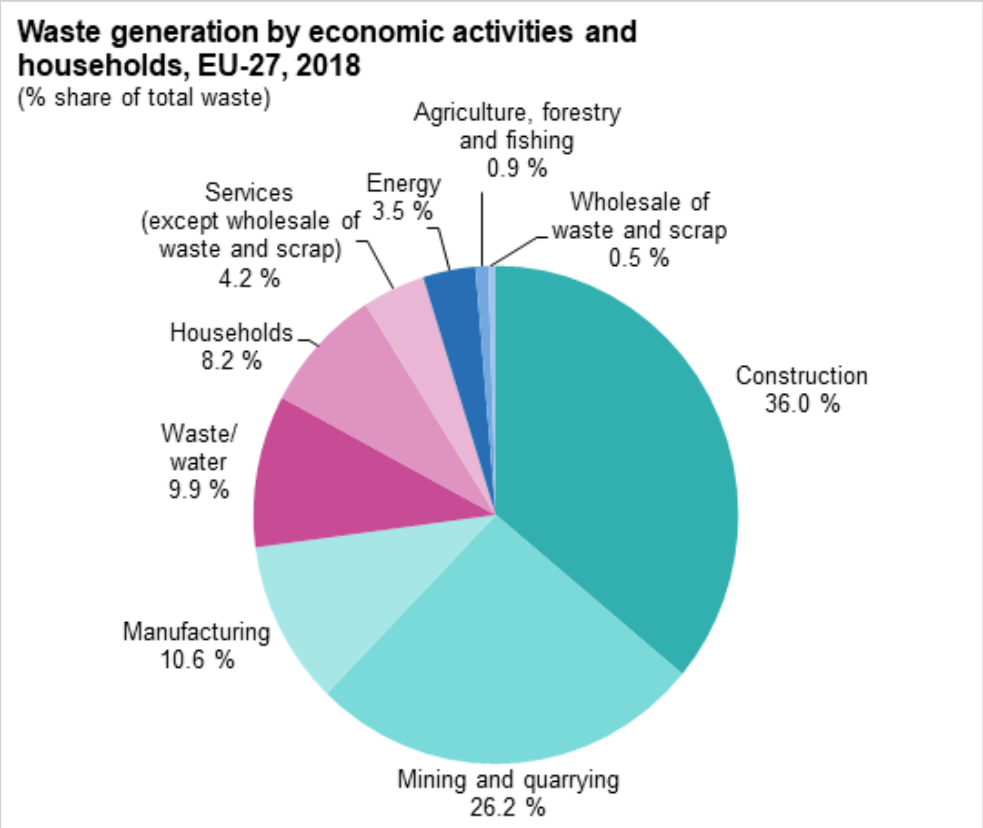

Figure 2. Percentage share of total waste by economic activities and households EU-27 in 2018.

[10] https://www.ellenmacarthurfoundation.org/assets/downloads/publications/Ellen-MacArthur-Foundation-Towards-the-Circular-Economy-vol.1.pdf

[11] https://ec.europa.eu/eurostat/statistics-explained/index.php/Waste_statistics#Total_waste_generation

2. Predictions – resource scarcity

With the current consumption levels, resources are being extracted from nature at an unsustainable pace. But not every country is consuming resources in the same way. This can be exemplified by the **Country's overshoot day** for every country. It represents the date on which Earth Overshoot Day would fall if all of humanity consumed like the people in this country. Figure 3 shows the dates corresponding to the different countries' overshoot days for 2022.[12] Countries like Qatar, Luxemburg, United Arab Emirates, and Canada are some of the first to reach their overshoot day, while other countries with less consumption per capita like Indonesia, Ecuador or Nicaragua won't reach their overshoot days until December (the Overshoot day for Czechia is April 12, May 3 for Slovakia and May 12).

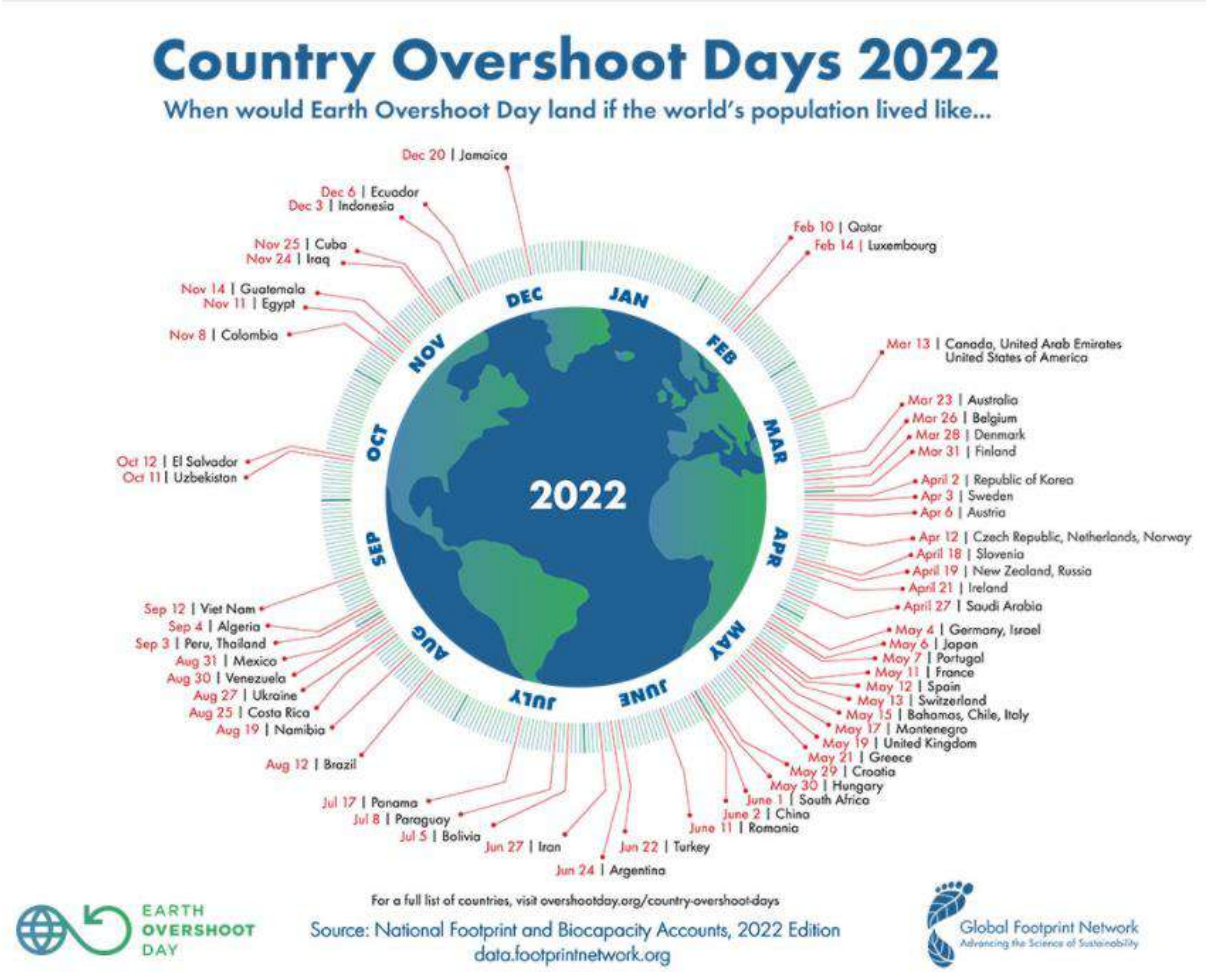

Figure 3. Country Oveshoot Days 2022.

[12] https://www.overshootday.org/newsroom/country-overshoot-days/

So, according to what we know now, what can we expect? Here are some predictions:

- There is only one planet Earth, yet by 2050, the world will be consuming as if there were three.[13] If the global population reaches 9.6 billion by 2050, the equivalent of almost three planets could be required to provide the natural resources needed to sustain current lifestyles.[14]
- If we continue our current patterns global consumption of materials such as biomass, fossil fuels, metals and minerals is expected to double in the next forty years,[15] while annual waste generation is projected to increase by 70% by 2050.[16]
- Each year, an estimated one third of all food produced – equivalent to 1.3 billion tonnes – ends up rotting in the bins of consumers and retailers or spoiling due to poor transportation and harvesting practices.[17]

3. Economic, environmental and social sustainability

Sustainable development: Three pillars

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. First defined in the 1987 Brundtland Report,[18] sustainable development has become perhaps our most important piece of political architecture for thinking about the long-term consequences of how humans impact the world and each other. It is generally considered to be comprised of three pillars: **environmental sustainability**, **economic sustainability** and **social sustainability**.

The EU needs to accelerate the transition towards a **regenerative growth model** that gives back to the planet more than it takes, advance towards keeping its resource consumption within planetary boundaries, and therefore strive to reduce its consumption footprint and double its circular material use rate.[19]

SDGs and the Circular Economy

The **17 Sustainable Development Goals (SDGs) and 169 targets** are integrated and indivisible and balance the three dimensions of sustainable development: the economic, social and environmental.[20] **Circular Economy practices** could potentially contribute directly to achieving a significant number of SDG targets. The strongest relationships exist between Circular Economy practices and the targets of SDG 6 (Clean Water and sanitation), SDG 7

[13] https://www.un.org/sustainabledevelopment/sustainable-consumption-production/
[14] https://www.un.org/sustainabledevelopment/sustainable-consumption-production/
[15] OECD (2018), Global Material Resources Outlook to 2060
[16] World Bank (2018), What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050.
[17] https://www.un.org/sustainabledevelopment/sustainable-consumption-production/
[18] https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf
[19] COM(2020) 98
[20] Resolution adopted by the General Assembly on 25 September 2015, General Assembly of the United Nations, https://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E

(Affordable and Clean Energy), SDG 8 (Decent Work and Economic Growth), SDG 12 (Responsible Consumption and Production), and SDG 15 (Life on Land).[21]

SDG	Circular Economy practices related	SDG	Circular Economy practices related
	small-scale water purification, sustainable sanitization, wastewater treatment, water reuse and recycling, nutrient recovery, biogas systems		Affordable and Clean Energy: Renewable energy systems, incl. small-scale biomass technologies and 2nd generation biofuels, energy (heat) recovery and improved utilisation in industrial systems (e.g. industrial symbiosis)
	New circular business models are a major potential source of increased resource effectiveness and efficiency, waste valorisation and green jobs		CE practices that are all about decoupling economic activity from resource use and associating environmental and social impacts
	Restore natural capital, adopting sustainable and regenerative agricultural and agroforestry practices that embrace and protect biodiversity and returning biological material back to soils as nutrients		

Figure 4. SDGs

[21] https://www.researchgate.net/publication/344220320_The_Relevance_of_Circular_Economy_Practices_to_the_Sustainable_Development_Goals

4. CE as a solution - characteristics, examples, EU plans

What is the Circular Economy?

The European Parliament defines the Circular Economy as "a model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products to keep materials within the economy wherever possible. A circular economy implies that waste will itself become a resource, consequently minimizing the actual amount of waste. It is generally opposed to a traditional, linear economic model, which is based on a "take-make-consume-throw away" pattern.[22]

According to Kirchherr et al.,[23] a circular economy describes an economic system that is based on business models which replace the 'end-of-life' concept with reducing needs, alternatively reusing, recycling and recovering materials in production/distribution and consumption processes, thus operating at the micro level (products, companies, consumers), meso level (eco-industrial parks) and macro level (city, region, nation and beyond), with the aim to accomplish sustainable development, which implies creating environmental quality, economic prosperity and social equity, to the benefit of current and future generations.

At the Ellen MacArthur Foundation, they tried to capture the essence of the circular economy in the diagram below, which is somewhat understandably nicknamed the "butterfly diagram"[24] (figure 4). The diagram tries to capture the flow of materials, nutrients, components, and products, whilst adding an element of financial value. It builds on several schools of thought, but is perhaps most recognisably influenced by Cradle to Cradle's two material cycles.[25] It represents:

- Moving from a linear approach to production and consumption towards a circular approach where value is retained by closing product and material loops.
- Closed loop design strategy - shorter loop and greater value.
- Principles behind this high-level material use:
    - retains value and embodied carbon longer (shorter loop - greater value retention) by closing material loops;
    - the use of renewable energy; and
    - the use of clean materials.

[22] https://www.europarl.europa.eu/thinktank/infographics/circulareconomy/public/index.html

[23] Kirchherr, J., Reike, D. and Hekkert, M., 2017. Conceptualizing the circular economy: An analysis of 114 definitions. Resources, Conservation and Recycling, 127, pp.221-232. https://www.sciencedirect.com/science/article/pii/S0921344917302835

[24] https://www.ellenmacarthurfoundation.org/assets/downloads/publications/Ellen-MacArthur-Foundation-Towards-the-Circular-Economy-vol.1.pdf

[25] https://www.ellenmacarthurfoundation.org/explore/the-circular-economy-in-detail

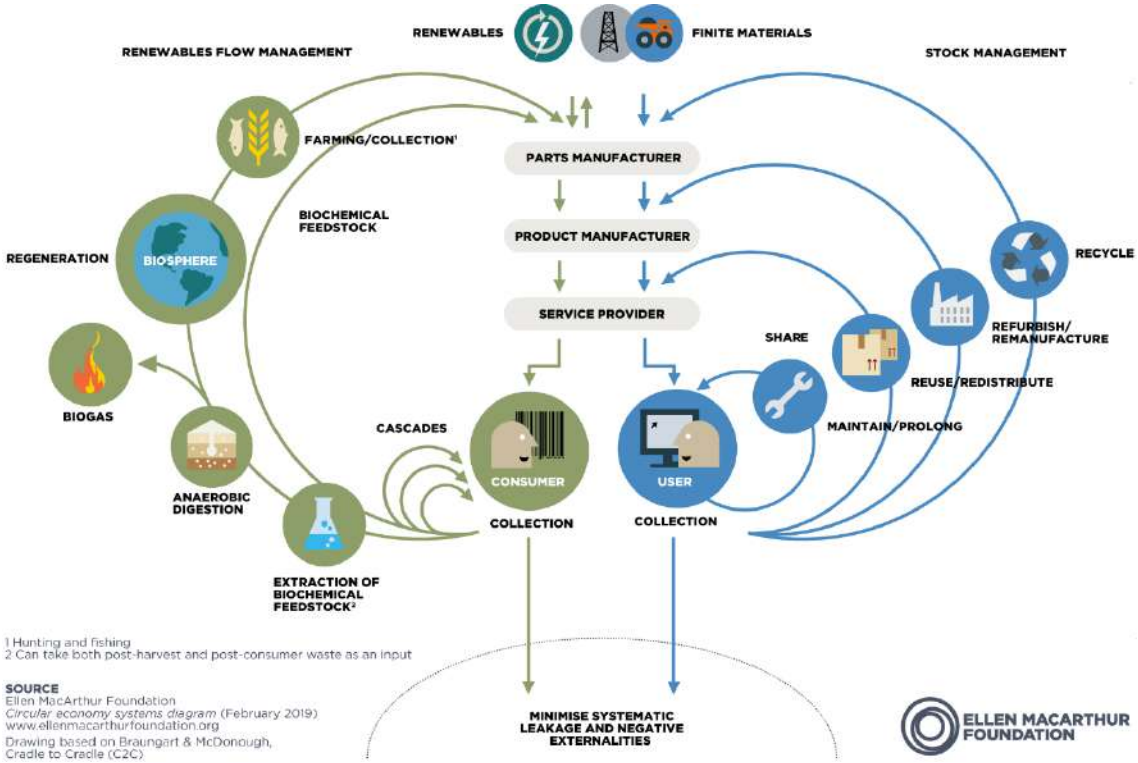

Figure 5. Circular Economy systems diagram.

Circular Economy practices: the 9 Rs framework

Circular practices contribute, directly or indirectly, to increasing resource efficiency and decreasing environmental impacts throughout value chains. This can be achieved by applying or enabling one or more of the following 9 circular economy "R strategies or principles", referred to as the 9 R's. There are different "R frameworks" such as the 3R, 4R, 6R and 9R. All varieties of the R framework share a hierarchy as their main feature with the first R viewed to be a priority to the second R and so on, but the 9R framework represents the most elaborated and exhaustive one. In this framework, the practices range from the ones with low circularity to the ones with high circularity, and are described below:[26]

- **R0 – Refuse:** Make a product redundant by abandoning its function or by offering the same function by a radically different product or service.
- **R1 – Rethink:** Make product use more intensive (e.g. by sharing product)
- **R2 – Reduce:** Increase efficiency in product manufacture or use by consuming fewer natural resources and materials
- **R3 - Reuse:** Reuse by another consumer of discarded product which is still in good condition and fulfils its original function.
- **R4 – Repair:** Repair and maintenance of defective product so it can be used with its original function.
- **R5 – Refurbish:** Restore an old product and bring it up to date.
- **R6 – Remanufacture:** Use discarded product in a new product with the same function.
- **R7 – Repurpose:** Use discarded product or its parts in a new product with a different function.

[26] Adapted from Potting et al. (2017, p.5) cited by Kircher et al. (2017)

- **R8 – Recycle:** Process materials to obtain the same (high grade) or lower (low grade) quality.
- **R9 – Recover:** Incineration of material with energy recovery.

Circular Business models

Depending on the circular principles implemented the circular economy can be classified in different types of business models. The report from Social Circular Economy (2017) divides the circular economy business models into the following five broad groups:[27]

- **Dematerialisation**: digitisation, on-demand production and the use of reusable products are able to diminish the amount of resources needed to create products. E.g. Netflix (visual content is available online, and not through materialised items such as DVDs) and Kindle (it substituted paper products as written content is available online through Kindle).
- **Circular inputs:** the business models under this category employ renewable energy (e.g. solar power), fully biodegradable materials (e.g. untreated wood) that are made in a sustainable way (e.g. properly sourced palm oil) and/or fully recyclable (e.g. pure high density polyethylene) for production.
- **Product life extension**: circular practices such as design for durability, design for modularity, maintenance and repair, reuse, reconditioning, refurbishment, remanufacture, repurpose and part harvesting allow to extend the life of products. Examples are Patagonia that designs for repair of their clothing and Fairphone that designs phones built with durability and modularity in mind using ethical supply chains.
- **Resource recovery:** it is achievable through the practices of recycling, bio-chemical extraction, anaerobic digestion and composting. (e.g. at Toast Ale, beer is brewed by using surplus bread).
- **Product as a service or Product Service System (includes Sharing Economy):** this group includes leasing, performance-based payment (pay for success), sharing resources and peer to peer lending. Examples are AirBNB (accommodation) and Uber (transport).

[27] https://www.socialcirculareconomy.com/uploads/7/3/5/2/73522419/social_circular_economy.pdf

Key elements of the Circular Economy

According to Circle Economy,[28] eight key elements define the majority of terms linked to the circular economy. They concluded this after they mapped the various terms and definitions used by over 20 organisations—NGOs, government agencies, academia, consultancies, etc. and conducted an in-depth literature review.

CORE ELEMENTS

The core elements of the circular economy relate to direct circular handling of material and energy flows—for example closing loops, extending product lifecycles and increasing usage intensity.

1. PRIORITISE REGENERATIVE RESOURCES: Ensure renewable, reusable, non-toxic resources are utilised as materials and energy in an efficient way.
2. STRETCH THE LIFETIME: While resources are in-use, maintain, repair and upgrade them to maximise their lifetime and give them a second life through take back strategies when applicable.
3. USE WASTE AS A RESOURCE: Utilise waste streams as a source of secondary resources and recover waste for reuse and recycling.

ENABLING ELEMENTS

The enabling elements of the circular economy support the implementation and uptake of circularity by removing some of these obstacles for core elements—for example, using waste as a resource is difficult to implement because of a lack of knowledge of quantity and quality of waste streams, but can be enabled through the use of a digital platform which exposes waste streams and their characteristics in a certain region.

4. RETHINK THE BUSINESS MODEL: Consider opportunities to create greater value and align incentives through business models that build on the interaction between products and services.
5. TEAM UP TO CREATE JOINT VALUE: Work together throughout the supply chain, internally within organisations and with the public sector to increase transparency and create joint value.
6. DESIGN FOR THE FUTURE: Account for the systems perspective during the design process, to use the right materials, to design for appropriate lifetime and to design for extended future use.
7. INCORPORATE DIGITAL TECHNOLOGY: Track and optimise resource use and strengthen connections between supply chain actors through digital, online platforms and technologies that provide insights.
8. STRENGTHEN & ADVANCE KNOWLEDGE: Develop research, structure knowledge, encourage innovation networks and disseminate findings with integrity.

[28] https://www.circle-economy.com/circular-economy/key-elements

European legislation on Circular Economy

In the past few years, the European Union has increasingly adopted ambitious initiatives to put in place foundations for the transition towards a circular economy.

"In 2020, €206 million is earmarked for projects to transform sectors that are traditionally energy intensive into competitive, low-carbon and circular industries and to significantly lower their environmental footprint. €132 million will support the development and production in Europe of the next generation of batteries, as part of the drive towards a low-carbon, climate-resilient future. Ten new topics on plastics with a total budget of €135 million contribute in different ways to the **EU Plastics Strategy".** [29]

The transition towards a Circular Economy importantly converges with international political frameworks that target climate and sustainability goals. In the last few years there have been many international initiatives and policies that encourage a transition towards a circular economy in Europe, such as:

- Seventh Environment Action Program (2013-2020) to transform the EU into a low carbon economy, with efficient use of resources, ecological as well as competitive;
- Paris Agreement on Climate Change (COP 21 in 2015);
- The 2030 Agenda for Sustainable Development (2015) - the 17 Sustainable Development Goals (SDGs);
- The New World Urban Agenda (UN-Habitat 2016).

