

# The CO<sub>2</sub> Performance Ladder as a Tool for Low-Carbon Procurement

A feasibility study for  
10 European countries

**IISD REPORT**



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### **The CO<sub>2</sub> Performance Ladder as a Tool for Low-Carbon Procurement: A feasibility study for 10 European countries**

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CO<sub>2</sub> PERFORMANCE LADDER

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## Executive Summary

This report assesses the feasibility of using the CO<sub>2</sub> Performance Ladder (CO2PL)—a green public procurement tool used extensively in the Netherlands—in other European contexts. It provides an overview of how the tool can be implemented in 10 European countries.

The CO2PL is both a carbon management system that helps organizations reduce their emissions and a procurement tool that rewards suppliers with an award advantage in procurement processes. Many authorities in the Netherlands use it in their procurement, and successful pilot projects began in Belgium in 2019. Approximately 5,000 organizations are certified on the CO2PL, and it has a proven impact in reducing carbon emissions. It is owned and managed by the Foundation for Climate Friendly Procurement and Business (SKAO), a non-profit organization based in the Netherlands.

Public procurement is a powerful lever for advancing sustainable development and climate action. Public authorities across the European Union (EU) buy goods, works, and services worth 14% of their GDP every year. At the same time, public procurement is responsible for as much as 15% of global greenhouse gas (GHG) emissions. By choosing goods and services with reduced environmental impacts, governments can provide a strong incentive for businesses to develop more sustainable practices, products, and technologies, especially in sectors like infrastructure, where public buyers control a large share of the market.

**Sustainable public procurement (SPP)** is a process by which public authorities seek to minimize environmental costs and maximize social and economic value in public procurement, providing value for money across the life cycle of the goods, services, and infrastructure they buy. **Green public procurement (GPP)** focuses on the environmental component of sustainable procurement. A focus on reducing or avoiding carbon emissions through public procurement, referred to as **low-carbon procurement**, can directly help governments reach their climate commitments.

Even though procurers have many GPP tools at hand, such as eco-labels and life-cycle costing calculators, and increasingly use them to make their purchases more sustainable, the climate change challenge looms large, and GPP is still not being deployed at the scale required. In this feasibility study, we explore what is required to scale up the use of one specific GPP tool: the CO2PL. The CO2PL is considered a “best practice” for low-carbon public procurement by the Organisation for Economic Co-operation and Development, the Intergovernmental Panel on Climate Change, and the World Economic Forum.

Our conclusions confirm that there is a clear opportunity to use the CO2PL across Europe, as it responds directly to the demand from public authorities for easy-to-use, practical tools to reduce carbon emissions. There is a clear interest in tried-and-tested approaches to stimulate decarbonization through public procurement processes, as well as a marked demand for third-party verified certification systems.

This feasibility study focuses on the procurement contexts in 10 European countries: Austria, Denmark, Germany, Ireland, Italy, Poland, Slovenia, Spain, Sweden, and the United Kingdom. For each of the countries, the study provides information about:



- Sustainable public procurement: What are the key priorities and activities in the country? Which tools, instruments, and labels are used for sustainable public procurement?
- Low-carbon procurement: What are emission reduction targets in the country? What is the status of low-carbon procurement of goods, works, and services, and how is this monitored?
- Potential for the CO<sub>2</sub>PL: Who are the main stakeholders for sustainable public procurement in the country? What are the potential challenges and opportunities in using the CO<sub>2</sub>PL?

## Key Observations by Country

Table ES1 provides an overview of key observations on the potential for uptake of the CO<sub>2</sub>PL through public procurement processes in the 10 countries surveyed for this report.