Within the European political framework three initiatives have been driving a transition towards a circular economy:

- 2015 Circular Economy Action Plan
- 2020 European Green Deal
- 2020 Circular Economy Action Plan

The 2015 Circular Economy Action Plan

The European Union launched its first Circular Economy Action Plan in 2015, which represented a first step to a long-term commitment to establish a European circular economy.[30] The 2015 Circular Economy Action Plan was defined as a political instrument with high replicability and its focus on cooperation and comprehensive action, covering the entire product's cycle, makes it suitable for different political and economic contexts.

In particular, through this plan the Commission was working to break policy silos and expand circular economy principles across policy areas, especially in priority areas such as plastic, biomass, construction and demolition waste. It also sought to revise legislative framework on waste in particular[31]. The action plan sets a concrete action plan from production to

[29] European Commission, 2019. https://ec.europa.eu/info/news/commission-invest-eu11-billion-new-solutions-societal-challenges-and-drive-innovation-led-sustainable-growth-2019-jul-02_en&pk_campaign=rtd_news
[30] European Commission's "Circular Economy Action Plan" https://sustainabledevelopment.un.org/partnership/?p=29808
[31] Circular Economy for Climate Neutrality: Setting the Priorities for the EU https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3493573

consumption and waste management and is meant to close the loop of a product's value chain.

In addition, a Circular Economy Monitoring Framework[32] was adopted to measure progress towards a circular economy at EU and national level thereby inspiring action by making clear indications for policy makers of good practices and areas that need improvement. The monitoring process is especially relevant for identifying success factors in Member states and to consider what further actions are necessary to foster the long-term goal of a circular economy.

As a result, the Action Plan allowed the establishment of a more coherent policy framework for sustainable production and consumption driving coherent change across Europe through the adoption of similar strategies in different countries.

The European Green Deal and the 2020 Circular Economy Action Plan

In December 2019, the European Green Deal was presented, followed by the proposal of a new Circular Economy Action Plan in March 2020 focusing on sustainable resource use, which composes one of the main blocks of the EU Green Deal.[33] Indeed, circularity is at the core of the European Green Deal, which seeks to ensure a just and inclusive transition to making the EU climate neutral by 2050.

The EU Green Deal sheds light on the financing tools which are available, and on what investments are needed for this transition to happen,[34] covering all sectors of the economy and foreseeing significant investment. It provides a roadmap with actions to boost the efficient use of resources by moving to a clean, circular economy and stop climate change, revert biodiversity loss and cut pollution.[35] In fact, the transition towards a green economy is foreseen to be supported both technically and financially with an overall budget of at least €100 billion over the period 2021-2027.[36]

Moreover, the EU Green Deal includes as key policy areas topics that are at the core of the concept of a circular economy, such as: "From Farm to Fork strategy", which seeks to ensure more sustainable food systems; "clean energy", which envisions opportunities for alternative, cleaner and renewable sources of energy; "sustainable industry", which targets more sustainable, environmentally-respectful production cycles; "building and renovation", which acknowledges the need for a cleaner construction sector; and, finally, "eliminating pollution", which seeks to efficiently cut pollution.

Within its framework, the Circular Economy Action Plan of March 2020 seeks to make products more sustainable, while actively involving citizens in the circular economy and its benefits. Focusing on actions that seek to make circularity work for people and municipalities to empower consumers while producing more sustainably, it targets resource-demanding sectors such as electronics, packaging, plastics, construction, textiles, food and water and nutrients.

[32] https://ec.europa.eu/eurostat/web/circular-economy/indicators/monitoring-framework
[33] Circular Economy Action Plan - For a cleaner and more competitive Europe https://ec.europa.eu/environment/circular-economy/pdf/new_circular_economy_action_plan.pdf
[34] https://ec.europa.eu/docsroom/documents/39984
[35] https://ec.europa.eu/commission/presscorner/detail/en/ip_20_420
[36] https://ec.europa.eu/commission/presscorner/detail/en/qanda_20_24

Accordingly, the new Action Plan announces initiatives along the entire life cycle of products, targeting for example their design, promoting circular economy processes, fostering sustainable consumption, and aiming to ensure that the used resources are kept in the EU economy for as long as possible.

The focus on circularity and sustainability, as well as both the EU Green Deal and the Circular Economy Action Plan are in the center of research and innovation investment initiatives. These initiatives have been included under the European Green Deal Call, announced in May 2020, with the aim of responding to the urgency and ambition of the EU Green Deal within the current Horizon 2020 framework programme with a budget close to €1 billion.

III. General introduction to circular procurement

1. Terminology

The concept of sustainable procurement is not new, the UK and France published their sustainable guidelines in 2010 and 2011. In 2013, the ISO (International Committee for Standardization) was formed in 2013 to develop international standards. For example, the Ministry of Labour and Social Affairs in the Czech Republic uses the term "**Responsible Public Procurement**" enhancing the social and environmental aspect within public procurement. Responsible procurement has its roots in the Netherlands since 2005 and it sets criteria to be fulfilled.

The European Commission uses the term **Green Public Procurement (GPP)** to describe a situation when consumers are using their purchasing power to choose environmentally friendly goods, services and works.

Organisation Copper8 defines **Circular Public Procurement (CPP)** this way: "*Circular procurement is the process in which a product, a service or a project is purchased according to the principles of a circular economy. In this process the technical aspects of the product are as circular as possible, taking maintenance and return policies at the end of the use period into account, as well as including financial incentives to guarantee circular use*."[37]

According to the EC, „*Circular procurement sets out an approach to green public procurement which pays special attention to the purchase of works, goods or services that seek to contribute to the closed energy and material loops within supply chains, whilst minimizing, and in the best case avoiding, negative environmental impacts and waste creation across the whole life-cycle*".[38]

[37] Copper8: Circular procurement in 8 steps: https://www.pianoo.nl/sites/default/files/media/documents/Circular-Procurement-in-8-steps-oktober2018.pdf

[38] EC: Circular Procurement. https://ec.europa.eu/environment/gpp/circular_procurement_en.htm

Still, the circular economy concept stands on the three principles of sustainability – economic, social and environmental and promotes all the 17 SDGs. Thus, the concept of **Circular Public Procurement** bears in mind all aspects of sustainability. Circular procurement focuses on the use of resources, effective use of materials and reusability of the whole product and it aims to amplify the positive impact of the procurement process. Circular procurement does not only set sustainable criteria but promotes a new form of interaction between the procurer and supplier(s) with the aim to find new innovative ways to reach positive impacts on economic and environmental development and social well-being.

2. Characteristics of circular public procurement

In response to resource management linked to primary resource scarcity and depletion, circular public procurement seems to be an ideal (but not an easy) step to realize circular economy principles in practice. It should help stimulate the demand for more sustainable goods and it is therefore a strong stimulus for social or eco-innovation.

It is also important to understand the procurement process in a broader perspective – it is not only the process of demand specification and purchase. It is a whole process of **rethinking our needs** (and possible re-definition) and considering a product life cycle or other forms of possibilities (rent, service, reuse..). It is not only the public procurer who needs to change the attitude but it is the whole institution and supply companies (and the whole society in general) whose mindset needs to be changed towards more sustainable thinking by accepting circularity in everyday life.

Circular procurement is more than just purchasing circular products, you must also consider the circular use of the product. It means that if you procure a recycled product but after its usage it would end in the landfill, it is not circular. You have to take into account how it can be reused, down/upcycle or dismantled. This is the difference between recycling and circular economy.

There are also fundamentals to be realized before any procurement process starts:[39]

- Managing risks – identification, prioritization and management of sustainability risks related to procurement
- Due diligence – addressing adverse sustainability impacts
- Setting priorities – focused efforts on managing risk
- Avoiding complicity – avoiding being part in wrongful acts

[39] ActionSustainability webinar in Czechia (2021)

- Exercising influence – influencing the behaviour of suppliers and other stakeholders (giving a right example)

There are **three key aspects of circular procurement**: technical, organizational and financial. **Technical** aspects focus on reducing required material, design for disassembly and extending the product lifespan. **Organizational** aspects involve internal and external cooperation and long-term partnership. **Financial** aspect emphasizes the value at the end of life (long-term value creation), long-term business models and shift from product to service.

Circular procurement hierarchy

Procurement hierarchy is based on waste hierarchy. First step is to **REDUCE** what you purchase and assess what you really need (reducing packaging and waste, favouring reusable and refillable products where possible. Second step is to **REUSE** a product by the end of its life cycle (e.g. through take-backs systems in the contracts: especially IT equipment or furniture) or extend the product lifespan through special contract performance clauses related to maintenance, repair and recycling. Third step is to **RECYCLE** the product if it cannot be reused and create a new product (e.g. in construction: recycled concrete required in procurements). Fourth step is to **RECOVER** the waste for a different purpose through specific criteria in your tender.

Public authorities should comply with **six principles of circular procurement**:

1. Non-discrimination – no one can be excluded based on nationality or regional origin.
2. Equal treatment – every supplier must receive the same information.
3. Transparency – clear communication of expectations.
4. Proportionality – the procedure and the subject matter must be proportional to the nature and scale of the tender.
5. Collaboration – use the tender to bridge the traditional gap between buyer and supplier.
6. Innovation – facilitate innovation and circularity principles in practice.

Circular PP project[40] suggests six recommendations to boost circular procurement across the EU based on research and practical implementation of pilot procurements:

1. Raise the baseline of sustainable and circular procurement in Europe through the **introduction of minimum mandatory GPP criteria**, for example, compulsory collection and reuse clauses in ICT and furniture procurement.
2. Explore **innovative approaches** to output- and impact-focused monitoring, including innovative digital approaches, making use of big data and artificial intelligence.
3. **Promote Life Cycle Costing** through the development of further standardized, free-to-access LCC measuring tools, including calculation of carbon costs of products and services.
4. Continue the **provision and expansion of the EU Ecolabel**, including ecolabel for services, such as catering services or ICT collection services.
5. Support **capacity building for procuring organizations and suppliers**, with a particular focus of learning by doing through implementation of pilot procurements.
6. Lead by example by **making the procurement of EU institutions more circular**, in order to showcase the procurement practices necessary to facilitate the transition to a circular economy.

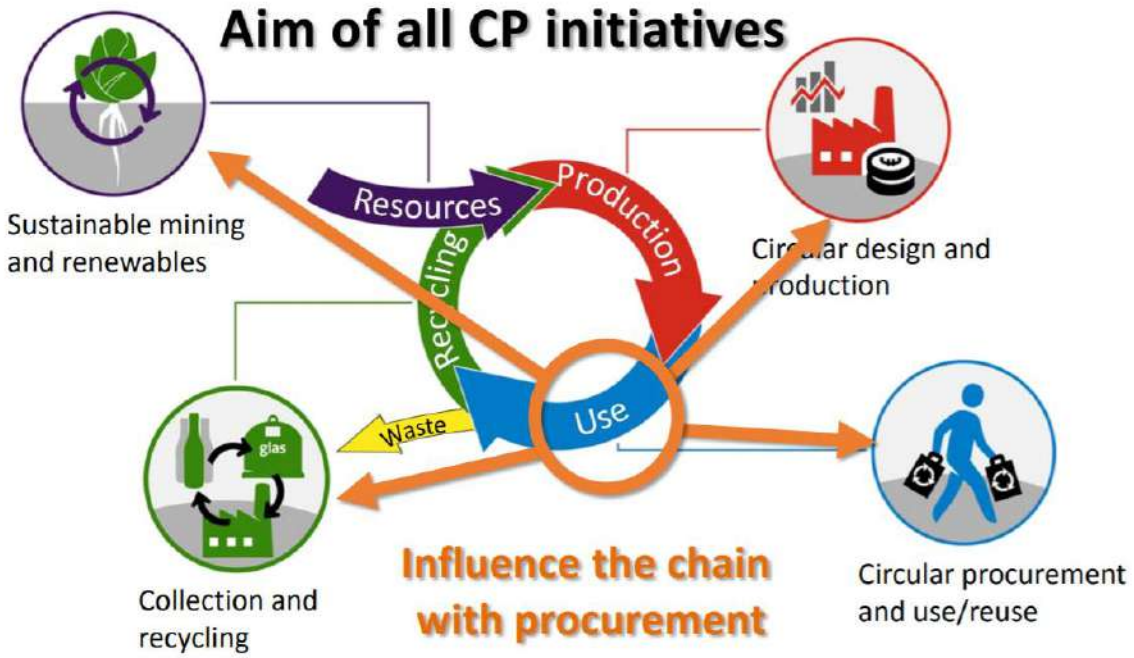

Figure 6. CPP Chain

[40] Circular PP: http://circularpp.eu/six-recommendations-to-boost-circular-procurement-across-the-eu/

To sum up, circular public procurement should focus on these circular business models:

1. ***Circular suppliers: supplying renewable, recyclable or biodegradable resources***
2. ***Resource recovery: eliminate material leakage and maximize economic value of product return flows***
3. ***Product life extension: through repairability, upgrading or reselling/reusing***
4. ***Sharing platforms: stimulating collaboration among product users***
5. ***Products as service: products are used by one or many customers through lease or pay-for-use arrangements***

3. Focus on environmental, social and economic sustainability

Realising circular economy in practice through the CPP can bring many positive impacts. Besides, CPP is an effective way to show public authority's commitments to sustainable development and EU targets towards a low-carbon economy.

Economic:

- Incentives for industry to innovate
- Promotion of environmentally friendly technologies
- New business opportunities
- Cost saving in the long-term
- Stimulating of circular economic activities
- New jobs

Environmental:

- Sustainable use of primary and secondary resources + material loops closing
- Energy savings
- Higher biodiversity protection
- Less waste production
- Mitigation of climate change negative impacts
- Emphasis on environment protection

Social:

- Higher awareness about environmental issues
- Reduction of needs and demands
- More responsible consumption
- Social inclusion
- Emphasis on well-being, gender equality and elimination of inequalities

IV. Benefits and problems in circular procurement

Circular procurement can bring many benefits to the institutions that are applying its principles. It can bring transparency but also the social and environmental benefits since the lowest price is not the only criteria to be fulfilled. Circular procurement is the way to meet environmental and social standards by defining the measurable requirements and going beyond lowest price at purchase.

Implementation of the circular procurement is new to many EU countries which are not prepared for its application in its full potential. Sometimes the problem is the market, since there are not so many companies providing the services or selling the products that fulfil the circular criteria. For the organization that is providing the procurement it is hard to define the measurable requirements and that is the reason why it is hard to meet ones. In some countries, one of the biggest problems are bureaucracy and legislative obstacles. There is also one more reason that can be an obstacle for implementing circular procurement: ignorance or low awareness, sometimes a reluctance to change, scepticism, bureaucracy, price as main criteria or more work on the preparation of the procurement process. In this chapter, we will focus on the benefits and problems of circular procurement.

1. **Benefits of circular procurement**

As it was mentioned above, circular procurement brings new criteria to the process of procurement. By implementation of these criteria, procurement can meet environmental, social and economic benefits. We list benefits which seem to be the most important but they are of course all linked to the benefit of circular economy as well as linked to the three pillars of sustainability.

<u>Economic benefits:</u>

- Possible use of leasing or renting
- Reduction of total costs in long-term perspective
- Supporting ecological and digital innovations of market
- Supporting product/service competitiveness
- Building resilience to external shocks

<u>Environmental benefits:</u>

- Reduction of pollution of water and air pollution
- Reduction of greenhouse gas emissions/the contribution to climate change
- Protection of non-renewable resources
- Protection of ecosystems
- Reduction of waste
- Reduction of energy consumption

- Support of sustainable agriculture and local products
- Reduction of environmental footprint
- Reduction of the use of primary resources

Social benefits:

- Improving social and health conditions of workers
- Improving the quality of life
- Increasing the health standards
- Increasing self-awareness of workers
- Improving the quality of food at workplace
- Creating (circular) jobs

2. Problems

In many countries, the implementation of the circular procurement can be seen as an obstacle since there are limits of the market but sometimes the main problem is setting up the requirements of the procurement since it's more time consuming for the ones that are setting it up. Sometimes it's the lack of awareness or ignorance.

Ignorance/low awareness:

- Procurers and suppliers do not know all the environmental and social impacts and economic benefits of products or services.
- It can be challenging to assess all circular procurement information and criteria.
- Cases of good examples are not available.

Reluctance to change:

- Workers responsible for procurement are required to have specific information about circular procurement implementation and that needs training and seminars.
- There is a need to overcome old established habits from both sides which can be difficult.

Scepticism:

- Green scepticism is gaining strength worldwide.
- Procurers are sceptical about the benefits of green products.
- Scepticism stems from a lack of information and environmental concerns.

Bureaucracy:

- The responsibility for defining public requirements, procurement and maintenance / replacement can be shared with the regional office, the city council and others.
- In the future, it will be necessary to address each of the stakeholders with specific tasks.

- In the private sector and public sector, it can be challenging for procurers to act on their own initiative.

Price as main criteria:

- Procurers often have no knowledge about circular procurement lowering costs.
- Purchasing costs are still the main criterion for purchasers to access contracts.

More work:

- Lack of practical tools and information – third party may monitor purchases.
- Workers need to have special training for implementation of policy and technical aspects of circular procurement.
- Formal and informal cooperation work and information exchange.
- Importance of sharing not only benefits but also problems.

Limit of the markets:

- Lack of circular know-how.
- Delivering the products or services to meet the circular procurement criteria for road transport.
- Prolonging the lifespan of furniture items on the procurement of refurbishment and of end-of-life services.
- The lack of coordinated exchange of best practices and problems.
- The lack of clear and verifiable information about circular procurement.

V. Steps to the circular economy in public procurement

Implementing circular procurement requires the involvement and cooperation of different departments and staff members across an organisation. Finance, environment and procurement officers will likely need to be consulted, as well as certain specialists in other departments.

In the next step - an operational implementation plan should be established, outlining specific tasks, responsibilities and a time plan. The implementation plan should then be communicated as widely as possible, particularly to the staff most affected and to suppliers who have a role to play in delivering the products or services.

Circular procurement policy should be aligned with any existing policies and strategies relating to procurement and the sustainable operation of the organisation. The input of internal users, suppliers and management is normally needed to ensure the policy can be implemented. You may also wish to seek external advice or peer review from other public sector organisations implementing CPP, or from the networks.

1. Preparation, research and planning

First step in every (circular) procurement is preparation, research and planning. Setting up the rules and a time plan of the whole process is crucial.

When making decisions about our purchase with the implementation of circular criteria, we need to research the market. This step is very important for the result of the whole procurement process and its results. Finding the products with certain (circular/green) certificates or services with certain authorisation is the key to setting up the criteria for the whole process.

In identifying which product, service and works sectors to prioritise, three main factors should be initially kept in mind:

- **Environmental impact** – Select those products or services which have a positive impact on the environment over their life-cycle.
- **Budgetary importance** – Focus efforts on areas of significant spend within the authority.
- **Potential to influence the market** – Focus on areas where there is the most potential to influence the market. This may be due to the size or visibility of the contract, or the importance for suppliers of having public sector clients.

A number of further factors should then also be considered in making your final selection of sectors:

- **Political priorities**. Are there particular local environmental priorities, such as urban air quality, energy/water consumption, waste management, or climate adaptation which you could link to?
- **Market availability of environmentally preferable alternatives**. Market analysis can be useful to determine whether appropriate alternatives are available which offer reduced environmental impact. Check for relevant environmental labels and certifications.
- **Cost considerations**. Are greener alternatives likely to be cost neutral or will they affect your budget? The assessment of "cost" should consider all costs throughout the life-cycle: purchase price, usage costs (energy/water consumption, maintenance), and disposal costs. In some cases, grants or subsidies may be available for investment in greener options, so it is worth searching for relevant programs.
- **Availability of criteria**. For many product and service groups, green purchasing criteria have been developed which can be inserted directly into your tender, without the need for lengthy research into environmental performance characteristics and market

analysis. The EU GPP criteria[41] (see below) at time of writing cover 20 product and service groups and are available in both core and comprehensive versions. In many EU countries national or regional criteria are also available.

- **Visibility**. How visible will your CPP activities be to the public, the market, other contracting authorities and your own staff? Will they realise that you are making an effort to improve environmental performance? High-profile changes like the type of vehicles used by an authority, or a switch to organic food in the canteen, can help build awareness of your CPP policy and improve the image of your organisation.
- **Practical considerations**. Are there any important contracts up for renewal, or are there long-running contracts in place for certain product/service groups? What time and financial resources are available for implementation? Are there any particular product/service groups where there is already some environmental expertise?

Set **priorities** for the product and service groups you will address by consulting existing **circular criteria**, **eco-labels** and other sources.

Note: Strategic thinking

One of the first steps towards circular procurement is to consider strategically how it can be integrated into existing procurement practices and systems.

- *Rethink need - identify your need as a first step in circular procurement (Example: do you really need specifically 18 green chairs and big blue tables or do you need a open space for 10 employees where the places can be shared among them and you don't mind that the furniture will be from second hand? The result can be designed by the company providing you with the solutions where the result will be both great looking, sustainable and innovative. Be open-minded to new innovations and solutions.*
- *Exploring options - explore the options of the current market (Example: Try to look for new opportunities even for small projects. There might be new companies providing catering services using local resources, working with disabled employees and providing reusable equipment instead of the company that you have been asking for this kind of services for years. Opening new competitions might surprise you with an innovative approach. There is always an opportunity to visit fairs, check websites, look at the catalogues but new open calls can save the time to do proper market research. But don't forget to promote your call to a wider audience.)*
- *Circular procurement hierarchy - apply the circular hierarchy in setting the measurable requirements: refuse, reuse, recycle and recover.*

[41] https://ec.europa.eu/environment/gpp/eu_gpp_criteria_en.htm

2. Prior Information Notice and Consultation

A crucial step before starting the procurement process is to assess your actual needs in light of the potential environmental impact of the contract. Proper consultation with internal or end users may reveal that lower volumes, or more environmentally friendly options, can readily be applied. In some cases, the best solution may be to buy nothing at all. For example, you may be able to share resources or equipment with other authorities. Purchasing re-used, recycled or re-manufactured products can also contribute to the idea of a circular economy.

Letting the market know well in advance about tenders which will include environmental criteria is advisable. This will give suppliers sufficient time to prepare for your requirements. Publishing a **Prior Information Notice (PIN)**, is one way to do this. You may also consider publishing information on your website, or holding an information day for interested suppliers. Future possible suppliers can help us clear all the uncertain issues about the product or services so the procurement will end up successfully with purchasing the product/service with lowest impact or best Life Cycle Analysis (LCA)/LCC. This step is also important when we want to develop a new product/service and consult with potential future suppliers about the possibilities to develop such a product/service.

The EU has developed green/circular criteria for a number of product and service groups, which are regularly reviewed and updated. The criteria are designed to be inserted directly into tender documents and include information on verification methods. Most of the criteria are available in all official EU languages.

At time of writing, the product and service groups covered are:

- Cleaning products and services
- Copying and graphic paper
- Combined heat and power (CHP)
- Office Buildings
- Electrical and electronic equipment in the health care sector
- Electricity
- Food and catering services
- Furniture
- Gardening products and services
- Imaging equipment
- Indoor lighting
- Office IT equipment
- Road Design, Construction and Maintenance
- Sanitary tapware
- Street lighting and traffic signals
- Textiles

- Toilets and urinals
- Transport
- Wall panels
- Waste water infrastructure • Water-based heaters

Note: Strategic thinking

When aiming to make a purchase more circular, it is a good practice to establish what the projected service is in terms of maintenance and repair.

- *Knowledge exchange – through work groups, workshops, seminars, conferences or via voluntary agreement between different stakeholders having the same goal (Example: In Czech Republic, there is a Memorandum on public procurement inspired by the Dutch concept of so-called Green deals which aim is to bring together stakeholders from different fields having the same aim in order to test & share results to make concrete innovations being implemented faster and cleverer into practices.*
- *Promoting awareness to the broad public – participants of this deal are interested in exchanging and publishing knowledge with the public – related to the benefits and problems of public and private circular procurement.*
- *Sustainable cooperation – participants of circular procurement are interested in further cooperation.*

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3. Integrating sustainability specifications + evaluation criteria

In the process of procurement, it is crucial to set up the criteria according to your research and preliminary consultation. Requesting the certain certificates, approvals from the authorities have to be integrated in the criteria of the product/service you procure. The criteria should be very complex to achieve the best result in the whole process of procurement.

Set **award criteria** which encourage tenderers to deliver even higher levels of environmental performance than those you have specified and apply these in a transparent way. Assess **life-cycle costs** when comparing tenders and reject **abnormally low tenders** if these do not comply with environmental law.

How to measure circularity – Key Performance Indicators[42][43]

There are plenty of indicators which might be taken into account while preparing a circular tender. Basically, they may be divided into these groups:

Energy use:

- % renewable energy
- share of recycled energy
- CO2 emissions reduction
- electricity consumption

Water use

- water circularity indicator
- share of recycled water used
- share of water consumption form scarce source

Material consumption

- contribution of recycled materials to raw materials demand
- specific waste streams (packaging waste, biowaste, e-waste, etc.)
- mass of unrecoverable waste
- material recovery rates from own buy-back/take-back contract, partnership system, collection and recovery programs
- consumption of raw materials
- proportion of materials with recycling possibility
- proportion of ecologically certified materials in material use

Social impact

- job creation
- rate of community participation
- support of diverse or inclusive society
- citizen awareness, engagement and participation in the circular economy
- participation in new forms of consumption (e.g. sharing, product-service systems, willingness to pay more for durability), re-use (requiring changed mindsets regarding repair and refurbishment)

[42] https://ec.europa.eu/eurostat/web/circular-economy/indicators
[43] https://www.mdpi.com/2071-1050/12/11/4483/htm

Environmental impact

- contribution to national and international objectives to counter climate change, for example by reducing greenhouse gas emissions
- rate of energy efficiency
- level of waste generated
- environmental footprint of consumption
- work travel emissions per employee
- toxicity of products and materials

Economic life cycle cost and value

- utility (lifetime and function served)
- material losses in the supply chain or during Product Use
- modifications of products or services
- increasing resource security and lowering pressures on the environment domestically and abroad
- remanufacturing and recycling process flow

4. Selection and evaluation process

After receiving the offers from future suppliers, we have to choose the one with the best results linked to our criteria. Circular criteria therefore must have a higher percentage than the one that represents the budgetary preferences.

Apply, where appropriate, selection criteria based on **environmental technical capacity** or **environmental and supply chain management** measures, and **exclude tenderers who do not comply with applicable environmental laws.**

Selection criteria focus on an economic operator's ability to perform the contract they are tendering for. When assessing ability to perform a contract, contracting authorities may take into account specific experience and competence related to environmental aspects which are relevant to the subject matter of the contract. They may ask for evidence of the ability of operators to apply environmental and supply chain management measures when carrying out the contract. They may also exclude operators who are in breach of environmental law.

5. Contract management

Set **contract performance clauses** which underline the environmental commitments made by contractors, and provide appropriate **remedies** where they fall short. Ensure there is a system for **monitoring** these commitments and that they are also applied to **subcontractors.**

Contract performance clauses are used to specify how a contract must be carried out. Environmental considerations can be included in contract performance clauses, provided they are published in the call for competition or procurement documents and are linked to the subject-matter of the contract.

Any special environmental conditions should be indicated in advance, to ensure companies are aware of these obligations and are able to reflect them in the price of their bids. The contracting authority may provide that economic operators will be excluded from further participation if they do not assent to the contractual clauses. Where such mandatory conditions are indicated, it is important to apply them to all bidders in the manner set out in the procurement documents.

Having environmental contract clauses is only effective if compliance with these clauses is properly monitored. Different forms of contract compliance monitoring can be applied:

- The supplier may be requested to supply evidence of compliance
- The contracting authority may carry out spot checks
- A third party may be contracted to monitor compliance.

Appropriate penalties for non-compliance or bonuses for good performance should be included within the contract. For example, many contracting authorities include key performance indicators (KPIs) in contracts, which can be linked to the contractor's entitlement to claim payment. As good performance on environmental issues also helps to establish a contractor's reputation, incentives may take the form of positive publicity which highlights this to the public and other contracting authorities.

6. Reviewing & learning & evaluation

Implementing circular procurement means going beyond the lowest price at purchase. At the award stage, the contracting authority can evaluate the quality and circularity aspects of the tenders using predetermined award criteria. After a tender is realised, it is recommended to evaluate it through the perspective of economic, social and environmental sustainability and SWOT (strengths, weaknesses, opportunities and threats) in order to avoid potential problems in the future. It is also good to share the circular procurement case to encourage other public authorities.

VI. Specific guidance - practical contract preparation

1. How to take into account specific aspects in contracts? How to evaluate the impact of a contract? What to prioritize in contracts?

A. Defining the subject-matter.

When defining the subject-matter of a contract, contracting authorities have great freedom to choose what they wish to procure. This allows ample scope for including environmental considerations, provided that this is done without distorting the market, i.e. by limiting or hindering access to it. A thorough needs analysis involving the relevant stakeholders will help you to define the scope for greening the contract – as well as avoiding unnecessary purchases.

B. Environmental technical specifications

Environmental performance levels and particular materials and production methods may be specified, if relevant. Specifications can relate to any stage of the life-cycle, e.g. raw material extraction, processing, packaging, delivery, use phase or disposal. Additionally, including procurement criteria rewarding circularity to ensure that more circular products or services have equal chances in tender procedures.

C. Specifying materials and production methods

A careful analysis of the life-cycle of the goods, services or works you are purchasing will help you arrive at appropriate specifications for production processes and methods. Life-cycle assessment (LCA) allows for cradle-to-grave analysis of the environmental impact of products. It is also important to remove unnecessary technical requirements based on performance of primary materials (both public procurement and technical standards) hampering circular material flows.

D. Use of variants

The variants approach means you allow tenderers to submit an alternative solution which meets certain minimum requirements you have identified, but may not meet your full specification. Allowing tenderers to submit variant bids can assist in finding the most economically advantageous tender which also delivers high environmental performance.

E. Using GPP criteria and labels

Technical standards, labels, such as EU labels[44], and the EU and national GPP criteria[45] (see above) sets are all valuable sources of information when developing a specification.

To sum up: EU GPP criteria have been designed to assist contracting authorities in identifying and procuring greener products, services and works, environmental procurement criteria have been developed (at time of writing) for 21 product and service groups which can be directly inserted into tender documents. They are developed to facilitate the inclusion of green requirements in public tender documents. While the adopted EU GPP criteria aim to reach a good balance between environmental performance, cost considerations, market availability and ease of verification, procuring authorities may choose, according to their needs and ambition level, to include all or only certain requirements in their tender documents.

Special conditions apply if you wish to require tenderers to have a label, and equivalent labels must be accepted.

F. Verifying compliance with technical specifications

You should set out in advance in your tender documents the types of evidence of compliance which bidders can submit. This is often done by providing an indicative list and stating that other equivalent forms of evidence will also be accepted.

To find help and more information on the Circular tendering process:

- Helpdesk: The European Commission established a Helpdesk to disseminate information about GPP and to provide answers to stakeholder enquiries (http://ec.europa.eu/environment/gpp/helpdesk.htm).
- GPP information website: It is a central point for information on the practical and policy aspects of GPP implementation. It provides links to a wide range of resources related to environmental issues as well as local, national and international GPP information (http://ec.europa.eu/environment/gpp).

2. How to evaluate the impact of a contract?

Selecting and excluding tenderers

- 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

[44] https://ec.europa.eu/info/business-economy-euro/product-safety-and-requirements/eu-labels_en
[45] https://ec.europa.eu/environment/gpp/eu_gpp_criteria_en.htm

given the opportunity to 'self-clean' and cannot be excluded for more than three years on this basis.

- The past experience of a company and the professional qualifications of its personnel can be assessed with a view to environmental considerations. The 2014 directives also introduce a new possibility to request evidence of the supply-chain management measures which companies are able to apply, which can be relevant for GPP.
- In order to check whether companies can perform the environmental management measures associated with a contract, contracting authorities may ask them to demonstrate their technical capacity to do so.
- Environmental management systems such as EMAS or ISO 14001 can serve as a (non-exclusive) means of proof for that technical capacity.

You can define different criteria:

1) Exclusion criteria
2) Selection criteria
    a. Environmental technical capacity
    b. Environmental management systems
    c. Supply chain management measures
    d. Product samples, checks and conformity assessment
3) Means of proof
4) Evaluating groupings

3. What to prioritize in contracts. Awarding contracts

<u>General rules for awarding a contract</u>

A. Formulating and advertising award criteria
    a. Award criteria must not confer an unrestricted freedom of choice
    b. Award criteria should ensure the possibility of effective competition
    c. Award criteria must be advertised in advance

<u>Applying environmental award criteria</u>

A. Specifications or award criteria
B. Weighting approaches
C. Using labels
D. Using environmental management systems
E. Using test reports and certificates

Life-cycle costing (LCC)

A. LCC and environmental considerations
    a. Savings on use of energy, water and fuel
    b. Savings on maintenance and replacement
    c. Savings on disposal costs
B. Assessing external environmental costs
C. Applying LCC

VII. Specific instructions on problematic situations

1. Requirements on regionality

In order to maximise the value and close the material loops, the concept of circular economy emphasizes regionality and localisation of production and consumption. In public procurement, it contradicts the EU principle of equal treatment to require local products or suppliers though. Equal treatment:

- includes requirement of non-discrimination based on nationality
- Applies to all procurement covered by directives or of certain cross-border interest
- Does **NOT** mean treating everyone the same – but treating them according to objective criteria

What is key to do in such a case when a procurer wants to buy products with low environmental footprints is to require qualitative environment criteria such as low CO2 emissions or life cycle costing (LCC).[46] Life Cycle Costing includes the costs arising from external effects of the environmental pollution which are associated with the advertised capacity during the life cycle in the calculation of the actual costs for a product.

LCC in the EU Public Procurement Directive 2014/24/EU: the Directives clearly includes, defines and foresees the use of LCC within the public procurement process: Life cycle means "all consecutive and/or interlinked stages, including research and development to be carried out, production, trading and its conditions, transport, use and maintenance, throughout the existence of the product or the works or the provision of the service, from raw material acquisition or generation of resources to disposal, clearance and end of service or utilisation".

[46] SPP Regions: Life Cycle Costing. https://sppregions.eu/fileadmin/user_upload/Life_Cycle_Costing_SoA_Report.pdf

The Directive (Subsection 3. Award of the contract Article 67 Contract award criteria) encourages the use of LCC during the awarding phase, as a tool to get the "most economically advantageous tender":

1. Without prejudice to national laws, regulations or administrative provisions concerning the price of certain supplies or the remuneration of certain services, contracting authorities shall base the award of public contracts on the most economically advantageous tender.

2. The most economically advantageous tender from the point of view of the contracting authority shall be identified on the basis of the price or cost, using a cost-effectiveness approach, such as lifecycle costing in accordance with Article 68, and may include the best price-quality ratio, which shall be assessed on the basis of criteria, including qualitative, environmental and/or social aspects, linked to the subject-matter of the public contract in question. [...]

2. Greenwashing

With the current trend to promote sustainable and green consumption, many companies try to attract their customers with products which are not as sustainable as they claim to be, either willingly or unwillingly. Many of the proposed solutions are identified as not responsible after some period of time because of the progressive research which shows negative impacts not predictable in the beginning. That is why any green and sustainable solution / products must be critically assessed and careful attention must be paid to greenwashing in any kind of purchase or tender.

Terminology[47]

- Greenwashing was first accused in 1986 by activist Jay Westerveld, when hotels began asking guests to reuse towels, claiming that it was a company water conservation strategy, although, did not have any environmental actions with more significant environmental impact issues.
- TerraChoice defines greenwashing as "the act of misleading consumers regarding the environmental practices of a company or the environmental performance and positive communication about environmental performance".
- Delmas and Burbano define it as "poor environmental performance and positive communication about environmental performance". Baum considers greenwashing as "the act of disseminating disinformation to consumers regarding the environmental practices of a company or the environmental benefits of a product or service".
- Tateishi summarizes greenwashing as "communication that misleads people regarding environmental performance/benefits by disclosing negative information and disseminating positive information about an organization, service, or product".

[47] de Freitas Netto et al. (2019)

- **All of these authors describe the phenomenon as two main behaviours simultaneously: retain the disclosure of negative information related to the company's environmental performance and expose positive information regarding its environmental performance. This two-folded behaviour can be named as selective disclosure.**
- 'Green claims' (or 'environmental claims')[48] can be defined as practices of suggesting or otherwise creating the impression (in the context of a commercial communication, marketing or advertising) that a product or a service is environmentally-friendly (i.e. it has a positive impact on the environment) or is less damaging to the environment than competing goods or services (e.g. because it was produced with lower emissions). This may include claims indicating that a product is more environmentally-friendly because of its composition, the way it has been manufactured or produced, the way it can be disposed of and the reduction in energy or pollution which can be expected from its use. When such claims are not true or cannot be verified, this practice is often called 'greenwashing'.

The Seven Sins of Greenwashing[49]

1. **Hidden Trade-Off:** Labelling a product as environmentally friendly based on a small set of attributes (i.e., made of recycled content) when other attributes not addressed (i.e., energy use of manufacturing, gas emissions, etc.)
2. **No Proof:** Making an environmental claim without providing easily accessible evidence on either the label or the product website.
3. **Vagueness:** Using terms that are too broad or poorly defined to be properly understood (i.e., an "all-natural" cleaner may still contain harmful ingredients that are naturally occurring).
4. **Irrelevance:** Stating something that is technically true but not a distinguishing factor when looking for eco-friendly products (i.e., advertised as "CFC-Free"—but since CFCs are banned by law this is unremarkable).
5. **Lesser of two evils:** Claiming to be greener than other products in its category when the category as a whole may be environmentally unfriendly (i.e., an organic cigarette may be greener, but, you know, it's still a cigarette).
6. **Fibbing, falsehood:** Advertising something that just isn't true (i.e., claims to be Energy Star Certified, but isn't).
7. **Worshiping false labels:** Implying that a product has a third-party endorsement or certification that doesn't actually exist, often through the use of fake certification labels.

[48] BEUC (2020): Getting Rid of Greenwashing. https://www.beuc.eu/publications/beuc-x-2020-116_getting_rid_of_green_washing.pdf

[49] ECOWATCH: 7 Signs of Greenwashing. https://www.ecowatch.com/7-sins-of-greenwashing-and-5-ways-to-keep-it-out-of-your-life-1881898598.html#toggle-gdpr

HOW TO AVOID GREENWASHING[50]

- **Research**
  - The best way to avoid deception is to educate yourself and the company to avoid falling into the trap of greenwashing. As a consumer, look past the pretty packaging and find out more about a company's production ethics. As a company, reflect on how accurate the sustainability claims are.
- **Receive feedback**
  - Opening up a line of communication with customers is one way of gaining awareness of how the brand's claims are satisfying the consumers. Receiving feedback is extremely valuable. Above all, it enables gaining an outsider's perspective on how a product is perceived.
- **Involve stakeholders**
  - The more you consult, the more impact you will have. It is advisable to involve colleagues, investors, suppliers, CSR managers etc…
- **Look for genuine certifications and logos (see Annex 1)**
  - Ask only for well-known and verified certifications used in your country.
  - Look for fake labels and certifications
- **Check the ingredients list**
  - While demanding food, cosmetics, or cleaning products, it is necessary to avoid harmful chemicals.
- **Watch out for false and misleading claims**
  - Brands like to give credibility to their products by including snippets of information that, at first glance, make them seem like they're a good choice. In particular, look for the use of "cruelty-free" and "not tested on animals" or "Earth-friendly" and "recyclable/compostable/biodegradable". These terms are meaningless on their own without further information. Double check brands on their claims, don't take them at face value.
- **Be wary of hidden trade offs**
  - This happens when a brand introduces a token act of being environmental, sustainable, or ethical, while having an unappealing trade off. For instance, promoting their 'recyclable packaging' while ignoring the environmental impact of the product itself. Genuine sustainable and eco-friendly products will provide information on manufacturing from worker conditions, energy use, emissions, water and air quality; unethical brands will not.

[50] 2030 Builders: https://2030.builders/stories/greenwashing/

VIII. Legislative Frameworks in Czechia, Spain and Slovakia

As all the involved countries are part of the EU, their legislative frameworks must comply with the European legislation. Here, we summarise directives and regulations focused on public procurement at the EU level.

1. European Union

Primary law - founding acts:

- Lisbon act - amendment in Art. 191 of the act on the Functioning of the EU. EU policy on the environment is intended to contribute to preserving, protecting and improving the quality of the environment, health, the rational use of natural resources and the mitigation of climate change. EU policy on the environment is aimed at a high level of protection and is based on the precautionary principle and prevention, averting environmental risks at source, and on the "polluter pays" principle.

Secondary law - Regulations and Directives of the European Parliament and the Council:

- Directive 2014/23 / EU of the European Parliament and of the Council on the award of concessions
- Directive 2014/24 / EU of the European Parliament and of the Council on public procurement and repealing Directive 2004/18 / EC
- Directive 2014/25 / EU of the European Parliament and of the Council on procurement by entities operating in the water, energy, transport and postal services sectors and repealing the Directive 2004/17 / EC
- Regulation (EC) No 106/2008 on a Community program for the labelling of the efficiency of office equipment, as amended by Regulation (EU) No 182/2011 of the European Parliament and of the Council 174/2013
- Directive 2009/33 / EC of the European Parliament and of the Council on the promotion of environmental and energy technologies fuel-efficient road transport vehicles
- Directive 2010/30 / EU of the European Parliament and of the Council on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products - public authorities "shall procure only those products that meet the highest performance criteria and belong to the highest energy efficiency class"
- Directive 2012/27 / EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency and amending Directives 2009/125 / EC and 2010/30 /

EU and repealing Directives 2004/8 / EC and 2006/32 / EC, sets an ambitious target of 20% energy savings in 2020

- Regulation (EC)of the European Parliament and of the Council 66/2010 on the EU Ecolabel
- Regulation (EU) of the European Parliament and of the Council 995/2010 laying down obligations of operators of wood and wood products - the placing on the EU market of illegally harvested wood and wood products is prohibited
- Directive 2009/125 / EC of the European Parliament and of the Council on ecodesign - provides EU rules for the design of eminent energy-related products
- Regulation (EC)of the European Parliament and of the Council 1221/2009 concerning the voluntary participation by organizations in a Community eco-management and audit scheme (EMAS)

Current practice in the EU

According to DATLAB, a company analyzing data within the public procurement sector, the price is the determined factor in most public procurement. The analysis of around 14 million public contracts from the European Journal of TED evaluated the categories: price, quality, life cycle costs, qualifications, deadlines, environment, social aspects, etc. As Figure 6 shows, the average weight of non-price criteria is around 50% in Britain, France and the Netherlands, while it is almost without exception only up to 10% in Eastern Europe (including the Czech Republic).