**Table ES1.** Key observations in the 10 countries

	Key observations
<b>Austria</b>	Procuring authorities in Austria have advanced experience with sustainable procurement and use diverse instruments, such as environmental management systems, eco-labels, and carbon calculators.
	Procurement policies, technical specifications, and award criteria include various aspects of sustainability with a strong focus on fostering a circular economy.
	The frequent use of sustainable award criteria and environmental management systems creates an enabling environment for the CO <sub>2</sub> PL.
<b>Denmark</b>	Danish procurers have long-standing, frontrunner experience with GPP and maintain a culture of regular dialogue with suppliers, similar to the practice in the Netherlands.
	Reducing GHG emissions in public procurement is high on the agenda of procurers and policy-makers, who are also aiming to monitor emissions accurately.
	The implementation of Denmark's GPP strategy represents a clear pathway for piloting the CO <sub>2</sub> PL at the national level.
<b>Germany</b>	Procuring authorities are searching for practical, easy-to-use tools to consider and reduce carbon emissions through their processes.
	Ensuring the legal certainty of GPP approaches, generally, and the use of the CO <sub>2</sub> PL, specifically, is a challenge to be addressed.
	Support from the supply side is key for success and will require close engagement and dialogue with suppliers.



	<b>Key observations</b>
<b>Ireland</b>	Net-zero commitments and the introduction of sectoral carbon budgets are driving demand for low-carbon public procurement tools/approaches.
	There is promising stakeholder engagement with both contracting authorities interested in pilot projects and with local non-governmental organizations to host and guide the CO2PL in Ireland.
	There is demand for capacity building on carbon management in the construction sector, particularly for small and medium-sized enterprises (SMEs), as well as for more information on how the CO2PL could support Irish industry in transitioning to more sustainable practices.
<b>Italy</b>	GPP in Italy is based on the mandatory use of Minimum Environmental Criteria (CAM) and is often put into practice through eco-labels and certification schemes.
	For implementation in Italy, the CO2PL would need to be integrated into the CAM or complement the existing system as an easy-to-use tool to reward sustainability performance beyond the minimum criteria.
	Piloting the CO2PL would require comprehensive capacity building and support for interested procuring entities.
<b>Poland</b>	The new State Purchasing Policy, which aims to foster GPP, could increase the momentum for sustainable procurement and the uptake of GPP tools in Poland.
	Procuring authorities and suppliers have little experience with GPP, and a risk-averse procurement culture represents an obstacle for the CO2PL.
	Strong political support and legal backing at the national level would be required to introduce the CO2PL and overcome prevailing legal concerns about GPP.
<b>Slovenia</b>	Current GPP activity at the national level is focused on the successful implementation of the 22 mandatory GPP product categories.
	Municipalities are, in some cases, frontrunners on climate neutrality, going beyond federal-level GPP requirements, which could make them strong potential partners for trialling the CO2PL.
	Challenges are related to limited capacity among public procurers and the need for further clarity on legal concerns.
<b>Spain</b>	Reducing GHG emissions in procurement is high on the agenda of national, regional, and local authorities in Spain.
	The Spanish procurement system is highly decentralized, and many GPP activities are implemented by local and regional frontrunners like Barcelona, Catalonia, and the Basque Country.
	Procuring authorities are searching for practical, legally secure ways of integrating sustainability considerations in their procedures and making use of the legal space for GPP—for example through award criteria.



	Key observations
Sweden	Procurement practices in Sweden are conducive to testing new approaches for SPP, as reflected in the large number of tools and certification systems already used, as well as the regular market dialogue with suppliers.
	There is high momentum for low-carbon procurement, with the transport and buildings sectors taking the lead in driving low-carbon innovation through procurement.
	Challenges for the CO <sub>2</sub> PL in Sweden relate to risk aversion in public procurement and the busy marketplace that already exists for low-carbon tools and approaches
United Kingdom	Major procurement reforms are currently underway and are expected to provide more flexibility and opportunity for contracting authorities to practice GPP.
	Carbon neutrality is a priority for value-based and socially responsible procurement frameworks, and there is potential for the CO <sub>2</sub> PL to complement the new Carbon Reduction Plans.
	A challenge might be demonstrating the clear value added of the CO <sub>2</sub> PL in a busy marketplace for carbon tools.

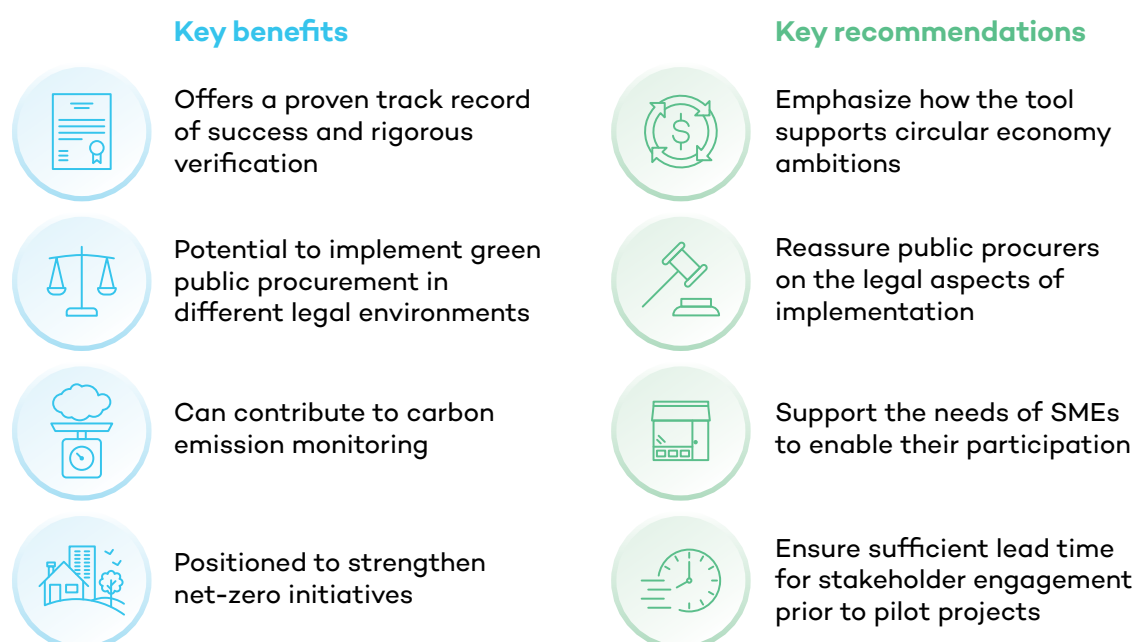
## Summary of Conclusions and Recommendations

1. Compared to other carbon tools and approaches, the **CO<sub>2</sub>PL stands out for its track record** of use in public procurement, its proven carbon mitigation impacts, and its third-party verification system.
2. **Mandatory GPP is prevalent in many countries in Europe; however, it does not necessarily lead to meaningful climate action**, whereas the CO<sub>2</sub>PL is specifically designed to motivate suppliers to make ambitious carbon emission reductions. Moving forward, it is important to note the legal space under the 2014 EU Procurement Directive to use award criteria for advancing environmental objectives.
3. **Countries in Europe are facing similar measurement challenges in implementing net-zero policies through public procurement.** It will be important for the CO<sub>2</sub>PL to align with common carbon measurement methods, such as Environmental Product Declarations, and to integrate these into practical resources to facilitate the harmonized use of tools.
4. **Cities across Europe are positioned to lead on net-zero**—for example, in initiatives like DaringCities, NetZeroCities, and Big Buyers for Climate and Environment. Positioning the CO<sub>2</sub>PL in a network of European cities to disseminate knowledge about the tool and implement pilot projects, while creating synergies with other projects, is a potentially fruitful way forward.



5. **Circular economy policies are becoming mainstream in legal frameworks in Europe.** The CO2PL can be communicated in this context, drawing attention to how the instrument contributes to circularity.
6. **Public procurers across Europe are risk averse, particularly when it comes to the legal aspects of procurement.** It will be important to continue to demystify the use of the CO2PL and educate interested parties about legal aspects of the instruments—for example, through the [Legal FAQ](#) that accompanies this report and through dedicated working groups.
7. **Protecting the ability of SMEs to bid for government contracts continues to be a priority for contracting authorities in Europe.** It will be important to emphasize the popularity of the CO2PL among SMEs in the Netherlands, as well as the alignment of the instrument with the EU Procurement Directives. Pilot projects should specifically consider the needs of SMEs.
8. **Sufficient lead time for any new initiatives in procurement is essential.** This should be considered for pilot projects of the CO2PL. Outreach and training for procurers and relevant private sector players should begin as soon contracting as authorities express their interest in using the CO2PL.