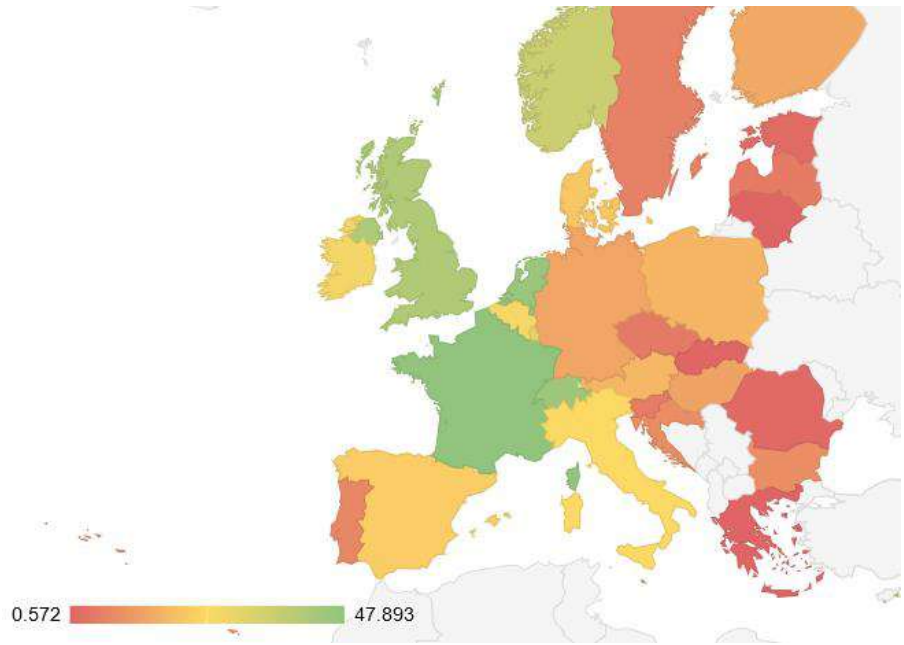


Figure 7: Average weight of non-price criteria (above-limit public contracts 2006 – 2019); Source: DATLAB (2021)

2. Legislative Framework in Czechia

Public contracting authorities are governed by the Public Procurement Act (No. 134/2016 Coll.). As of January 2021, an amendment to this Act applies, which stipulates that "*the contracting authority is obliged, provided that this is possible due to the nature and meaning of the contract, to comply with the principles of socially responsible procurement, environmentally responsible procurement and innovation.*" This new principle applies in conjunction with other principles in public procurement: efficiency, economy, effectiveness, proportionality and transparency.

Nevertheless, the Government in the Czech Republic introduced the Rules for the Application of a Responsible Approach in the Award of Public Contracts and Purchases of State Administration and Self-Government by Resolution No. 531 already in 2017. The emphasis on sustainability is not a complete novelty. However, the most important thing is to convince contracting authorities of the need to buy responsibly and in a circular way and to change the current practice, where only the price is taken into consideration.

Tools of circular and responsible procurement

Preliminary market consultations pursuant to Section 33 of the Public Procurement Act are a legal tool for the implementation of cooperation between the contracting authority and suppliers. In this way, contracting authorities may:

- Explain to suppliers their needs, goals or values that they want to fulfil,
- obtain information on available solutions and their limits,
- verify the fulfilment of the considered circular criteria in the requirements for the subject of the public contract, qualification, or evaluation, or
- coordinate circular activities across relevant sectors.

Thanks to preliminary market consultations, the contracting authority can conduct market consultations with both experts and suppliers in order to prepare the tender conditions and inform the supplier about its intentions and requirements. Thanks to this, the contracting authority can identify the existing possibilities on the market and prepare the tender conditions so that the performance best meets its needs, and in addition provides added value in the form of social or environmental benefits. Preliminary market consultations can also contribute to greater participation of SMEs in procurement procedures.

Other key tools are the Design & Build and Best Value methods. Design & Build is a method of delivery of construction projects, which is characterized by the fact that the responsibility for the processing of project documentation and thus for the overall quality of execution is transferred to the construction contractor. In other words, the client defines a functional solution and the supplier implements the project according to its own plans and solutions.

Best Value is an innovative way of evaluating the quality of tenders with a wide application across public service, supply or construction contracts. In the BEST VALUE method, the weight of the price offer is 30%. Qualitative evaluation with a weight of 70% is focused on the level of expertise, risk and added value. An integral part is also an interview with key team members, which can have a weight of between 20-30%, i.e. the same as the price. This

method gives contracting authorities the opportunity to choose a candidate who clearly outperforms others, and in turn allows bidders to show what they can do. This method is perfect for the introduction of new innovative approaches and technologies.

In discussion about circular public procurement, we need to focus on these topics:

- how to emphasize **quality criteria**
- how to involve **externalities and price** in a complex manner
- how to set **innovative and alternative solutions**
- how to be **transparent** and keep the rule of **non-discrimination**

3. The legislative framework in Slovakia

In the Slovak Republic, the issue of green public procurement is regulated by the following documents:

· **National Action Plan for Green Public Procurement in the Slovak Republic in 2016 to 2020** appoints for the use of GPP at the level of 50% of all contracts and from the total volume of public procurement contracts.

· **The Environmental Strategy of the Slovak Republic until 2030** appoints that the Slovak Republic will provide 70% of the total number of public procurement contracts with green public procurement.

· Program waste prevention in the Slovak Republic for the years 2019-2025

· Act no. 343/2015 Coll. on Public Procurement and on Amendments to Certain Acts, as amended (hereinafter referred to as the "Public Procurement Act")

· Act no. 158/2011 Coll. on the promotion of energy and environmentally efficient motor vehicles and on the amendment of certain laws

The basic legal basis for the application of the Green Public Procurement in the Slovak Republic is the Public Procurement Act.

Based on the notion of "public procurement" (Section 2 of the Public Procurement Act), in the case of green public procurement in the procedures under this Act, which are awarded contracts, concessions and design contests in addition, they mainly take into account environmental aspects, thereby minimizes the negative impact of procured products on the environment. Resources that are offered by the Public Procurement Act for the purpose of procuring more environmentally friendly products, are generally considered to be voluntary instruments in the enforcement of environmental policy.

The Public Procurement Act allows for the application of environmental aspects in public procurement at all stages of public procurement, within the framework of:

- Conditions of participation
- Technical requirements for describing the subject of the contract
- Criteria for the evaluation of tenders and under special conditions for performance of the contract

Conditions of participation:

- The purpose of determining the conditions of participation in public procurement is primarily to obtain a supplier who is qualified to perform the contract, and by setting these conditions, the contracting authority and the contracting party may significantly affect the range of potential suppliers provided that the basic obligations under § 10 of the PP Act are met. When awarding contracts, the contracting authority must apply the same principle treatment, the principle of non-discrimination, the principle of transparency, the principle of proportionality and the principles of economy and efficiency.

Principle of equal treatment:

- The principle of equal treatment obliges the contracting authority to treat all bidders or candidates in principle in the same way, without directly or indirectly, knowingly or unknowingly favouring or disadvantaging any of the tenderers or candidates in the same position.

Principle of non-discrimination between economy operators:

- The principle of non-discrimination prohibits the contracting authority from favouring a certain bidder or candidate in the public procurement process in question, resp. contracts. The principle of non-discrimination prohibits:
    - Open discrimination against an economy operator (eg. nationality, office address, etc.)
    - Covert discrimination between an agricultural operator and indirectly harming the economy operator

The principle of transparency:

- The principle of transparency requires the contracting authority and the contracting authority to ensure, in the procurement process, that the contract in question is conducted in a predictable, transparent and verifiable manner

Proportionality principle:

- The principle of proportionality obliges the contracting authority and the contracting authority to take appropriate decisions in order to achieve the objectives set and pursued.

Principle of economy and efficiency:

- The purpose of the principle of economy and efficiency is to ensure that the tenderer is selected who provides the best performance for the money spent, while public procurement is economical and efficient to ensure the highest number of tenders submitted and thus the widest possible competition financial and administrative complexity of the public procurement process.

The requirement to prove that at least the minimum requirements are met is justified.

It ensures that only tenders are placed in the final selection of those tenderers/bidders who:

- have sufficient capacity to carry out the specific contract and
- have experience in carrying out a comparable subject matter
- would be able to carry out the contract smoothly

Under the conditions of participation in public procurement, it may be a requirement of the public contracting authority to submit a document (certificate, attestation, etc.) issued by an independent institution confirming compliance with the requirements of environmental management system standards to bidders or candidates. The contracting authority / entity shall recognize as equivalent the environmental management system certificate issued by the competent authority of the Member State. If the tenderer or candidate has not objectively been able to obtain the relevant certificate within the specified time limits, the contracting authority and the contracting entity must also accept other evidence of environmental management measures submitted by the tenderer or candidate to show that the measures proposed by him are equivalent to those required under the scheme of environmental management or the relevant environmental management standard.

Alternatively, it is possible to examine the fulfilment of the conditions of participation concerning technical or professional competence, for example according to § 34 par. 1 letter a) of the Act on PP, through the list of deliveries of goods or provided services for the previous three years from the announcement of public procurement with the indication of prices, delivery times and customers or according to § 34 par. 1 letter b) of the Act on PP through a list of construction works carried out in the previous five years from the announcement of public procurement stating prices, places and deadlines for construction works, including confirmation of satisfactory execution of construction works and evaluation of completed construction works according to business conditions.

The breaking of the voluntary approach in enforcing environmental protection policy can be observed in the framework of the regulation of § 45 of the PP Act, according to which the public contracting authority or the contracting authority in the case of a motor vehicle supply contract within the procedure of awarding above-limit contracts energy and environmental impacts of motor vehicle operation during their lifetime in the description of the subject of the contract or in the criteria for evaluation of tenders (according to a special regulation, Act No. 158/2011 Coll. and amending certain laws).

The lowest price:

- Based on the definition of green public procurement, the contracting authority must also consider the long-term environmental impacts of each contract subject. The lowest price criterion does not, in essence, take into account the long-term costs of the contracting authority for the subject of the contract to be procured (compared to using the life-cycle cost approach) or the added social value of the procured (compared to the MEAT criteria / Most Economically Advantageous Tender). Therefore, this criterion does not directly support green public procurement. Nevertheless, any contracting authority can also use this criterion in "green contracts", but in that case it must reflect the "green aspect" in public procurement in another legal institute, such as e.g. conditions of participation, description of the subject of the contract, or special contractual conditions.

Life cycle costs:

- In the context of public procurement, the use of "life cycle costs" is a key tool that allows contracting authorities and procurers to move beyond the purchase price of goods, services or works. Given that the contract price itself does not reflect financial and non-financial benefits, resp. costs offered by environmentally preferred contract objects, it is economically and socially appropriate to use this legal instrument in "green public procurement"

4. Legislative Framework in Spain

NATIONAL LEVEL

Circular Economy has been a priority in Spain for a long time, being an essential part of many initiatives at the national, regional and local levels. Traditionally the efforts have been made in the area of waste management, but more recently a more systemic approach has been implemented, with specific Circular Economy plans and strategies. Some of the more significant CE initiatives are summarised below:

Public Sector Contract Law (LCSP) - Law 9/2017, of November 8[51]

It includes as an objective: "to ensure that public procurement is used as an instrument to implement both European and national policies in social, environmental, innovation and development, promotion of SMEs, and defence of competition".

Ecological Public Procurement Plan (2018-2025)[52]

It includes a series of general environmental criteria for contracting, of a voluntary nature, which may be incorporated into the contracting specifications as selection criteria, award criteria, technical specifications and special execution conditions.

The Plan establishes objectives, such as:

- Promote the acquisition by the public administration of goods, works and services with the least environmental impact.
- Serve as an instrument to promote the Spanish Circular Economy Strategy.
- Guarantee a more rational and economical use of public funds.
- Promote environmental clauses in public procurement.
- Publicize the possibilities offered by the legal framework for green public procurement.

Spanish circular economy strategy 2030[53]

The Strategy thus contributes to Spain's efforts to achieve a sustainable, decarbonised economy, efficient in the use of resources and competitive. The Spanish Circular Economy Strategy (EEEC) is aligned with the objectives of the two circular economy action plans of the European Union, "Closing the loop: an EU action plan for the circular economy" of 2015 and "A new 2020 Circular Economy Action Plan for a cleaner and more competitive Europe", in addition to the European Green Pact and the 2030 Agenda for sustainable development.

Regarding the ecological public contracting, it states that the administrations do not act solely as models to imitate, but that together with the large corporations act as tractors are used for the conversion to a sustainable economic model that transcends producers of the production chain. In the transition to a circular economy, the prescriber and the consumer are involved as key pieces, then their decision-making capacity under the condition of the productive model has sustainable and circular products.

[51] https://www.boe.es/eli/es/l/2017/11/08/9/con
[52] https://www.boe.es/eli/es/o/2019/01/31/pci86
[53] https://www.miteco.gob.es/es/calidad-y-evaluacion-ambiental/temas/economia-circular/espanacircular2030_def1_tcm30-509532.PDF

Circular Economy Action Plan (2021-2023)[54]

It includes measures such as: 1. Incorporation of the Circular Economy in the field of centralized contracting; 2. CE criteria in contracting MITERD; 3. Integrate CE into MITERD supply chains; 4. Preparation of a catalogue of environmental and social criteria for contracting in the field of railway infrastructures; 5. Comprehensive program for the social recovery of disused railway assets, generating value through entrepreneurship or public service projects.

Action Plan for the Implementation of the 2030 Agenda, towards a Spanish Strategy for Sustainable Development[55]

It Includes the Circular Economy as a "lever policy" to accelerate the implementation of the Sustainable Development Goals (SDG)) 2019. Also, it considers it necessary to "align public procurement with the sustainable development goals (SDGs)", one of which is responsible production and consumption (which integrates the objectives of the circular economy), which should be done, as indicated in the Plan itself, through the National Public Procurement Strategy (art. 334, LCSP).

Law on Climate Change and Energy Transition (May 2020)[56]

It is the normative and institutional framework to facilitate the progressive adaptation of our reality to the demands that regulate climate action. It has been created to facilitate and guide the socially fair decarbonisation of the Spanish economy by 2050.

Spanish Urban Agenda[57]

Is the roadmap that will set the strategy and actions to be carried out until 2030, to make our towns and cities areas of friendly, welcoming, healthy and aware coexistence. It includes the strategic objective of making a sustainable management of resources and promoting the circular economy.

[54] https://www.miteco.gob.es/es/calidad-y-evaluacion-ambiental/temas/economia-circular/plan_accion_economia_circular_tcm30-529618.pdf

[55] https://www.cooperacionespanola.es/sites/default/files/plan_de_accion_para_la_implementacion_de_la_agenda_2030.pdf

[56] https://www.miteco.gob.es/es/prensa/ultimas-noticias/la-ley-de-cambio-clim%C3%A1tico-y-transici%C3%B3n-energ%C3%A9tica-entra-en-la-recta-final-de-su-tramitaci%C3%B3n-administrativa/tcm:30-506983

[57] https://www.aue.gob.es/

State Program for the Prevention of Waste 2014-2020 and the State Plan for Waste Management 2016-2022[58]

Through the State Program for the Prevention of Waste 2014-2020 and the State Plan for Waste Management 2016-2022, the generation of all types of waste is expected to be reduced by 10% in 2020 by 10% over 2010 levels.

Spanish Bioeconomy Strategy Horizon 2030 (2015)[59]

This strategy defines the bioeconomy as the set of economic activities that obtain products and services, generating economic value, using, as fundamental elements, resources of biological origin, in an efficient and sustainable way.

AT REGIONAL LEVEL

Public Purchase of Innovation of Andalusia[60]

The Public Procurement of Innovation (CPI) is a public procurement mechanism in full swing that aims to help promote the development of new markets and whose reference client is the Public Administration.

Other regional laws and strategies related to Circular Procurement

The Autonomous Communities are beginning to approve their own circular economy strategies, and laws in the field of waste and climate change that incorporate the promotion of green procurement as one of their objectives. This is also the case of the FEMP. The most relevant are:

- Smart Development Strategy of Navarra (2016)
- Foral Law 14/2018, on Navarra waste
- Law 10/2019, of February 22, on climate change and energy transition of the Balearic Islands
- Strategy to Promote the green economy and the circular economy of Catalonia (2015)
- Law 16/2017, of August 1, on climate change in Catalonia
- Law 8/2018, of October 8, against climate change in Andalusia

[58] https://www.miteco.gob.es/es/calidad-y-evaluacion-ambiental/planes-y-estrategias/pemaraprobado6noviembrecondae_tcm30-170428.pdf
[59] http://cytema.es/files/2012/09/Estrategia-Espa%C3%B1ola-de-Bioeconom%C3%ADa.pdf
[60] https://www.juntadeandalucia.es/organismos/transformacioneconomicaindustriaconocimientoyuniversidades/aac/areas/compra-publica-innovacion/estrategia-cpi.html

· Andalusian Circular Bioeconomy Strategy (2018)

· Andalusian Strategy for Sustainable Development 2030 that includes the development of the Circular Economy (2018), Andalusian Strategy for Circular Bioeconomy (2018)

· Extremadura 2030: Strategy for green and circular economy (2018)

· Euskadi Circular Economy Strategy 2030 (2019)

· Circular Economy Strategy of the Region of Murcia (2019)

· Circular economy law of Castilla la Mancha,

· Circular Economy Strategies of the Canary Islands, Galicia, and Castilla y León are under development.

IX: More detailed information on individual procurement areas

The aim of this chapter is to introduce the topics of water, wood, furniture and waste. These specific topics are the core issues of the organisations writing this methodology, thus sharing their experience in long-term focus. In each topic, we present context, key environment impacts as well as GPP/CPP criteria.

1. WATER

Water scarcity

Despite the relative abundance of freshwater resources in parts of Europe, water availability and socio-economic activity are unevenly distributed, leading to major differences in levels of water stress over seasons and regions. Water demand across Europe has steadily increased over the past 50 years, partly due to population growth. This has led to an overall decrease in renewable water resources per capita by 24 % across Europe. This decrease is particularly evident in southern Europe, caused mainly by lower precipitation levels, according to an EEA indicator (European Environment Agency). For instance, in the summer of 2015, renewable freshwater resources (such as groundwater, lakes, rivers or reservoirs) were 20 % less than in the same period in 2014 because of a 10 % net drop in precipitation. More people moving to cities and towns has also impacted demand, especially in densely populated areas.[61]

[61] https://www.eea.europa.eu/signals/signals-2018-content-list/articles/water-use-in-europe-2014

Water over-abstraction is a major cause of water stress. Main pressures from water consumption are concentrated on irrigation and domestic demand, including tourism. The 2007 Communication on Water scarcity and Droughts made clear that water scarcity and drought events are likely to be more severe and more frequent in the future due to climate change and increasing population. Over the past thirty years, droughts have dramatically increased in number and intensity in the EU and at least 11% of the European population and 17% of its territory have been affected by water scarcity to date.[62]

Reuse of treated wastewater can be considered a reliable water supply, quite independent from seasonal drought and weather variability and able to cover peaks of water demand. This can be very beneficial to farming activities that can rely on reliable continuity of water supply during the irrigation period, consequently reducing the risk of crop failure and income losses. Appropriate consideration for nutrients in treated wastewater could also reduce the use of additional fertilisers resulting in savings for the environment, farmers and wastewater treatment.[63]

Water reuse contributes to the broader water sector which is a key component of the EU eco-industrial landscape. The world water market is growing rapidly, and it is estimated to reach 1 trillion € by 2020. For this reason, water reuse also encompasses significant potential in terms of the creation of green jobs in the water-related industry, and it is estimated that a 1% increase in the rate of growth of the water industry in Europe could create up to 20.000 new jobs. At present, about 1 billion cubic metres of treated urban wastewater is reused annually, which accounts for approximately 2.4% of the treated urban wastewater effluents and less than 0.5% of annual EU freshwater withdrawals. But the EU potential is much higher, estimated in the order of 6 billion cubic metres – six times the current volume.[64]

EU legislation on Circular Economy and water

Over the past 30 years substantial progress has been made by EU Member States to improve the quality of Europe's freshwater bodies, thanks to EU rules, in particular the EU's Water Framework Directive, the Urban Waste Water Directive and the Drinking Water Directive. These key legislative texts underpin the EU's commitment to improve the state of Europe's water. The goal of EU policies is to significantly reduce the negative impacts of pollution, over-abstraction and other pressures put on water and to ensure that a sufficient quantity of good-quality water is available for both human use and the environment. Waste water treatment and reductions in the agricultural use of nitrogen and phosphorus have led in particular to significant improvements in water quality in recent decades.[65]

The main legislations related to Circular Economy in the water sector are:

[62] https://ec.europa.eu/environment/water/reuse.htm
[63] https://ec.europa.eu/environment/water/reuse.htm
[64] https://ec.europa.eu/environment/water/reuse.htm
[65] https://www.eea.europa.eu/signals/signals-2018-content-list/articles/water-use-in-europe-2014

- **Water Framework Directive (WFD; 2000/60/EC).**[66] To achieve good ecological and chemical status of surface water bodies and good chemical and quantitative status of groundwater bodies.

- **Urban Waste Water Treatment Directive (91/271/EEC).**[67] To protect the environment from adverse effects of urban wastewater through collection and treatment of wastewater. Implementation period varies depending on the year of accession.

- **A new Circular Economy Action Plan.**[68] Launches initiatives throughout the entire life cycle of products, aiming to ensure that the resources used are kept in the EU economy for as long as possible.

- **Sewage Sludge Directive (86/278/EEC).**[69] Encourages the use of sewage sludge in agriculture and regulates its use to prevent harmful effects on soil, vegetation, animals and humans.

- **Regulation on minimum requirements for water reuse (EU) 2020/741).**[70] Sets minimum requirements for water quality and monitoring and provisions on risk management for the safe use of reclaimed water.