**Figure ES1.** Summary of conclusions and recommendations about the CO2PL







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## Abbreviations and Acronyms

<b>BBG</b>	Bundesbeschaffung (Austrian central purchasing body)
<b>BIG</b>	Bundesimmobiliengesellschaft (Austrian federal real estate company)_
<b>BMWK</b>	Bundesministerium für Wirtschaft und Klimaschutz (Germany)
<b>BNB</b>	Bewertungssystem Nachhaltiges Bauen
<b>CAM</b>	Minimum Environmental Criteria. In Italian: Criteri Ambientali Minimi
<b>CO<sub>2</sub></b>	carbon dioxide
<b>CO<sub>2</sub>PL</b>	CO <sub>2</sub> Performance Ladder
<b>CRP</b>	Carbon Reduction Plan
<b>DEFRA</b>	Department for Environment, Food and Rural Affairs
<b>EMS</b>	Environmental Management System
<b>EMAS</b>	Eco-Management and Audit Scheme
<b>EPA</b>	Environmental Protection Agency
<b>EPD</b>	Environmental Product Declaration
<b>ESB</b>	Energy Supply Board
<b>EU</b>	European Union
<b>FSC</b>	Forest Stewardship Council
<b>GBS</b>	Government Buying Standards
<b>GHG</b>	greenhouse gas emissions
<b>GPP</b>	green public procurement
<b>ICLEI</b>	ICLEI – Local Governments for Sustainability
<b>ICT</b>	information communications and technology
<b>ISO</b>	International Organization for Standardization
<b>LCA</b>	life-cycle analysis
<b>LCC</b>	life-cycle costing
<b>MAT</b>	most advantageous tender
<b>MEAT</b>	most economically advantageous tender
<b>naBe</b>	Aktionsplan für nachhaltige öffentliche Beschaffung
<b>NGO</b>	non-governmental organization
<b>PAS</b>	Publicly Available Specification



<b>PEF</b>	Product Environmental Footprints
<b>PEFC</b>	Programme for the Endorsement of Forest Certification
<b>PPN</b>	Procurement Policy Notes
<b>SCM</b>	Should Cost Model
<b>SDG</b>	Sustainable Development Goals
<b>SKAO</b>	Foundation for Climate-friendly Procurement and Business (in Dutch: Stichting Klimaatvriendelijk Aanbesteden en Ondernemen)
<b>SKI</b>	Statens og Kommunernes Indkøbsservice (Danish National Procurement Agency)
<b>SME</b>	small and medium-sized enterprise
<b>SPP</b>	sustainable public procurement
<b>TCO</b>	total cost of ownership
<b>TII</b>	Transport Infrastructure Ireland
<b>ZAD</b>	Zavod za gradbeništvo (Slovenian National Building and Civil Engineering Institute)



## Introduction

Public procurement is a powerful lever for sustainable development and climate action. Public institutions in the European Union (EU) buy goods, works, and services worth about 14% of their GDP every year. For example, procurement in Germany amounts to EUR 300 billion annually (Bundesministerium für Wirtschaft und Klimaschutz, 2022), and procurement in the United Kingdom amounts to GBP 300 billion annually (Government Commercial Function, 2022). At the same time, the procurement activities of national, state, and local governments are directly or indirectly responsible for 15% of global greenhouse gas (GHG) emissions (World Economic Forum et al., 2022). Avoiding these emissions represents a key opportunity to help meet national and international climate change mitigation targets and slow global warming. This immense power of public procurement in terms of both spending and potential climate change mitigation makes it essential that these funds are spent in a forward-looking, exemplary way instead of sponsoring business-as-usual practices.