The water sector is committed to reducing its environmental footprint in line with the European Green Deal.[71] Increasing the energy efficiency of operations, producing renewable energy, exploiting the sector's circular economy potential, and minimising process-related greenhouse gas emissions are four key avenues to achieving these goals. Much will depend on the level of treatment required to supply consumers with safe and clean drinking water and return treated waste water safely to the environment. The better protected our drinking water resources and the fewer unwanted substances are released to the waste water, the faster water operators can increase their sustainability.[72]

Green Public Procurement Criteria on Water

Procurement of waste water infrastructure is a complex process. In most cases, the procuring organisation will need technical support with specific engineering, environmental and economic knowledge to undertake the whole tender process from initial feasibility studies to

[66] https://ec.europa.eu/environment/water/water-framework/index_en.html
[67] https://ec.europa.eu/environment/water/water-urbanwaste/legislation/directive_en.htm#:~:text=Council%20Directive%2091%2F271%2FEEC,and%20from%20certain%20industrial%20discharges.
[68] https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1583933814386&uri=COM:2020:98:FIN
[69] https://ec.europa.eu/environment/topics/waste-and-recycling/sewage-sludge_en
[70] https://eur-lex.europa.eu/eli/reg/2020/741/oj
[71] https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en
[72] https://www.eureau.org/resources/publications/eureau-publications/5824-europe-s-water-in-figures-2021/file

the final selection of a contractor. To make this process easier we can use the GPP criteria as a guide: "Green Public Procurement Criteria for Waste Water Infrastructure".[73]

The proposed GPP criteria are designed to reflect the key environmental impacts. The approach is summarised below (adapted from "Green Public Procurement Criteria for Waste Water Infrastructure"[74]):

KEY ENVIRONMENTAL IMPACTS	GPP APPROACH
Energy consumption especially in the operation phase which contributes to greenhouse gas emission	**Purchase equipment with high energy efficiency**
	Increase the energy efficiency of electricity and heat producing units
	Promote use of renewable energy sources
Emission of nutrients with the treated waste water	**Purchase equipment with a high treatment efficiency**
Emissions of pathogens and/or hazardous substances with the treated waste water	
Emissions from sludge incineration	**Purchase equipment with a high flue gas treatment efficiency**
Water consumption	**Incentivise the reduction of water consumption**
	Promote reuse of water and use of grey/rain water

[73] https://ec.europa.eu/environment/gpp/pdf/waste_water_criteria.pdf
[74] https://ec.europa.eu/environment/gpp/pdf/waste_water_criteria.pdf

Case studies on water:

- Waterschapsbedrijf Limburg, public utility company responsible for the transport and treatment of municipal and industrial wastewater and treatment of sludge in the province of Limburg, Netherlands. Hydrolysis process installed to increased biogas production, reduced sludge generation and speeded up the process – leading to both energy savings and cost reductions: https://ec.europa.eu/environment/gpp/pdf/news_alert/Issue43_Case_Study91_Limburg.pdf

- Ryaverket waste water treatment plant, Sweden Turning wastewater into useable resources: https://ec.europa.eu/environment/gpp/pdf/news_alert/Issue20_Case_Study45_Ryaverket_waste.pdf

- Procurement of a wastewater recycling system for the Austrian Mint: https://ec.europa.eu/environment/gpp/pdf/news_alert/Issue58_Case_Study117_BBG_Austria.pdf

Other useful information

http://www.fundacionconama.org/wp-content/uploads/2019/09/Agua-y-Economi%CC%81a-Circular.pdf

https://iuaca.ua.es/es/documentos/documentos/ebooks/guia-compra-publica-innovadora-2019.pdf

2. WOOD

Wood is a versatile material that can be used for many purposes, whether it is the construction of buildings, the production of furniture, decorative elements or packaging. From the environmental point of view, the main advantage of wood is the fact that it is a renewable source that stores carbon, thereby reducing the amount of carbon dioxide (CO2) in the atmosphere. In addition, wood is a local source. These are reasons for using wood in any public contract. Moreover, the use of wood as a building material brings other benefits.

The use of wood as a building material in public procurement contracts brings the contracting authority mainly time savings. In general, wooden constructions are realized faster than their masonry equivalents and their construction is 4-5 times less energy intensive compared to brick houses. As already mentioned, wood stores carbon, thus reducing the amount of CO2

in the atmosphere. It is generally stated that one cubic meter of raw wood stores up to 250 kilograms of carbon, that is about 920 kg of CO2. With an average consumption of 100 - 150 m3 of wood per house and a lifespan of at least 100 years, these are significant quantities. Furthermore, it has been proven that wooden buildings have a positive effect on the human spirit.[75]

Challenges: lack of raw materials in the EU and landfills

In the context of the post-pandemic crisis, the principles of circularity need to be introduced into the use of wood. In addition to the shortage of wood, another range of building materials is in short supply after the pandemic as common global supplier-customer relations were interrupted. This is due to the growing demand driven by the economic power of previous years, but also to the fact that we are still desperately under-exploiting the potential of secondary raw materials that we have in Europe.

Energy by-products, which are available in power plants in the amount of millions of tonnes each year and which some Western countries commonly use in construction as a valuable raw material, are still often landfilled in Europe without any use. Demolition, which could have been replaced by deconstruction long ago, still makes it impossible to additionally crush and recycle construction raw materials for further use. More than half of municipal waste and a huge proportion of industrial waste end up in the EU. All these raw materials can be put back into a circular system thanks to the principles of circularity in public procurement and, for example, by replacing some of them with wood.

Opportunities in introducing circularity in public procurement

Indeed, before formulating their requirement to use wood, contracting authorities must always consider whether wood is a suitable material for their purposes and if it is able to meet their requirements in the same quality as another material. Or in lower quality, which is, however, compensated by lower acquisition or operating costs. For such an assessment, we recommend to realise preliminary market consultations.

Another way to verify whether the use of wood instead of another material is suitable for the needs of the contracting authority is to use the principle of requesting variants of the solution of the given public contract. The comparison of solution variants, according to the predetermined objective criteria set out in the evaluation criteria, will enable the contracting authority to choose the most advantageous performance. In the case of public works contracts and above-limit public supply contracts, we recommend to include **life cycle analysis** in the evaluation criteria as well as analysis of **life cycle costing**.

[75] Broum et. al (2021)

The contracting authority may also set the rate of use of the wood as one of the evaluation criteria. When the higher the percentage of used wood will be used instead of another material in the performance of the subject of the public contract, the more points the supplier will receive in the given criterion. In this way, the contracting authority motivates suppliers to try to offer products that at least partly consist of wood. Calculators of CO2 emissions from construction are freely available on the internet, eg.:

Carboncloud

CO2DATA

Carbon Calculator

In general, the use of wood as a natural material is recommended wherever wood can fully replace other materials and its use meets the requirements for economical, efficient and effective use of public funds.

KEY ENVIRONMENTAL IMPACT	GPP APPROACH
Use of primary resources	• renewable natural resource • carbon storage, which reduces the concentration of CO2 in the atmosphere • local availability • the use of a certain% of recycled building materials as an impetus for the development of a market for recycled products replacing primary raw materials • easy recycling or disposal by energy recovery of wood waste in the heating industry

Innovations in constructions	• lower energy intensity of the building • modularity enabling easy repair, renovation or increase or decrease of capacity even at the level of buildings or its equipment without the need for complex reconstructions • lease instead of ownership, allowing at the end of the life cycle to hand over the building or equipment to the original suppliers for the use of materials or sub-units without the need for the customer to take responsibility for disposal
Policy level	• Use of wood in accordance with the European Green Deal

Good examples

- Circl – how wood is used instead of concrete: https://circl.nl/themakingof/en/
- Venlo City Hall – cradle-to-cradle concept: http://www.c2c-centre.com/project/venlo-city-hall
- Sustainable wood procurement in Cognac: https://ec.europa.eu/environment/gpp/pdf/news_alert/Issue11_Case_Study28_Cognac_wood.pdf
- FORCE project: wood waste: https://knowledge-hub.circle-lab.com/article/4673?n=Force-project-wood-waste
- Brummen Town Hall: https://www.circulareconomyclub.com/solutions/modular-building-brummen-town-hall/#post_profile

3. FURNITURE

In the EU market, demand for low-cost furniture is increasing which makes it difficult for companies to focus on long lasting and quality products. In addition, increased global competition for raw materials or increasing labour and energy costs within the EU challenge the business as usual in the furniture industry (FURN 360). That is why the consumption of furniture, which is an "all time needed" item, has to be rethought and new ways must be found. We believe that circular economy gives the answers while closing the material loops and focusing on the already existing secondary sources.

Furniture in numbers:

- **Employment** - the sector employs around 1 million workers in 130 thousand companies generating an annual turnover of around EUR 96 billion.[76]
- **Production** - Around a quarter of the world's furniture is manufactured within the European Union – representing a €84 billion market.[77]
- **Manufacturing** furniture requires a lot of materials and energy but 80-90 % of the resources are lost after a while.[78]
- **Waste** - 10 million tonnes of furniture are discarded by businesses and consumers in EU Member States each year, the majority of which is destined for either landfill or incineration.[79]

„Recycling of materials from old furniture will not be enough on its own. Material recycling not only reduces purity and quality of materials, but also by breaking down products and components into their constituent materials, there is an associated loss in energy, labour, and other resources."[80]

While procuring or buying furniture, we can and we should take into consideration environmental and social aspects of the purchase and focus on circular principles which basically work for all sectors, furniture including: products with **modularity**, **disassembly**, **life extension**, **repair**, **upgrades** and **modifications** or return furniture in **buy-back scheme**. Another key circular principle is **sharing** (co-working space) or **leasing**.[81]

[76] https://ec.europa.eu/growth/sectors/raw-materials/industries/forest-based/furniture_en
[77] EEB report
[78] EMF: case studies
[79] EEB report
[80] EMF: case studies
[81] Great example of lightening leasing is the Airport Schiphol: https://www.schiphol.nl/en/schiphol-group/page/circular-lighting-and-displays/

There are six key activities[82] to make furniture circular:

- Maintain: maintenance to maximise product lifespan (e.g. regular painting)
- Repair: corrective maintenance (upholding, varnishing, repainting, grinding)
- Reuse: redistributing products/furniture to different owners
- Refurbish: remanufacturing the product to optimise its lifespan
- Re-purpose: changing the functionality (upcycling)
- Recycle: recovering the value of the material as secondary materials for a new product

Case study: how to think about furniture?[83]

Step 1: Do I have any furniture? → YES → How can I **maintain** it?
How can I **redesign** it? (Do I need more furnishings?)
Step 2: NO, I do not have any → Do I need to **own** it? Can I **rent/lease** it or **share**?
Step 3: YES, I want to own it → Must it be **new**? NO, I can buy second-hand goods.
Step 4: YES, it must be new → What kind of **requirements do I have**?

Currently, there are several obstacles in the EU for circularity in furniture. The European Environmental Bureau (EEB) identified these barriers to circular furniture:

- Lower quality materials and poor design
- Poor consumer information and availability of spares
- Limited collection and reverse logistics infrastructure
- High cost of repair and refurbishment
- Weak demand for second-hand furniture
- Poor demand for recycled materials

Some of these barriers could be overcome thanks to circular public procurement which could drive the demand for circular furniture and lead the society by example. In its GPP criteria for furniture, the EU[84] requires:

1. **Wood and wood-based materials** - All wood and wood-based materials shall come from legally sourced timber.
2. **Plastic parts** - All plastic parts ≥ 50g shall be marked for recycling according to ISO 11469 or equivalent and must not contain additions of other materials that may hinder their recycling.
3. **Surface coating** of wood, plastic and/or metal parts: The products used for surface coating shall not contain hazardous substances that are classified according to Directive 1999/45/EC.

[82] UNEP: International Resource Panel
[83] OVZ
[84] EC: Furniture GPP Product Sheet

4. **Adhesives and glues** used in the assembly of furniture shall not exceed 10% by weight.
5. **Packaging materials** - Packaging must consist of readily recycled material, and/or materials taken from renewable resources, or be a multi-use system. All packaging materials shall be easily separable by hand into recyclable parts consisting of one material (e.g. cardboard, paper, plastic, textile).
6. **Durability, reparability, fitness for use and ergonomics** - Furniture must meet relevant national/international quality standards or equivalent regarding serviceability.

In order to fulfil the **needs of the target group**, it is also appropriate to discuss them beforehand. The results can be subsequently considered during a transparent **pre-procurement market** consultation or **pre-procurement dialogue**. The procurer informs about his intentions and suggested parameters so suppliers (or independent experts) can comment on them and advise possible improvement. Moreover, a necessary part of the pre-procurement process is made up by a **market survey** so the procurer has up-to-date information.

Impacts on circular furniture in public tenders:[85]

- Increase availability of local furniture refurbishment services and jobs
- Incentivise use of recycled materials
- Promote design innovation in terms of reparability
- Decrease resources sent to landfill

Thus, EEB recommends:

1. To develop an agreed common set of core criteria that could work across different instruments such as Extended Producer Responsibility (EPR)
2. A mandatory but simple EPR system, with gradually increasing targets for 'preparing for reuse' and separate recycling targets, would provide the most certainty in terms of positive outcomes.
3. Green Furniture Mark (GFM), with mandatory or voluntary labelling of products around a core set of criteria (common with possible eco-design requirements, GPP and EU Ecolabel), with a points-based performance scale (e.g. A to G as per the Energy Label approach).
4. An agreed common set of core criteria, and a related 'Green Furniture Mark' (GFM), with the intention of providing consumers and procurers with a simple means of assessing product circularity
5. Core CE GPP criteria for furniture to be put in place and made mandatory across all public sector institutions, including the need to purchase GFM furniture above a

[85] EC GPP Training Toolkit, 7.3. Furniture

certain class (e.g. B) and consideration of lease options (in the context of whole life costing).

6. Consumers could also be incentivised to return furniture for reuse, for example by having a refundable levy (paid on purchase on a new item), or free bulky waste collections, where the item is going to a reuse/preparing for reuse or remanufacturing organisation.

KEY ENVIRONMENTAL IMPACT	GPP APPROACH
Resource usage	• higher use of secondary material • support for recycling • lesser production of waste meant for incineration or landfill
Awareness raising	• consumers adopt sustainable consumption as a key driver of their purchases • rethinking of their needs
Business reorientation	• new business models (repair, refurbishment) • innovation & new technologies development • longer lifespan of the products

Case studies:

- Public Health Wales (PHW) National Health Service (NHS) Trust, Wales (United Kingdom): https://ec.europa.eu/environment/gpp/pdf/news_alert/Issue77_Case_Study_152_Wales.pdf
- Circular Procurement of Furniture for the City Hall of Venlo: https://ec.europa.eu/environment/gpp/pdf/news_alert/Issue60_Case_Study122_Furniture_Venlo.pdf
- Circular procurement for a sustainable learning environment: https://ec.europa.eu/environment/gpp/pdf/news_alert/Issue79_Case_Study_155_Aalborg.pdf

- Circular Procurement of Furniture for the City of Wageningen: https://ec.europa.eu/environment/gpp/pdf/news_alert/Issue69_Case_Study_138_Wageningen.pdf
- SAWYER project: https://circularfurniture-sawyer.eu/downloads/

4. WASTE

More detailed information on individual procurement areas – waste management services in municipalities

As of July 2020, new EU laws will oblige governments to improve the way household waste is sorted and collected for recycling. Municipalities are expected to start separately collecting different materials, such as textiles, hazardous material and organic waste. This is in addition to the existing laws mandating the separate collection of plastics, glass, paper, metals, waste oils.

The Waste Framework Directive lays down some basic waste management principles. It requires that waste be managed:

- without endangering human health and harming the environment
- without risk to water, air, soil, plants or animals
- without causing a nuisance through noise or odours
- and without adversely affecting the countryside or places of special interest

It explains when waste ceases to be waste and becomes a secondary raw material, and how to distinguish between waste and by-products. The Directive also introduces the "polluter pays principle" and the "extended producer responsibility".

The foundation of EU waste management is the five-step “waste hierarchy”, established in the Waste Framework Directive. It establishes an order of preference for managing and disposing of waste.

To comply with the objectives of this Directive, EU countries shall take the necessary measures to achieve the following targets:

- by 2020, the preparing for re-use and the recycling of waste materials (such as paper, metal, plastic and glass) from households shall be increased to a minimum of overall 50 % by weight
- by 2020, the preparing for re-use, recycling and other material recovery, including backfilling operations using waste to substitute other materials, of non-hazardous construction and demolition waste shall be increased to a minimum of 70 % by weight
- by 2025, the preparation for re-use and the recycling of municipal waste shall be increased to a minimum of 55 %, 60% and 65% by weight by 2025, 2030 and 2035 respectively.

According to the annual reports on waste management published on Eurostat - we have a problem meeting the recycling targets defined in the Waste Framework Directive. This problem is present in most of the countries of the EU.

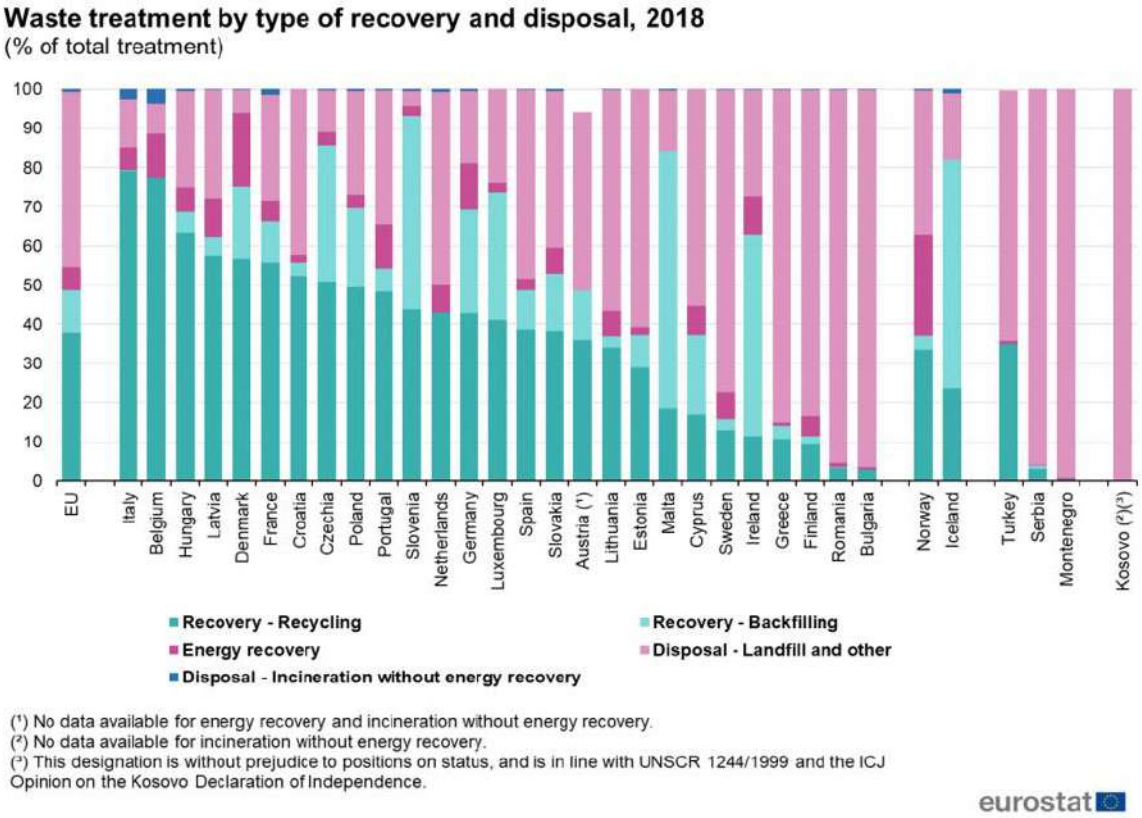


Fig. 8 Waste treatment

Source: EC[86]

In 2018, EU member states and institutions agreed on a comprehensive set of laws aimed at preventing household waste and boosting recycling. In Annex IVa of the agreed Waste Framework Directive, the EU executive sets out recommendations regarding the introduction of economic instruments such landfill and incineration taxes, deposit-return-schemes, fees and more.

According to the Annex IVa, there is more than a one way to make the waste management effective and meet the targets: special taxes, pay as you throw (PAYT) scheme, extended producers responsibility (EPR) scheme, deposit return schemes (DRS) and Sustainable and green public procurement to encourage better waste management and the use of recycled products and materials.

The annual costs on Waste management in municipalities represents around 5% of the total annual budget of the municipalities. Most of the municipalities in the EU countries don't own

[86] EC: https://ec.europa.eu/eurostat/databrowser/view/env_wastrt/default/table?lang=en

their own regional or local waste management company, but instead they order the services in the field of waste management from the private companies.

Applying circular criteria in the procurement is a great opportunity to procure better services of waste management companies, create better services for municipalities on the market. If we could make a few good examples of cities with quality circular services, the other municipalities will follow. We need to support research and innovation in advancing recycling technologies and remanufacturing and promote continuous dialogue and cooperation between all stakeholders in waste management.

Before making the contract with the future services, municipalities make the public procurement for this service. PP of the waste management companies is a great challenge, and green or circular criteria are usually not included. Most of the contracts don't require to follow the waste management hierarchy and do not require the waste to be recycled in a certain percentage that is in accordance with recycling targets in the Waste Directive.

Why we chose the waste management in municipalities as the topic for the circular procurement:

- there are many bad examples of PP without green/circular criteria where we can learn why not to do it that way
- this procurement is very important because it reflects the future services for several years in field of waste management
- it is a chance to fulfil the goals for the municipality in circular economy
- we can help build the better quality of the services on the market.