Green public procurement (GPP) is defined by the European Commission (n.d.) as “a process whereby public authorities seek to procure goods, services and works with a reduced environmental impact throughout their life cycle when compared to goods, services and works with the same primary function that would otherwise be procured.” By choosing goods and services with reduced environmental impacts, governments can contribute to sustainable consumption and production (Sustainable Development Goal 12) (United Nations Environment Programme, n.d.).

GPP functions as a strong incentive for businesses to develop more sustainable practices, products, and technologies, especially in sectors like infrastructure, where public buyers control a large share of the market. For example, GPP can encourage the development and widespread use of climate-friendly construction materials. Accelerating decarbonization in sectors like energy, buildings, and transport is particularly important because such infrastructure is directly or indirectly responsible for 79% of the global GHG emissions (Thacker et al., 2021).

In order to implement GPP, it is important to have both an enabling policy environment and tools, systems, and standards that can translate talk about GPP into GPP practice. On the former, countries across Europe have been creating the regulatory framework for GPP for over 20 years, guided and supported by the revised 2014 EU Procurement Directive. Notably, the EU Directive enables contracting authorities to assess bids on the most economically advantageous tender (MEAT) principle—meaning they can develop selection and award methods that consider not only price but also quality (e.g., a project’s carbon footprint). Using the MEAT principle, contracting authorities can make carbon management and reduction a competitive element of the bidding process. In addition, there is a suite of sector-specific directives from the EU that outline requirements for public procurement in member states—for example, the Energy Performance of Buildings Directive, the Energy Efficiency Directive, the Clean and Energy-Efficient Road Transport Vehicles Directive and others. Furthermore, other national and international policies and commitments on climate change mitigation, such as carbon reduction or neutrality targets, encourage low-carbon procurement, either explicitly or implicitly.



In this context, user-friendly tools that enable contracting authorities to systematically assess the environmental claims made by companies bidding for public contracts are essential. Some examples of GPP tools or instruments are green technical specifications for products and services, carbon calculators, life-cycle costing (LCC) methods, the CO<sub>2</sub> Performance Ladder (CO2PL), and the use of eco-labels and certifications that show compliance with environmental standards. These tools are important from a procurement perspective because they enable procurers to integrate environmental considerations in a fair and transparent way. They are also important from a sustainability and carbon management perspective, as they help ensure robust and traceable activities to address urgent environmental challenges.

Although many GPP tools are now available and regularly used in public procurement—as shown throughout this feasibility study—the climate change challenge looms large, and GPP is still not being deployed at the scale required. In this feasibility study, we explore what is required in different national contexts to make one specific tool—the CO2PL—succeed and enable procurement to reach its full potential in contributing to development goals and climate commitments.

## The Purpose of the Study

This feasibility study is part of a larger project called Accelerating Carbon Emissions Reduction Through the Power of Procurement, by Dissemination of the CO<sub>2</sub> Performance Ladder in Europe (CO2PLEU). It is a collaboration between the Foundation for Climate Friendly Procurement and Business (SKAO), the independent owner and manager of the CO2PL, and the International Institute for Sustainable Development (IISD), an independent think tank. The project is funded by the IKEA Foundation.

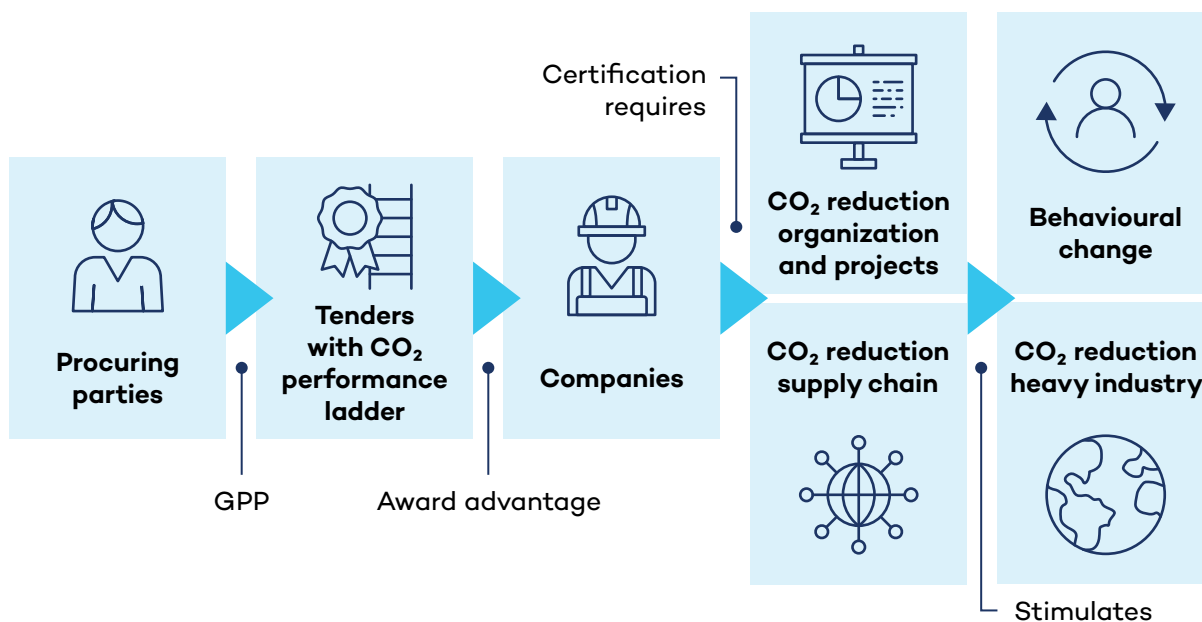
The CO2PL is both an instrument for GPP and a carbon management tool that helps organizations reduce their emissions (see [What Is the CO2PL?](#)). The CO2PL has been highly successful in the Netherlands since its creation in 2009, in terms of the number of companies certified but, more importantly, in terms of impact. Scientific research shows that organizations that are certified on the CO2PL reduce carbon emissions twice as fast as the Dutch average (Rietbergen et al., 2017). One of the main reasons that the instrument is used so extensively in the Netherlands is that it was originally a GPP tool, which harnessed the power of procurement to embed structural carbon reduction in organizations and supply chains (Schep et al., 2023). As a procurement tool, certified companies can obtain an award advantage in the tendering process. The CO2PL is mentioned as a good practice for sustainable procurement by the Organisation for Economic Co-operation and Development (OECD) (2015), the Intergovernmental Panel on Climate Change (2022), and the World Economic Forum (Mission Possible Partnership et al., 2022).

SKAO is a non-profit organization interested in exploring interest in and opportunities for the CO2PL as a procurement instrument in other countries. This project builds on the experience they have built up over time, on the success of the CO2PL as a procurement instrument in the Netherlands, and on the lessons learned through pilot projects in Belgium. SKAO aims to work collaboratively with public and private sector stakeholders to expand the use of the CO2PL and achieve meaningful carbon emission reductions.



Widespread procurement with the CO<sub>2</sub>PL can speed up the decarbonization of companies, projects, and supply chains. Ultimately, the project aims to accelerate carbon emission reductions in Europe through the power of GPP (see Figure 1).

**Figure 1.** Theory of change of the CO<sub>2</sub>PL



## What Is the CO<sub>2</sub>PL?

The CO<sub>2</sub>PL is both a carbon dioxide (CO<sub>2</sub>) management system and a green procurement tool. It was developed in 2009 in the Dutch railway sector and has been owned and managed by the SKAO since 2011.

### CO<sub>2</sub>PL as a Carbon Management System for Organizations

As a CO<sub>2</sub> management system, the CO<sub>2</sub>PL helps organizations structure internal business processes to save energy and reduce CO<sub>2</sub> emissions, communicate and prepare sustainability reports with a focus on CO<sub>2</sub>, identify opportunities for innovation and collaboration, and reduce costs associated with carbon emissions.