KEY ENVIRONMENTAL IMPACT	GPP APPROACH
High amount of waste placed onto landfill	• applying waste management hierarchy • require meeting the targets in EU and national legislation
Low recycling rates	• require meeting the targets in EU and national legislation • require meeting certain KPIs like targeting the number of inhabitants in waste sorting system (ex. 65% of inhabitants sort kitchen waste)
Cost efficiency	• differ prices for materials and waste streams (collection and treatment) • ask for the special reports on costs of collection of different waste streams

Missing waste data for PAYT	• ask to build waste data system for PAYT system in the municipality • ask how to collect the data and what report you require
Infrastructure with high environmental impact	• use of bins that are made of recycled plastics (ask for certificate) • use of vehicles with low carbon footprint • prefer only treatment of waste in local or national facilities
Usage of single used items	• when organizing any event, the organizer should avoid using single used items • ask to build a deposit return system of reusable items

Case studies:

- Procuring climate-friendly waste collection and treatment services, Municipality of Sarpsborg, Norway
- Collection, transportation and disposal of hazardous and non-hazardous hospital waste, Emilia-Romagna, Italy
- Waste Infrastructure Procurement Programme, Wales, United Kingdom
- Procurement of solar powered, compacting litter bins, Dun Laoghaire-Rathdown County Council, Ireland
- Low carbon waste collection services, Bristol, UK
- Sustainable procurement at the Natural History Museum of London, UK

X. Cases of good practices

1. Bark beetle wood bridge, South Bohemia (Czechia)

Description:

In Bohunice, it was necessary to reconstruct the bridge. Only thanks to the SUS South Bohemia directorate (road management and maintenance), a unique demand was created for a transport construction respecting the UN Paris Agreement on climate from 2015. Thanks to this call, it was possible to design a technology other than using only concrete. It turned out that it was possible to build bridges quickly and cheaply. It was a wood-concrete technology that has been in common use in Western Europe for more than 30 years.

Circular character:

The bridge is a unique ecological construction with the aim of minimizing the carbon footprint (in real terms by up to half compared to classic concrete or steel bridges). The most important factor in wooden buildings is the renewable nature of this material. This first construction in the Czech Republic uses spruce wood for the load-bearing part of the bridge (which was in abundance during the long bark beetle calamity in Czech forests). So, it is a domestic renewable resource and at the same time less frequently used resource in construction despite its potential. Glued laminated timber was used for the wooden part, which is an ideal element for these constructions, ensuring sufficient load-bearing capacity, durability and dimensional stability.

The service life of wooden bridges is determined primarily by the elements of insulation and details, as with any other bridge construction made of concrete or steel. Wooden bridges can last for hundreds of years, which can be observed on historic buildings both in the Czech Republic and abroad. The oldest wooden bridge structure is a building in China that is over 900 years old. Modern wooden bridges can be found, for example, in Austria, Switzerland, France, and especially in Scandinavia, where they have been built for more than 30 years. The bridge project in Bohunice is also innovative thanks to the use of a new technology and the sustainable thinking of its author. Parts of the original bridge were also used, when the abutments on the banks of the stream remained along the old bridge. It is not always necessary to demolish the entire building. By using the existing functional elements of the structure, state resources can be significantly saved.

Result:

Based on the project of doc. Ing. Roman Fojtík, Ph.D. (from the Technical University in Ostrava), a unique bridge built on the basis of wood-concrete technology for the load-bearing structure was created. The bridge also has a monitoring diagnostic system "Smart Timber Bridge", which is based on several years of research and informs about the condition of the bridge (overload, icing, fault, humidity, temperature). The sensor system allows data to be sent directly to the road administrator and, for example, detects when overloaded vehicles

cross the bridge. Among other things, the sensors can predict defects in the structure, which makes it possible to avoid costly repairs. This is the first installation of this system in the world.

Source: J. Fojtík

2. Promotional items in Moravian-Silesian Region (MSR)

Description:

The company NAVZDORY (meaning “despite”), based in the Moravian-Silesian Region (Czechia), produces promotional and advertising items from the materials used in the form of upcycling (transformation of materials or waste into higher value products). The company is engaged, for example, in the production of creative promotional items from old banners, car belts or fire hoses. These items are manufactured by hand and locally in order to eliminate inefficient waste management in the Czech Republic. Before Christmas 2020, the Moravian-Silesian Regional Authority requested promotional items from NAVZDORY for its partners, and due to the fact that it was a small-scale contract, the company was contacted directly (option for public contractors if they want to support local social enterprises in small-scale contracts).

Circular character:

NAVZDORY supplied MSR with Christmas gift items in the form of candlesticks made from used glass bottles and waste wood. It was a clear presentation of circular economy in practice and at the same awareness raising about the topic of circular economy. The used materials can be further processed or recycled after the candlestick lifespan (eg. in case of glass breaking). In terms of social responsibility, the contract was also realized thanks to the inclusion of the work of people with mental illness (through the non-profit organization MENS SANA), who ensured the packaging of products in gift boxes.
Result:

The public contractor required a local supplier, who also processes local waste at the place of its origin, so it was not necessary to use primary resources. At the same time, the supplier was supported in a difficult pandemic situation, when many companies were paralyzed by anti-pandemic measures to protect against the COVID-19 pandemic. The contracting authority has also used existing technical innovations from the business and can build on this contract in a form of long-term cooperation.

Source: NAVZDORY

Other information in the Czech language:
www.navzdory.cz
https://www.sovz.cz/wp-content/uploads/2021/04/dp_msk_propagacni_predmety.pdf

3. Circular furniture in the European Parliament

Description:

Furniture in the EP is usually bought into the property and used for its technical lifespan (usually discarded after 10-15 years and donated to charities that socially resell or recycle it). The cost of ownership in a public institution is high and in recent years it has been relatively difficult to "state" all discarded furniture. In addition, due to innovations in the market and changes in lifestyle and work style, furniture before the end of life is "morally" unsuitable for users' needs. Therefore, around 2014, alternative ways of purchasing furniture that would minimize these disadvantages began to be considered for the project of renovating approximately 2,300 workstations for MEPs and their assistants in Brussels. At that time, there were some Furniture-As-A-Service services (renting, medium-term rentals ...), but they were not very suitable especially for the needs of the EP, where it was a longer-term solution. At that time, long-term rental / operational leasing of furniture was still a novelty untested on this scale anywhere in the world.

Therefore, a contract was announced, where the rental of furniture was set not as a condition, but as one of the options. The Life Cycle Costing was a key aspect which accounted for 50% of the evaluation criteria and included different furniture rental period scenarios. Another 50% was the added value (ie quality in the sense of regulations on public works) and 15% social criteria (including socially responsible use of original furniture, but also eg. working conditions for workers providing on-site maintenance, including bonuses for user satisfaction) or environmental aspects (such as recycled ratio, recyclability and guaranteed use of returned furniture on the secondary market). The contract was implemented thanks to Directive 2014/24 / EU, which promoted sustainable procurement and expanded the possibilities of negotiated procedures - in this case a competitive dialogue was used given that in addition to the procurement regime the technical and aesthetic solution to negotiate and determine such conditions that possible innovative acquisitions (operational leasing) will enable to offer to the widest possible range of contracting authorities in a non-discriminatory and fair manner, without favouring a proprietary solution of one of them.

Circular character:

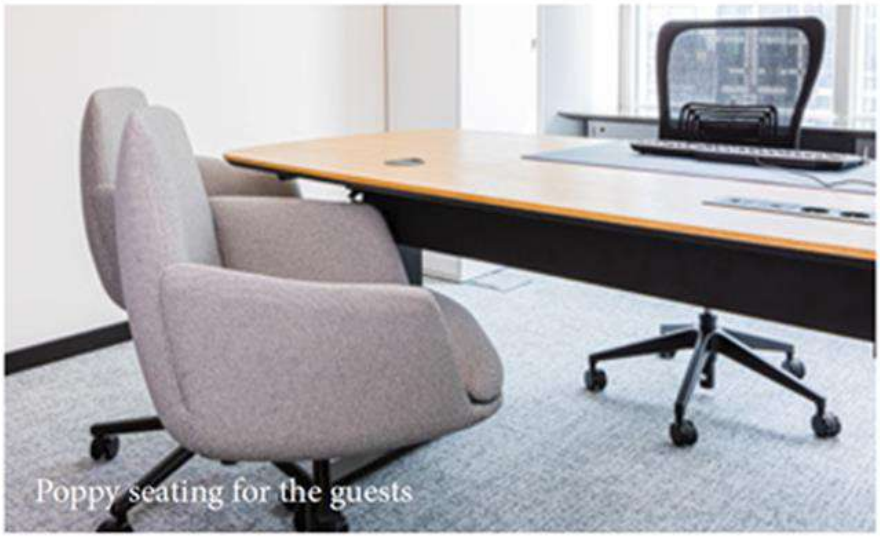
Product as a Service (PAAS) is an essential element of both responsible and circular input. The principle that we do not have to own everything is crucial in a circular economy, the aim of which is to use existing resources for circulation for as long as possible. PAAS is putting pressure on suppliers to offer the most durable and high-quality products that they will be able to reuse (either as a whole or their components) in the secondary market. The result is the "operating leasing paradox", also known, for example, from fleet management, where the price difference between a more and less quality product, which is striking when buying, is offset when renting due to the higher market residual value of the quality product.

Likewise, market consultation (either as a preparation of the usual procedure or as an initial phase of the competitive dialogue) and identification of future users' needs during the tender procedure (moderated discussions with users / focus groups, mock-up installation) leads to optimal order setting and identification of added value for contracting authority and users.

Especially when using the design & deliver approach, it is possible to take full advantage of innovations that do not have the opportunity to apply themselves in "traditional" public procurement (open procedure, lowest price or even price / quality with only technical criteria).

Result:

The form of the "design & deliver" contract brought quality bids and 5 companies participated in the competitive dialogue until the end, 4 of them submitted bids in accordance with the tender documentation. The contract was finally signed with a consortium of Haworth GmbH and Potiez-Deman BV for 10 years of furniture rental and with an option for another 5 years, while after the first 7 years the rent for the item is reduced to the price of the maintenance itself. The contract also allows the furniture to be returned early with compensation for the guaranteed residual value. The possibility of new sub-projects was also agreed with the company (this applies, for example, to reducing the number of deputies after Brexit with a new allocation of premises, or individual adjustments for new deputies after the elections). The manufacturer has undertaken to take back the furniture at any time, guarantees redemption prices according to the age of the furniture and guarantees the possibility of exchange, addition or return. The maintenance costs are paid as a lump sum, including damage insurance, repairs and maintenance of the furniture is provided by the team on site according to the contractually agreed SLA.



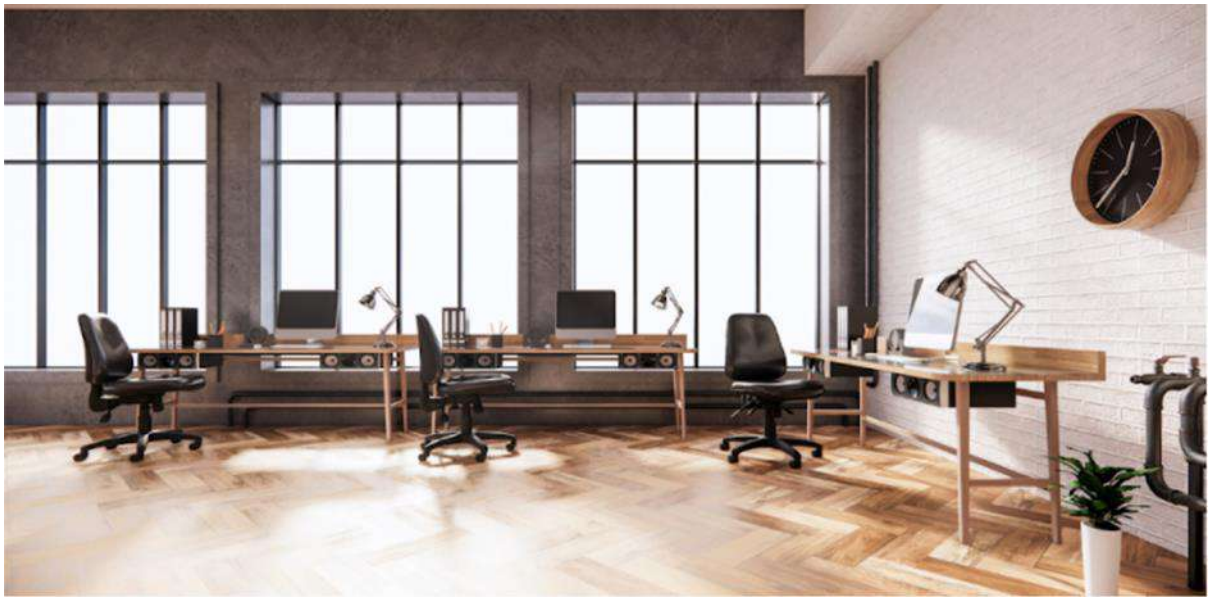
Source: J. Kodym, online CZ course on circular procurement

The whole project is generally evaluated very positively by the users and the EP's management and control bodies, both in terms of design and ergonomics, as well as in terms of logistics and finance. The winning tender in the tender procedure had a Quality / LCC ratio 26% higher than the benchmark determined at the beginning of the project from the estimated costs at that time and the technical level of the furniture purchased in the original way, even after taking into account the financial costs of leasing.

4. Procurement of green office furniture by Basque Government

Characteristics:

Ihobe is a public body within the Ministry of Environment, Land Use Planning, Agriculture and Fishing of the Basque Government. It works to improve the environment in the Basque Country in cooperation with all government levels. Since 2005, Ihobe has been actively encouraging and putting green procurement into practice within its own operations, using a strategy which specifically involves stimulating both supply and demand side actors in the region.



Circular character:

The main sustainability criteria included in the tendering process for office furniture focuses on sustainable production, use of recycled materials and recyclability of the end product, and are summarized as follows:

1) Technical and environmental quality of the materials

- Boards made of timber and wood by-products: Lowest possible quantity of formaldehyde; exclude dangerous substances (as classified by Directive 67/548/EEC) and use timber originating from a sustainably managed forest (reference to criteria from FSC and PEFC labels) or recycled.
- Plastic components: Products containing previously recycled plastic will be preferred and plastic pieces should be marked according to ISO 11469 (or equivalent) above a certain weight; substances based on lead, cadmium, mercury or its compounds should not be added to plastic materials.
- Metal parts: Must be easily dismantled at the end of the products' life cycle in order to be recycled; inclusion of recycled (second fusion) metals will be preferred.

- Upholstery: Preference will be given to products meeting criteria from Öko-tex, the EU Flower or equivalent
- Foam: Preference will be given to fulfilment of CertiPUR criteria or equivalent.

2) Technical quality of the products

- Focuses on having standardized assembly connections of pieces, modularity and ergonomics (for chairs).

3) Environmental quality of the products

- Requirements regarding durability (minimum guarantee of at least three years); maintenance – for example, cleaning of products should be possible without the use of organic solvents; and products shall be fit for recycling and re-use.

Results:

Four companies submitted bids which fulfilled all the compulsory requirements (technical specifications). In the award phase, more points were given to those offers that addressed the following two aspects: Life cycle analysis for some or all the offered products and Environmental product declarations.

Regarding environmental criteria, all companies but one presented the requested documentation. The least expensive offer, in terms of financial cost, was awarded the contract. This was also the offer that obtained the highest environmental point score.

This tender procedure has served to inspire and inform similar action in the region by other public sector actors. For instance, in 2008 the Basque Water Authority adopted a very similar approach to Ihobe to procure office furniture for their new office block. The City of Bilbao has also implemented a very similar approach.

Source:

https://ec.europa.eu/environment/gpp/pdf/news_alert/Issue6_GPP_Example16_Basque_Furniture.pdf

5. Masaryk University procuring the waste management company

Description:

The core values of Masaryk University (hereinafter referred to as "MUNI") include responsibility, understood in relation to the external environment as a public role of the University emphasizing its role as a co-creator of public opinion and an active participant in public debate, and respect for the rules establishing equality of opportunity and transparency in the functioning of the institution. Since the beginning of its cooperation with the project Support for the Implementation and Development of Socially Responsible Public Procurement, the University has been fulfilling its strategic objectives mainly using

environmentally friendly materials, products and processes and indirect support for small and medium-sized enterprises.

MUNI sees great added value in refraining from evaluating public contracts solely on price. The Masaryk University in Brno decided to go down the green procurement route and set up a procurement process that included green criteria when procuring a waste management company.

Circular character:

When procuring a waste management company, it is important to set the criteria for meeting the waste hierarchy or circular hierarchy, certain recycling targets and what is most important – the transparency in the whole value chain.

When the University was preparing the procurement, its goal was to implement principles of the circular economy, waste hierarchy, sustainability and transparency.

Evaluation criteria:

The procurement criteria when procuring the waste management company were set to:
- provide University 4 times a year with consulting the waste management
- vehicles should have Euro V standard
- legal employment, fair contracts with employees
- meet new legislation
- measure the amount of waste
- contract signed for 4 years.

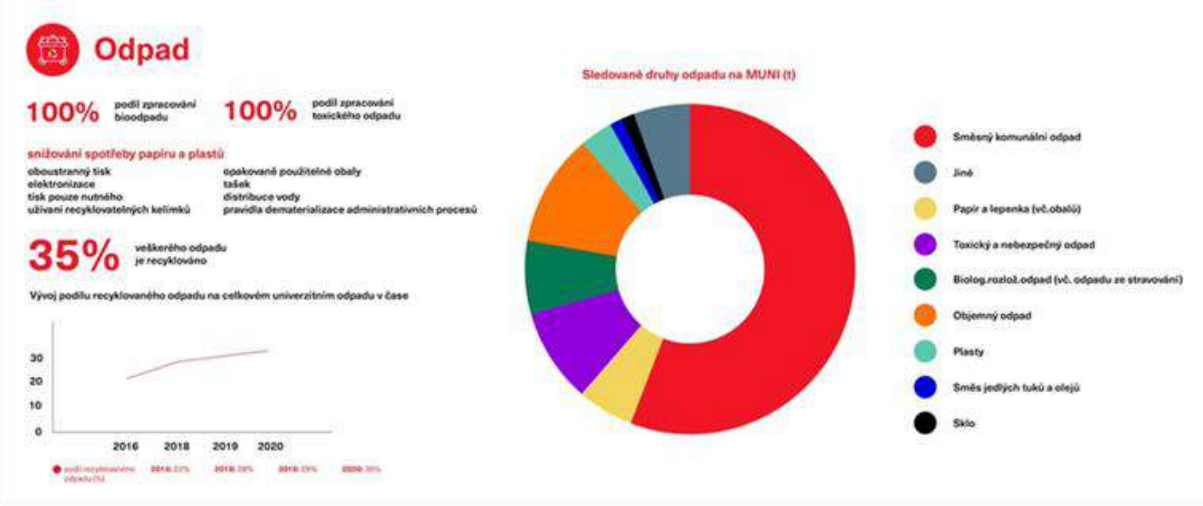
In numbers:
- price 50%
- recycling 25%
- other than recycling 15%
- technological level of vehicles 10%.

The University started the procurement process and made PIN with 3 waste management companies which were interested in providing this service. Only 2 of these companies sent their proposals and both proposals overlapped the price. This procurement was then cancelled.

The University decided to set different criteria and shorten the contract only to 2 years. The new criteria were:
- price 75%
- recycling 12%
- energy recovery 8%
- technological level of vehicles 5%.

Result:

This procurement was successful and the contract was signed.



Source: https://sustain.muni.cz/strategie-a-cile/vyrocni-zpravy

6. Procuring climate-friendly waste collection and treatment services Municipality of Sarpsborg (Norway)

Description:

The city of Sarpsborg is located in the county of Østfold, situated south-east Norway, and has a population of 54,678 people.
In August 2016, the Municipality of Sarpsborg re-tendered its waste collection service, encouraging bidders to consider how their proposed service could contribute to the Sarpsborg Energy and Climate Plan. The Energy and Climate Plan was first set up in 2002 and aims to significantly reduce greenhouse gas emissions (GHG) in the city. In 2008, emissions were estimated to total 374,000 tonnes of CO2 equivalents (7.4 tonnes per inhabitant) mostly caused by road traffic and industries.

The Energy and Climate Plan (2011-2020) has an overall target to reduce direct GHG by 50%, by 2020, and focuses on five areas of action: Transport, energy consumption of buildings, waste management, climate change adaptation, and capacity building and knowledge exchange.

Procurement objectives

In August 2016, the Municipality launched an 'open' public procurement procedure to tender Sarpsborg's waste collection service for the next five years. Subject matter of the contract:

Sanitation service for Sarpsborg municipality covering:

• Collection of source sorted consumable waste from households (and holiday home areas), municipal buildings and companies in the municipality;
• Collection units for waste and the collection of waste from events;
• Hire of containers for clearance waste and building waste from the municipality's entities.
Loading, transportation and recycling of waste from the collections described.
The contract shall also include the two further options:
• Collection of food waste in separate containers,
• Collection of glass and metal packaging in separate containers.

The winning bid was not only the one with the lowest price, it also scored highest on quality due to its compatibility with the Sarpsborg Energy and Climate Plan.

Circular character:

Service requirements included the collection of sorted waste, the provision of collection facilities and the transportation of waste to specified recycling/end-points.
The procurement was run according to a "most economically advantageous tender"(MEAT) model, with selection criteria used to exclude bidders who were unable to meet certain minimum environmental (and social) criteria. The award criteria were used to rank bids according to price and quality aspects. By encouraging a reduction of CO2 emissions as part of the award criteria, the winning service - which will introduce two fully electrified waste collection trucks - is not only cheaper due to the low cost of hydro-energy in Norway - but will also result in savings of approximately 300 tonnes of CO2 emissions annually.

Regarding the two options: The municipality of Sarpsborg plans to revise the Municipal Plan for Waste during the period. This may imply that a political decision is made to introduce collection arrangements for more waste types such as food waste, hazardous waste and glass and metal packaging.

Technical specifications:
Minimum performance requirements for the vehicles used to execute the service:
a) Minimum of European Emission Standard (EURO) 6 for vehicles to be used for the collection of waste.
b) Minimum of EURO 5 to be used for further transportation to the treatment plant.
In addition, due to an existing agreement between the Municipality of Sarpsborg and recycling provider Grønt Punkt Norge AS, bidders also had to meet requirements for plastic packaging after collection (that is, transportation, sorting, balling, storage and uploading), in order to ensure the ongoing recovery of plastic waste.

Award criteria:
The most economically advantageous tender was awarded the contract based on the following:
• Quality and Environment (60% of total points)
• Price (40% of total points)

Results:

The Call for Tenders was published in August 2016, with the contract signed in early December of the same year. Four bids were received. The service will run between 1 October 2017 to 30 September 2022. The contract is valued at over €21 million (204,822,859 Norwegian Krone) in total.
The winning bid was not only the one with the lowest price, it also scored highest on quality due to its compatibility with the Sarpsborg Energy and Climate Plan.

Finally, by assessing bids according to transportation distance to further waste processing, the winning bid also included agreements with local actors for the treatment of both residual and food waste, which will further reduce emissions related to transport to waste treatment plants.
By combining waste collection and further waste processing in one procurement, it was possible to procure a more holistic and efficient solution which also reduces the need to transport waste.

Source:
https://ec.europa.eu/environment/gpp/pdf/news_alert/Issue72_Case_Study_145_Sarpsborg.pdf

7. Low carbon waste collection services in the city of Bristol

Description:

The City of Bristol was awarded the European Green Capital Award 2015 for allocating € 800m towards transport improvements, energy efficiency and renewable energy, for consistently reducing carbon dioxide equivalent (CO2e) emissions since 2005 and for doubling the number of cyclists between 2001 and 2011. The award also recognised Bristol's growing green economy and ambition to become a centre of low carbon industry.

Bristol City's sustainable procurement strategy was adopted in 2009. It includes training, the development of relevant criteria, clauses and targets, monitoring SPP and market development. Every new purchase that requires a contract undergoes a sustainability assessment and input from the environment team, including recommended GPP criteria.

The Council has had emissions reduction targets for a number of years, but in 2011 a new target for the whole city was adopted to reduce CO2e by 40% by 2020, from the baseline year 2005.
The procurement procedure for a service contract for the collection of municipal waste and winter road maintenance around the City of Bristol began in 2009. Analysis showed that the market had changed considerably over the previous ten-year contract; therefore it was important to use the tender to drive economic and environmental improvements.

Circular character:

Pre-qualified service providers took part in a competitive dialogue procedure to explore the diverse approaches available within the waste industry. This was also considered the optimum way of achieving high recycling rates, a reduction in emissions and good value for money.
Bristol's waste team set separation requirements for the contract, whilst the environment team set CO2e reduction targets. The contract began in November 2011 and includes the provision of vehicles, staff and depots for waste collection, road gritting, snow ploughing and relevant communication with the public. A pre-qualifications phase allowed the selection of candidates according to the appropriateness of their Environmental Management System (EMS). This was necessary due to the subsequent requirements of the Environment Agency.

On the first page of the specification, the aims of Bristol by 2015 (as relevant to the contract) were set out, which included being a beacon authority delivering locally accountable 'Streetscene' services including street cleansing, litter picking, graffiti removal, litter bin emptying, and recovery of fly tipping. Aims also included working with partners to achieve excellence, being a recognised leader in waste collection and recycling, and being Britain's cleanest City.

Due to the fact that a competitive dialogue process was carried out, 'desired outcomes' were used as opposed to conformance-based technical specifications. These included:

- Reduce the 'carbon footprint' associated with the service in line with the agreed 2020 target for Bristol,
- Increase waste reduction, reuse, recycling and composting, towards an aim of zero waste,
- Deliver significant reductions of untreated waste sent to landfill,
- Maximise the efficient recovery of resources i.e. recycle and energy from residual waste,
- Tackle and reduce the incidents of environmental crime (e.g. by storing and collecting evidence from 'fly tipping'),
- Enhance community understanding of sustainable waste management.

Results:

Bidders were judged on the bids they put together following the competitive dialogue procedure and were evaluated according to factors including a carbon management plan indicating how they would achieve reduction targets. 4% of marks were allocated to environment and sustainability aspects including the carbon footprint of the service, quality of EMSs and the environmental impacts of the winter maintenance service. Effective operational management of the following aspects were also evaluated; waste collection (13%); street cleansing (12%); winter maintenance (4%) and waste transfer and processing (2%). A demonstration of how the bidder would meet performance targets for waste collection (8%) and street cleansing (5%) was also scored.

The share of CO2e emissions savings from this service contract, which would contribute to the overarching municipal target, was defined. In order to do this, the City target of a 40% reduction in CO2e emissions by 2020 (baseline 2005) was adjusted on a pro rata basis to fit the length of the service contract (2011 – 2017). Baseline emissions data from the previous contractor (2009/2010) were used to help calculate tonnes of CO2e saved. Calculations were also carried out on the difference in efficiency of available vehicles.

Source:
https://ec.europa.eu/environment/gpp/pdf/news_alert/Issue33_Case_Study71_Bristol_Business_case.pdf

8. South Moravia Innovation Center: green energy

Description:

The goal of the South Moravian Innovation Center (JIC) is to support innovative business in the region of South Moravia. In 2018, the JIC announced a tender for the supply of electricity to its INMEC building in the Brno Technology Park. In addition to the offer price, the decisive criterion was the percentage of energy that the supplier demonstrably purchased from renewable sources.
Under this contract, the contracting authority did not set a fixed requirement for the share of energy produced from renewable sources (RES). Instead, JIC decided to leave it up to the suppliers what share of RES they would offer and to take the preference for a higher share of RES into account when evaluating the offers. The evaluation criteria were set as follows: offer price 70%, environmental aspect - purchase of RES 30%.

Circular character:

The use of energy from renewable sources is one of the key principles of the circular economy, as it requires a comprehensive approach to resource efficiency. Therefore, it focuses not only on savings in the use of primary resources, but also on efficiency in energy production and consumption. Public procurement therefore needs to take into account current trends, new technologies and innovations in the low-carbon economy, thus reducing the environmental impact of the office's (or companies' or households') operations.

When using the quality criteria, the contracting authority clearly stated in the tender documentation the requirements and objectives to be achieved by the implementation of the public contract. If suppliers know and understand these goals, the evaluation and the whole competition is more transparent for them and they are able to come up with well-comparable offers. The contracting authority then defined unambiguous requirements and objectives in the tender documentation and clearly determined which specific indicators it would evaluate and how many points it would allocate to the individual levels of fulfilment of the set objectives.

Result:
The contracting authority has entered into an agreement with Nano Green Ltd., which has submitted the most advantageous offer and supplies energy from 100% renewable sources.

Source:
https://www.vhodne-uverejneni.cz/index.php?m=xenorders&h=order&a=detaildocumentsandimages&rwr=dodavky-elektricke-energie-z-obnovitelnych-zdroju
https://incien.org/wp-content/uploads/2021/06/Cirkularni-zakazky-KROUPAHELAN-INCIEN.pdf

9. 100% renewable energy for the building and garage of the Basque Parliament

Characteristics:

In 2015 the Basque Parliament committed to integrate environmental criteria in the tender for the supply of electricity to its buildings and garages and set that 20% of the energy supplied should come from renewable energy sources. Later, in 2017, the new tender required that the electricity supply be 100% renewable, although the trading company could supply non-renewable energy to other bidders, having the obligation to present justification of "redemption of guarantees of origin". In 2018 the Basque Parliament to increase the commitment demanded, as a criterion of solvency, that the trading companies have an “A” classification (of 100% renewable origin in the previous year). However, this requirement was challenged by 2 bidding companies, and finally the bidding was suspended. In 2019 the tender was re-processed eliminating the solvency criterion but maintaining to guarantee the renewable origin of 100% of the energy supplied and the hiring process has been successfully completed, with the new contract coming into force in January 2020.

Circular character:

As detailed in the specifications, the tender is for contracting the supply of 100% renewable electricity in high and low voltage for the buildings and garages owned by the Basque Parliament, for a period of 2 years.

The facilities that are the object of the contract are divided into 2 lots, according to the supply voltage (MT: Headquarters; and BT: complementary supply and garages). The aggregate consumption of the 2 lots is estimated at 1,541,000 kWh / year. The specifications state that the offers must contemplate all the concepts that influence the electricity bill; that is, the power term, the energy term and all the taxes and regulated concepts with which the electricity supply is charged, and even the cost of renting the meters. Also, unit prices were defined: Lot 1, € 296,000 (VAT not included); Lot 2, € 22,000 (VAT not included).

The specification is very clear, both in the technical specifications and in the administrative clauses, described in detail: 1) In the object; 2) In the characteristics of the supply; 3) In the special conditions of execution.

Results:

1) Satisfactory processing. Four companies submitted an offer, resulting in 2 of them being awarded (one for each of the 2 lots defined).
2) With the new contract, consumption is reduced as well as CO2 emissions. Based on the consumption estimated in the specifications (1,541,000 kWh / year), the reduction of CO2 emissions is estimated at 400.66 tons of CO2 each year, thanks to the consumption of electrical energy from 100% renewable sources, instead of electricity from the state energy mix.
3) An economic saving is foreseen: The rate change for the high voltage supply, which becomes 6.2 instead of 6.1 (by Royal Decree 15/2018); The inclusion in the price offered by the companies of all expenses, including the electricity tax.
4) In addition, a message is launched to the energy market: Betting from the demand for 100% renewable electrical energy is an active way of using public procurement and contracting to mobilize the market towards more environmentally friendly practices.

Source:
https://www.ihobe.eus/CriteriosAmbientales/Ficha.aspx?IdMenu=244677a9-6fc5-4e48-b375-3283c46421fe&Cod=1ad9f0d7-f2fa-4310-9557-68e025cfdff2&Idioma=es-ES

10. The building of the depository of the East Bohemian Museum in Pardubice

Description:

The client required a passive standard building for the construction of the new museum depository: an energy-efficient construction with low operating costs, minimal maintenance and a minimum of consumed energy for cooling and heating. This requirement was still quite unusual in the Czech Republic at the time of planning the contract. Thanks to this, a unique building was created until then, corresponding to the needs of museum activities for collection items storage.

Circular character:

The depository is exceptional for the use of unfired bricks (for humidity control) and recycled materials in the subsoil of the building, which has a volume of one thousand cubic meters. Recycled concrete replaces quarry aggregates, thus saving nature and the currently rapidly dwindling resources in the construction industry. The structure consists of a reinforced concrete skeleton with a panel ceiling on composite reinforced concrete beams. The depository uses modern technologies such as recuperation and a heat pump located on a green extensive roof.

Implementing and requiring circular principles in construction is crucial, because this sector is, on the one hand, very demanding in terms of raw materials consumption and at the same time it produces a huge amount of waste. Therefore, contracting authorities should discuss the topic with experts and demand solutions that will save primary resources and ensure the economical operation of new and renovated buildings.
Result:

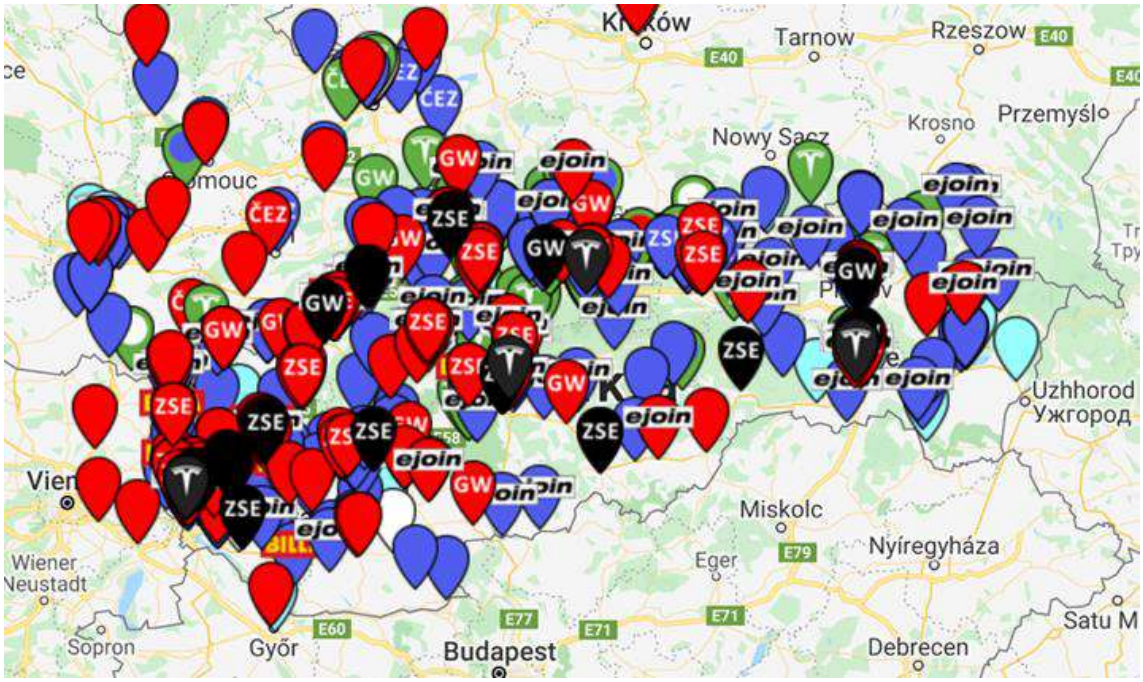
The building won the Ministry of Industry and Trade award in the Waste is Source competition and the Construction of the Year award in the Pardubice Region.

Source: https://www.tvarchitect.com/video/depozitar-vychodoceskeho-muzea-v-pardubicich-od-adama-rujbra-je-jiz-v-provozu/

11. Electric vehicles in state administration, Slovakia

Description:

In accordance with the Government Resolution No. 590 of 14 December 2016, by which the Government of the Slovak Republic approved the National Action Plan for Green Public Procurement in the Slovak Republic for 2016-2020, an obligation was imposed on ministers and presidents of central state administration bodies to apply the principles of green public procurement within its remit and recommended that the Heads of Self-Governing Regions and the President of the Association of Slovak Towns and Municipalities apply the principles of green public procurement within their competence.



The law in question aims to promote the marketing of clean and energy-efficient motor vehicles, thereby contributing to the energy efficiency of road transport vehicles by reducing fuel consumption, protecting the climate by reducing CO2 emissions and improving air quality by reducing pollutant emissions.

The Act lays down ways of considering the energy and environmental impacts of the operation of motor vehicles of categories M1, M2, M3, N1, N2 and N3 (hereinafter referred to as 'the vehicle') during their lifetime when purchasing or leasing vehicles. It also sets out a

methodology for calculating operating costs over the life of a vehicle to support and stimulate the market for energy-efficient and environmentally efficient vehicles.

Following the adoption of the Action Plan, the Government approached the Office for Public Procurement (OPP) with the idea of a model procurement of an electric car. OPP accepted this as a challenge and an opportunity to take advantage of green public procurement directly when purchasing a vehicle for the needs of the Authority, while at the same time the possibility of inspiring other contracting authorities. After all, if there is even a minimum possibility to contribute in any way to reducing the negative impact on the environment, so that the State and its institutions must be a model for other contracting authorities and to try to behave responsibly in each public contract.

Circular character:

The actual realization of market research was mainly based on "surfing" on web car dealers' sites from which the employees of OPP had drawn a lot of information. They verified the availability of electric vehicles on the market, their technical parameters, and they got the product catalogues. They found the price on the websites of individual sellers, published price lists, or using the price configurator. Various websites were also very helpful to them, which was a very clear and comprehensive process of the issue of electromobility.

An excellent opportunity to expand expertise in electromobility participation in the exhibition Auto Salon, which took place in Bratislava.

Good public procurement planning also includes very good market knowledge. That is why, before the tendering procedure itself, the employees of OPP used § 25 GPP - Preparatory market consultations. The consultation was divided into a theoretical and practical part – testing of electric vehicles.

As green public procurement is involved, when setting the environmental parameters, the issues related to environmental factors were considered throughout the lifecycle of electric cars. In fact, they were concerned with clarifying the facts relating to 'clean vehicles'. There is a fundamental difference in whether components in the production of electric vehicles are produced in the country, electricity is generated from renewable sources (water, sun, wind, etc.) or whether they are produced in a country where fossil fuels are a source of electricity (e.g. coal). The eco-friendliness of electric vehicles depends substantially on the country where these components are manufactured and used. The source of electricity is therefore important: the specific country in which the production plants of the components of electric vehicles are located, the electric car itself, and no less important is what the 'energy mix' is in the country in which the electric car is used.

Environmental requirements were translated into emissions issues, power sources used to produce the battery, the energy sources used to produce the production of the electric car itself, issues relating to the disposal and recycling of batteries, battery composition etc. They have not received a clear and, in particular, demonstrable response. There may be europe-wide pressure in this area to create a uniform form and methodology of calculation and demonstration.

The fact that, at the time, despite the preparatory market consultations carried out, could not get more concrete answers to our questions about the complex eco-friendliness of electric car does not mean that they had resigned to these parameters. OPP is continuously interested in these environmental parameters.

In addition to environmental parameters, they were also interested in economic parameters. However, they did not go down the road with the lowest cost only. One option for achieving symbiosis between costs and environmental protection is the use of environmental costs cycle. Therefore, in addition to the purchase price of the electric car, they were also interested in the service costs per 100 000 km, number of service inspections per 100 000. km, price for disposal/recycling of the battery, the price of the new battery, any discount on the sale of the old, free rental of a replacement vehicle during service/damage event, free of charge towing when the battery is discharged, etc. In terms of life cycle costs, it was important for us to answer questions such as the time of use of the electric car, average mileage (daily/monthly/annual) and the estimated consumption.

Result:

OPP procured the electronic vehicle and used this whole procedure to write a very detailed guidance for procuring the electronic vehicle.

Source:
http://www.uvo.gov.sk/extdoc/2634/ako_sme_obstarali_elektromobil.pdf
https://zevo.uvo.gov.sk/fileadmin/zevo/dokumenty/Metodicka_prirucka_Ekologicke_vozidla_a_vybrane_sluzby_aktualizacia_1.1.....pdf

12. City of Ghent "Framework agreement on the provision of detergents, ecological cleaning products and various sanitary needs”

Description:

Located in the Flemish region of Belgium, Ghent is the capital and largest city of the East Flanders province. With more than 250,000 inhabitants, Ghent is Belgium’s second largest municipality.
Since 2008, the City of Ghent has in place an action plan for sustainability, Ghent 2020, which includes more than 105 actions and initiatives to make Ghent a more sustainable city, including sustainable procurement activities. A first Procurement strategy with a deep-rooted focus on sustainability was launched in 2012. In 2014, this strategy was renewed in accordance with the adapted priorities set forth by the newly elected city council. During the EcoProcura 2014 conference, held in Ghent, this strategy was formally signed by the Mayor.

Ghent has spent the last 10 years progressively greening its municipal cleaning services to achieve the use of 100% environmentally sound products. Ghent purchases products meeting the European Ecolabel criteria, as a minimum, and was the first city to use Cradle-to-Cradle Certified products through their contracted cleaning services for all of its buildings and facilities. There are 340 locations in the city (ranging from office buildings, schools, nurseries, museums, etc.) which benefit from the City's cleaning services and/or products (such as those used for providing public catering services), which involve 350 external collaborators. The City's annual spend on cleaning products and services is 14.4 million euro.

Circular character:

The most recent public procurement contract was awarded in September 2016 following an Open Procedure. A four-year framework agreement for the supply of cleaning and polishing products was established.

The technical specification of the description of the subject-matter of the contract (16 groups of detergents) had to:

- be biodegradable;
- meet the criteria for obtaining a European Ecolabel for the relevant product category or its equivalent
- product labelling (label, dosing instructions, safety information);
- all products should be equipped with dosing aids,
- empty packages should have been removed and recycled by the supplier,
- the supplier should have ensured the initial coding of employees (scale and correct use of products).

Award criterion — ENP
(70% price and 30% sustainability)
Sustainability consisted of:
Sustainable transport – max. 10b (EURO 5 or higher),
Sustainable waste management – max. 10b,
Other elements – max. 10b (proposals on innovative and sustainable solutions, products, services, etc.)

Result
Transport is provided exclusively by EURO 6 vehicles,
Packaging - products are packaged in 85% recycled cardboard packaging and plastic fleece made of high density polyethylene (PEHD) – 100% recyclable,
Other elements – a welcome supplier has designed a fully automatic intelligent dosing system (energy, water and waste savings).

Source:
https://ec.europa.eu/environment/gpp/pdf/news_alert/Issue70_Case_Study_140_Ghent.pdf

13. Using award criteria to purchase ecolabelled cleaning products at Generalitat Valenciana, Ministry of Finance and Economic Modelling (Spain)

Characteristics:

The Generalitat Valenciana is the government of the Valencian Community, which is the fourth most populous region of Spain with more than five million inhabitants. It is responsible for procuring services and goods for the public sector within the region, and is committed to including environmental criteria in their framework agreements for products and services. The UN's Sustainable Development Goals are used as a framework for the Generalitat Valenciana's work, which is guided by their strategy "Valencian Strategy for Climate Change and Energy 2030".

The EU GPP criteria for indoor cleaning services were used as the foundation for the sustainability criteria included in the tender. The procurement was set up as a framework agreement for a two-year service contract (extendable for one more year). The tender was launched in September 2018 as an open procedure.

Circular character:

The sustainable performance of the cleaning services was evaluated by five award criteria, which counted for 55 of the 100 points available. Bidders had to score a minimum threshold of 25 points in order to be considered.

- Use of ecolabelled cleaning products officially recognised Type I ecolabel, according to UNE-EN ISO 14024: 2001 (32 points).
- Use of concentrated undiluted cleaning products (6 points). All product units of any of the following product categories must have a minimum dilution rate of 1:100:
- Use of paper from sustainable managed forests or recycled sources (8 points). All product units of the listed product categories should have a minimum content of 70% of sustainable recycled and/or virgin fibres (covered by valid sustainable forest management certificates).

o valid chain of custody certificate, issued by a third-party certification scheme, such as PEFC or FSC certification systems, or equivalent.

o or an officially recognised Type I ecolabel certificate (according to UNE-EN ISO 14024:2001), which includes this requirement.