The instrument does not prescribe certain carbon emission thresholds for organizations. Instead, it is based on the Plan-Do-Check-Act cycle, focusing on continuous improvement for organizations working toward carbon reductions or carbon neutrality. Certified organizations need to continuously improve their insights into their carbon emissions, advance their carbon reduction measures, communicate about their activities, and cooperate within their sector and supply chain.

So far, over 5,000 organizations are certified, mainly—but not only—in the Netherlands and Belgium. They cover a wide range of sectors, such as infrastructure construction, operation and maintenance, energy production, furniture manufacturing, catering, and more. One





of the main motivations for companies to become certified on the CO2PL is that they can obtain an award advantage in public procurement processes, creating a strong economic incentive to invest in decarbonization (Schep et al., 2023). The fact that one certificate can be used for multiple tenders from contracting authorities using the CO2PL in procurement is also a strong selling point for businesses. Further, the CO2PL is proven to be effective in structural CO<sub>2</sub> reduction (Rietbergen et al., 2017; Schep et al., 2023), meaning it also helps organizations reduce costs—for example, from reductions in energy use. CO2PL certification helps companies demonstrate their sustainability efforts internally and externally, reinforcing their market position and improving products and services.

Small and medium-sized enterprises (SMEs) comprise more than 75% of all certificate holders in the Netherlands, showing that it is an instrument that is accessible to organizations of all sizes. SKAO estimates that about two thirds of the companies that win tenders with the CO2PL are SMEs. To make sure that the CO2PL is accessible to SMEs, they enjoy a number of exemptions at higher levels of the instrument. Research by CE Delft indicates that small companies often get certified on the CO2PL because it gives them insights into their emissions and helps them develop a roadmap for CO<sub>2</sub> emission reductions (Schep et al., 2023).

Certified organizations are often private companies, but public utilities and administrations in the Netherlands are increasingly getting certified on the CO2PL, too. For instance, all Dutch ministries have committed to getting certified on the CO2PL. The CO2PL helps public organizations fulfill their exemplary function by “practicing what they preach,” working toward their own reduction/carbon-neutral goals as well as helping to improve their insight on Scope 1, 2, and 3 emissions (which also increases the motivation to strengthen their action on GPP). In 2022, CE Delft examined the quantitative and qualitative effects of the implementation of the CO2PL in municipalities (Schep et al., 2022). The study shows that the surveyed municipalities reduced their CO<sub>2</sub> emissions by 23.9% in the period 2018 to 2020 (12.8% per year). Most reductions took place in Scope 1, with many municipalities observing a sharp reduction in CO<sub>2</sub> emissions in the year of certification or the following year.

A CO2PL certificate is available on five different levels. The ranking is based on an organization’s performance across four different categories: insight, reduction, transparency, and participation (described below). For certification for levels 1 to 3, organizations must take into account CO<sub>2</sub> emissions generated through their own operations only (Scope 1 and 2 emissions). To obtain certification at levels 4 or 5, organizations need to also consider Scope 3 emissions—those that are generated throughout the full value chain.

The four categories of requirements for the CO2PL are:

- **Insight:** Certified organizations are required to develop insights into their energy consumption. At the lower levels of the Ladder, they are required to map the sources and types of energy used (levels 1 and 2); at higher levels, they are required to quantify their energy use into CO<sub>2</sub>-equivalent emissions (Level 3) and report on Scope 1, 2, and 3 emissions (levels 4 and 5).
- **Reduction:** Certified organizations are required to develop ambitious CO<sub>2</sub> reduction plans. At the lower levels of the CO2PL, this involves investigating potential energy



savings options and establishing clear objectives (levels 1 and 2). At higher levels, they are required to develop a quantified action plan for their own organization (Level 3) and for Scope 1, 2, and 3 emissions (levels 4 and 5).