- Use of recycled or compostable plastic waste bags (4 points). All garbage bags comply with the resistance requirements of the UNE-EN 13592:2017 standard (Plastic bags for the collection of domestic waste. Types, requirements and test methods), or equivalent, and containing at least 80% recycled post-consumer plastic or are fully compostable in accordance with the requirements of the standard UNE-EN 13432:2001 or equivalent.
- Energy efficiency of vacuum cleaners (5 points). Vacuum cleaners are classified with an energy efficiency of class A (for those purchased before 1 September 2017) or class A+ (for those purchased after 1 September 2017).

Contract performance clauses:

- The contractor must keep records, available on request of the contracting authority, on the following: consumed quantity of all cleaning products, with their corresponding updated safety data sheets, their technical dates (with instructions for application, use and dosage) and verification of the requirements established in the technical specifications.
- Training received by cleaning staff (on cleaning products, saving water and energy, waste, health and safety).

Results:

There were many interested bidders in the cleaning service contract, and about 17 offers were received for each lot. A total of 18 suppliers were able to qualify for the tender, scoring high enough on the environmental criteria. The service contract was awarded to the best valued offers in June 2019. In general, the selected suppliers had the highest score on the environmental award criteria. Most of the ecolabelled products offered by the bidders held the EU Ecolabels, although all Type I ecolabels were accepted. The estimated contract value is € 33.239.151. Energy efficient vacuum cleaners can reduce the total energy consumption up to 50%, depending on the cleaning situation, e.g. if floor cleaning is a major task. The suppliers were also encouraged to use undiluted products as these reduce emissions due to lower packaging material requirements and fuel use for transportation.

Source:
https://ec.europa.eu/environment/gpp/pdf/news_alert/Issue_98_Case_Study_185_Valencia.pdf
https://contrataciondelestado.es/wps/portal/!ut/p/b0/04_Sj9CPykssy0xPLMnMz0vMAfIjU1JTC3Iy87KtUlJLEnNyUuNzMpMzSxKTgQr0w_Wj9KMyU1zLcvQjS_38Qkw9k4qCzHNzC40MSysykhLDAm1t9Qtycx0BcPm5-A!!/

14. Use of the carbon footprint as an award criterion in a tender

WORKS FOR SEALING THE INERT LANDFILL OF DEHESAS VIEJAS, GRANADA

The Andalusian Ministry of Agriculture, Livestock, Fisheries and Sustainable Development includes the carbon footprint as an award criterion in a tender.

Characteristics:

Andalusian law on Climate Change Measures (2018) promotes circular procurement. Public entities will promote climate change mitigation and the transition towards a new energetic model. The definition of award criteria and special implementation conditions that take into account the environmental impact of each product, or service provided. The definition of award criteria that preferably value reduction, reuse and recycling processes of products as well as the reduction of Greenhouse Gas emissions in production processes, their commercialization and distribution.

Circular character:

Contract: works for sealing the inert landfill of Dehesas Viejas, Granada. The activity's largest negative environmental impact is the transportation service.

About award criteria, up to 100 points can be obtained:

Project details (16); Methodology (5); Schedule (4); Materials study (20); Price (45); Carbon footprint from use of heavy machinery (10).
10% is awarded directly by the environmental performance of the bidding company. 10 points are assigned to the one with the smallest footprint, and with a rule of proportions, the scores are assigned to the rest.
Methodology for calculating the footprint is also provided. Calculations are homogeneous and comparable. Any company can do it without the need for complex technical resources.
Companies only need: Type of vehicle (rigid, articulated), Travel distances and Level of load.

Results:

The Dehesas Viejas (Granada) Landfill sealing tender was granted applying the criteria and the works are underway. The carbon footprint has been included in the award process for a contract of over 2 MM€. This resulted in the reduction of GHG emissions in the works carried out resulting from a contractual legal guarantee. The main success consists in that this criterion can now be included in further tenders, as the legal obstacles for their application have been overcome.

Source:
https://www.interregeurope.eu/policylearning/good-practices/item/5289/use-of-the-carbon-footprint-as-an-award-criterion-in-a-tender/
https://www.juntadeandalucia.es/haciendayadministracionpublica/apl/pdc_sirec/perfiles-licitaciones/detalle-licitacion.jsf?idExpediente=000000255100
https://www.hyvalenzuela.com/inicio/obras-y-proyectos/dehesas-viejas

15. Supply of t-shirts for the La Mercè race 2019-2020-2021 with sustainable public procurement measures

Characteristics:

For over 40 years, the La Mercè Race (Cursa de La Mercè) has been held each September as part of Barcelona's "La Mercè" festivities. Before the race, each runner receives a special race t-shirt which they can wear on the day to mark them out as one of the participants. The race's organiser, Barcelona Sports Institute (IBE), is committed to reducing the environmental impact of sports events, and it identified waste reduction as a priority in its greening plan for the La Mercè race.

The IBE wanted to buy t-shirts which met the standards of MADE IN GREEN by OEKO TEX, to ensure t-shirts were free from harmful chemicals and made under safe working conditions. They also wanted to reduce local transport emissions in the delivery of t-shirts. Regarding the packaging, in addition to the plastic bags wrapping each t-shirt, it was also noticed by the IBE that the t-shirts were being delivered in a lot of excess cardboard.

Circular character:

In order to meet the procurement objectives, the following award criteria were developed to select the most economically advantageous offer. A maximum 100 points were available:

Price (34 points): The highest score was awarded to the lowest bidder permissible (i.e. excluding abnormally low prices). Other bids were awarded points on a proportional scale. A maximum budget for this tender was set at €146,211 (including VAT). Any bids which exceeded this would be excluded.
Transport (10 points): vehicles used for local delivery were awarded points based on their environmental impact (certified according to Spain's DGT classification): Zero emission vehicles (10 points), ECO-vehicles (6 points), Vehicles with C badge (2 points), vehicles with a B badge or no badge (0 points).

Waste (18 points): The bidder was asked to present a technical file describing the design of the box used for packing t-shirts, including the total number of boxes, the mass of each box and the total mass of packaging (TMP), and a calculation of the percentage of waste reduction (PWR) using the following formula: PWR = 100 - (100xTMP) / 425,01

Green fibres (18 points): T-shirts should be made from fibres produced in ways not harmful to the environment or health, or use of recycled fibres, verified by: MADE IN GREEN certification by OEKO TEX, or equivalent (9 points); Certificate proving use of recycled polyester (9 points)

Design (12 points): the evaluation of some criterion was based on a value judgement, including the design (4 points), comfort (6 points), and breathability (2 points). Samples of the male and female t-shirts in medium size were required, plus a copy of the catalogue and the technical files on the fabrics used.

Production period: up to 8 points were available for reduction of the production period ahead of the delivery deadline.

Results:

Four bids were received, out of which one was disqualified for reasons not related to the sustainability criteria, and three evaluated. The winning bidder Master Touch Publicidad SL scored 77.6 points out of 100. As both the winner and second place scored the same number of points in the environmental criteria (6 points for transport, 18 points for waste reduction, and 9 points for green fibres), price was the deciding factor. The winning bid offered a price of €142,341.25.

As a result of this procurement, the new race t-shirts are certified by MADE IN GREEN OEKO TEX, and are delivered using ECO vehicles, which leads to less CO2 emissions and reduces air pollution in the city. The packaging used to deliver the t-shirts has been reduced by over 75%, through the delivery of the t-shirts in reusable crates that the company takes back, after the t-shirts have been distributed to the runner's packs prepared for the race. The winning supplier has also completely eliminated single-use plastic bags, which in 2019 alone saved 13,000 plastic bags. Separately, the 2019 race also avoided the use of 39,000 single-use PET water bottles.

Source:
https://ec.europa.eu/environment/gpp/pdf/news_alert/Issue_99_Case_Study_186_Barcelona.pdf

PRIVATE SECTOR

In this methodology, we also bring cases from the private sector showing the possibilities of the market to respond to circular requirements.

16. Atelier Paletky: Creation of a relaxing atrium for OGILVY & MATHER

Description:

Atelier Paletky Ltd. is a company that designs ecological interiors from A-Z, it has designers, architects and its own carpenters. It is unique because since 2013, it has been upcycling one-way pallets from non-traditional wood species that have come to the Czech Republic from all over the world and their useful value would end there. In the company, they save the exotic wood by transforming materials or waste into products of higher value and make furniture and entire interiors out of it. Whether they work with pallets or supplement them with wood from purely local sources, they are always interested in ecological sustainability. They look for material in the Czech Republic and never order it for their own needs.

The task of Ogilvy & Mather was to change and revive the atrium into an informal and relaxing space. It was necessary to create a pleasant environment for the relaxation of the creative staff employed in the company and at the same time to create a place where they will meet clients. Atelier Paletky was approached directly by Ogilvy & Mather and the implementation took place in 2015. Atelier Paletky was a comprehensive implementer, so not only they prepared the entire interior redesign, but they also comprehensively delivered it, from all upcycled furniture and metal to the installation of a 7-meter tree in the atrium.

Source: Paletky

Circular character:

Design by Eva Groch MDes. was carried in conjunction with the old and the new. The limited budget was meant for the use of existing furniture. Other furniture was made of Japanese cedar and larch, which were cycled out of one-way pallets in Atelier Paletky. They created large benches, flower boxes and a swing. This is a beautiful example of the fact that, thanks to the transformation of waste material into useful and beautiful furniture, unnecessary trees do not have to be felled. In addition, this natural material can be easily repaired or refurbished, reducing the purchase of new items. Last but not least, a local company was supported.

Result:

The contract required a local supplier who was also looking for its resources in the vicinity of its location. There was no need to use primary resources either. On the contrary, the existing furniture was used and tastefully supplemented with recycled furniture from pallets. The Atrium, as a large meeting room and at the same time a casual and informal space with a piece of nature at heart, won a prestigious award known as the "Meeting Room of the Year" from the CBRE jury in the Office as Company DNA category in 2015.

Source: Paletky

PROJECTS IN PREPARATION

We would like to mention projects which are currently in progress but not finalized yet. These cases should be understood as examples of what can be done or what can be demanded within public procurement.

17. Circular brewery

Description:

The new operators of a traditional Czech brewery decided to adjust the operation of their brewery in the spirit of the circular economy and sought solutions that would be both technically and financially feasible. Within an external expert consultation, they considered the principles of social and environmental impacts at the global and local levels, taking into account the concept of the "doughnut economy" by British economist Kate Raworth and believing that every economic operator should consider its impacts in a broad perspective.

One part of the circular strategy was to consider existing business partners and their business models to be in line with the new circular principles. Furthermore, the original communication and marketing strategy was changed and elements of "mattering" were included (emphasis on what really matters instead of the classic promotion of products).
Circular character:

The brewery is based on the use of local raw materials. For example, malt is supplied from a craft malting plant, which processes grain from domestic growers, and hops from a company associating local growers. Operators try to use fruit from the nearest sources in sour-type beers to which fruit is added. In the spirit of upcycling, threshing waste was used as part of the feed for the cattle of the local farmer. The brewery is CO2 neutral and only glass and ecological labels are used as packaging material due to the fact that plastic recycling is low in the Czech Republic. The demand for the installation of own renewable energy sources (solar panels) is in the process. Operators consider the environmental friendliness of appliances and consider the possibilities of renting them, as well as the possibilities of a circular office.

Circular operation of the brewery:

Source: M. Streichsbierová, project prepared within the online course Circular procurement 2020/21 (CZ)

18. Ministerial canteen

Description:

A team was set up at the ministry to set the conditions for the catering services of the ministerial food service, taking into account environmental and social responsibility. The team focuses on the technical parameters of catering, waste, food certification and employee participation, while analyzing examples of good practice. As part of the preparations, a market survey and a preliminary market consultation were carried out in order to determine the feasibility of the contracting authority's ideas.

Circular character:

Key criteria included: origin of raw materials, organic farming, animal production (animal welfare), community-supported agriculture (KPZ) and support for small producers, waste prevention (packaging material and the ability to purchase raw materials in larger packages or returnable packaging), the carbon footprint of raw material imports, energy management, the ability to quantify the carbon footprint of individual meals, the inclusion of vegetarian and vegan meals, social aspects of employment (minimum wage, part-time work, inclusion of

disadvantaged groups) and the minimization of food residues including their management (biowaste, composting and returning to the soil).

Evaluation criteria:

70% should be decided in the contract price. The qualitative criteria will focus on the share of ecolabelled subcontractors / the share of small tradesmen, the carbon footprint of the import of ready meals from the kitchen to the food dispenser and the quality of the food (taste / nutritional value / balance / freshness).

The procurement is currently in the process of preparation.

Source: project prepared within the online course Circular procurement 2020/21 (CZ)

19. Project Re:Špitálka in Brno (Czechia)

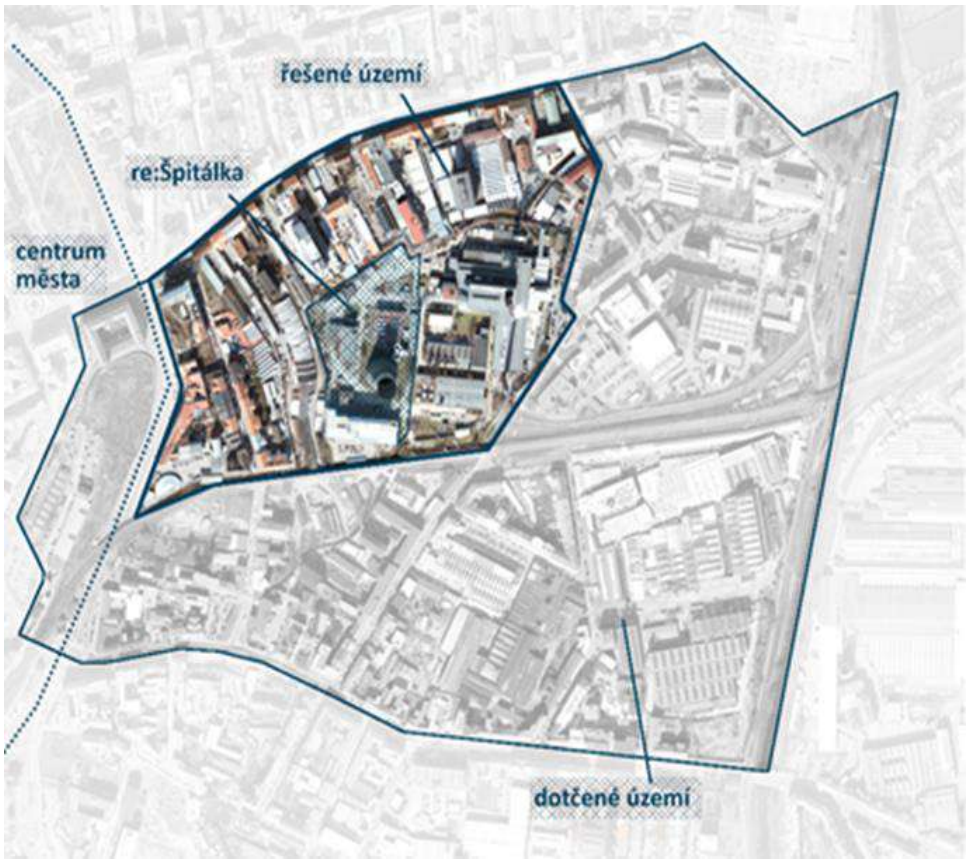
Description:

The intention of the city of Brno is to plan, design and build a "smart district" that will be as sustainable as possible and will use various modern technologies or approaches for this purpose. It is not just a high-tech solution, but an overall approach to the territory which should ensure that it is possible to live well, work, and spend free time. At the same time the whole project (from construction to operation and maintenance) will meet high environmental sustainability criteria.

The smart district in Špitálka will serve as a pilot district for verifying the municipal goals set by 2050 (in the areas of environment, prosperity, resources, services and administration) in the nearer future than 2050, so that the individual implemented measures can be evaluated and possibly further extended to other areas of the city. The area is part of the protection zone of the city conservation area. It is an area with a high building density and a closed block structure. There are former manufacturing areas which were formerly the industrial centre of the city. Today, these ruining buildings make up a large portion of the local brownfields.

Circular character:

The plan is based on the following principles: re-design, re-build, re-use, resource, resilience, responsibility and responsiveness. The key circular feature is that the contracting authority places great emphasis on preparation and tries to manage the project from the beginning, i.e. before preparing the actual selection of the supplier for the processing of project documentation and construction, so that the environmental objectives are met. For this purpose, it actively connects various stakeholders, external experts, prepares studies, white papers, evaluates financing models, etc.
The project is divided into seven basic areas: energy, transport, public space and greenery, people and community, smart buildings, waste and data & communications. These were designed by Brno research institutes and the city invites people to discuss them further.



Source: https://respitalka.brno.cz/en/

PROJECT NOT REALISED

This project is to show that there may be will at the beginning but the stakeholders might not be prepared for the change towards circular procurement. We would like to support all those who try even though there might be obstacles.

20. Interior equipment of the new fire station with sustainable furniture (Paskov, Moravian-Silesian Region)

Description:

The city of Paskov selected a furniture supplier that would meet the increased demands for environmentally friendly performance. A demonstrable level of environmental overlap was important for the contracting authority - the health safety of the product (elimination of hazardous substances used in the manufacture and surface treatment of furniture), the use of environmentally friendly materials in production and packaging, distance and mode of transport and product lifespan. Furthermore, repairability, demountability of individual parts and recyclability.

The larger the proportion of recycled materials that furniture or interior equipment would contain, the more points it would receive in the evaluation. The technical properties of the product should have been demonstrable and documented by the supplier with the appropriate certifications. Emphasis was also placed on warranty lengths and the expected life of the furniture. In addition to environmental overlap, social criteria were mentioned (employment of disadvantaged people - prisoners, the disabled).

Obstacles to implementation:

These criteria were published in the framework of the preliminary market consultation. The contracting authority thought about the use of used furniture, but the second-hand offer proved to be insufficient. The next step considered was the rental of furniture from the IKEA company, but this offer is still developing in the Czech Republic and was not satisfactory for the client. The focus on the local carpentry workshop, which was the next step, also proved to be a dead end, due to a lack of capacity and the impossibility of carrying out the contract on a larger scale. The recommended circular company operating in Prague would have been able to prepare an architectural design in too long a time. A key negative factor was also the rising price of wood due to cheap exports of bark beetle calamity wood and its lack in stocks. As a result, time (the approaching station opening date) and price played a decisive role.

XI. Conclusion

While working on this methodology, we have enriched ourselves too thanks to information and experience exchange among the project partners. Our diversity in topics, regionality and local context has resulted in a concise guide on how to comprehend the circular economy principles in public procurement as well as in private purchases.

We would like to highlight key messages of this methodology:

1. Circular public procurement is inevitable and it is a solution to the current challenges. There is no other way and it represents a first step in realisation of the circular economy in practice (following the trend set within the European Green Deal).
2. Circularity and sustainability can be applied in any sector, but usually, there is lack of knowledge and consultation. Thus, experts should be invited to consult the goals, possibilities and specific aspects of any future circular public procurement.
3. It is more and more clear that market consultations (discussion among the public authority and potential suppliers) are key to understanding both sides' needs, plans and conceptions. It is not illegal but these consultations must be held in a transparent manner and open to any interested party.
4. Cooperation (and common solution-seeking) between the public authority and supplier(s) makes the procurement successful. It is also one of the key principles of the circular economy in general.
5. To apply the circular economy in practice, traditional consumption patterns must be changed as well as the current consumer mindset. Circular economy is not about growing consumption being "greener" but it is about focusing on quality instead of price and quantity and minimising our needs.
6. It is not only about circular public procurement but also about circular private purchase. Circular principles must be applied in the everyday life of every single consumer.
7. It is natural to make mistakes or to find obstacles in the process of circular procurement. This is a way of learning and getting valuable lessons but in any case, we should not be discouraged and follow the circular path again.

We believe that circular public procurement and circular purchase will soon be a natural part of our lives. This methodology makes a tiny part of the efforts to bring about change and realise the circular economy in practice. There is no other way to go.

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Annex 1: LIST OF THE MOST KNOWN CERTIFICATIONS

In procurement, any kind of certification can be required. Here you can find some of the main known in the European Union.

Electronics

- IT: https://electronicswatch.org/en/
- TCO Certified: https://tcocertified.com
- Energy STAR: https://www.energystar.gov/

Food and trade

- Soil Association https://www.soilassociation.org/our-standards/read-our-organic-standards/
- Organic agriculture in Europe: https://www.ecocert.com/en/certification-detail/organic-farming-europe--ce--n-834-2007
- EP: https://ec.europa.eu/info/food-farming-fisheries/farming/organic-farming/organics-glance
- MSC Marine Stewardship Council: https://www.msc.org
- ASC Aquaculture Stewardship Council: https://www.asc-aqua.org
- FairTrade: https://www.fairtrade.net
- Rainforest Alliance, UTZ : https://www.rainforest-alliance.org, https://www.rainforest-alliance.org/utz/
- Naturland: https://www.naturland.de/en/producers/steps-to-naturland-certification.html
- UEBT: https://www.ethicalbiotrade.org/about-uebt

Textile

- Global Organic Textile Standard: https://www.global-standard.org
- Better Cotton Initiative: https://bettercotton.org
- Textile exchange: https://textileexchange.org

Environment

- FSC/Forest Stewardship Council: https://fsc.org/en
- PEFC/Programme for Endorsement of Forest Certification: https://www.pefc.org
- Ecolabel EU: https://ec.europa.eu/environment/ecolabel/
- NATRUE: https://www.natrue.org
- ECO GARANTIE: https://ecogarantie.eu
- IMAFLORA: https://www.imaflora.org/o-que-fazemos/certificacoes

Other sources:

- https://ec.europa.eu/environment/ecolabel/ecolabel-and-green-public-procurement.html
- https://globalecolabelling.net/what-is-eco-labelling/
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- https://www.greenseal.org/certification
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