- **Transparency:** Certified organizations are required to communicate about their efforts and progress to reduce CO<sub>2</sub> emissions. At the lower levels, they are required to communicate internally (levels 1 and 2), and on the higher levels, they are also required to communicate externally (Level 3), initiate dialogue with government and non-governmental organizations (NGOs) (Level 4), and make public commitments to public and/or private carbon reduction programs (Level 5).
- **Participation:** Certified organizations are required to collaborate and share knowledge. At lower levels, they are required to be aware of and join initiatives in their sector (levels 1 and 2); at higher levels, they are required to become active participants in initiatives that aim to lower CO<sub>2</sub> emissions (levels 3 and 4) and, eventually, collaborate with the government or NGO efforts in their sector (Level 5).

Certified organizations are audited every year by an independent and accredited certifying institution. The third-party audit covers the four categories described above and ensures the effective implementation of the CO<sub>2</sub>PL. In addition, certified organizations are assessed on their continuous improvement from year to year (in line with the Plan-Do-Check-Act approach). The carbon management system of the CO<sub>2</sub>PL also includes several general requirements for certified organizations, such as an internal audit, a management review, and maintaining documentation related to the organization and projects.

Certified companies pay an annual contribution to SKAO to cover the costs of managing the instrument. This fee is on a sliding scale, with SMEs and companies under sole proprietorship paying EUR 68 annually in 2023, and the largest companies, with annual turnovers above EUR 500 million, paying roughly EUR 6,300 per year (the exact costs are available on SKAO's [website](#)). As the number of certified organizations and companies increases, these annual fees regularly decrease, since SKAO operates on a not-for-profit basis. In addition to the annual fees, certified companies need to cover the costs for the third-party audits and the costs associated with implementing their commitments to carbon reduction (e.g., investing in new technology or energy-saving devices, training, or electric vehicles, etc.). These costs are usually outweighed by savings from reduced energy use and the financial advantage gained in procurement processes.

## The CO<sub>2</sub>PL as a GPP Instrument

The CO<sub>2</sub>PL also functions as a GPP tool and has been used in public procurement processes in the Netherlands since 2010. While there is no legal obligation to use the CO<sub>2</sub>PL, over 300 Dutch public procurement agencies apply the CO<sub>2</sub>PL in their tendering processes across different purchasing categories, such as infrastructure, information communications and technology (ICT), food, facility services, landscaping, waste management, and health care. In the Netherlands, procuring authorities often combine the CO<sub>2</sub>PL with other quality and sustainability criteria, such as the calculation instrument [DuboCalc](#). Since 2019, the CO<sub>2</sub>PL is also being piloted in public procurement in Belgium.



The CO<sub>2</sub>PL has been applied as a voluntary award criterion in procurement processes to date. Award criteria are the criteria that a contracting authority uses to evaluate and select the best tender, subsequently awarding a contract to this bidder. These criteria must be established in advance by the contracting authority and must be conducive to fair competition. As briefly mentioned above, under the EU Procurement Directive, contracting authorities may use either a “lowest price” criterion or integrate other quality considerations as per the MEAT principle, applying criteria other than price in the selection of bids. In the case of carbon management as a quality consideration, the award stage allows procurers to give an advantage to companies that are working to reduce their carbon emissions. This can be through giving additional points or offering a fictitious discount on the registered bid price.

Contracting authorities use the CO<sub>2</sub>PL in tenders with the goal of providing a greater chance to companies that are working to reduce their carbon emissions to win public contracts. They do this by granting an award advantage at the award stage in the form of either additional points or a fictitious discount to bids that meet the requirements of the CO<sub>2</sub>PL. The higher a company or project performs on the Ladder, the higher the award advantage (e.g., Level 1 = 1% discount, Level 5 = 5% discount). The fictional example in Table 1 illustrates how using the CO<sub>2</sub>PL as an award criterion rewards certified companies that take ambitious climate action and helps them win public contracts. Procuring authorities are free to choose the size of the fictitious discount or bonus points.

**Table 1.** Example of award advantages that certified companies might receive in tenders

Company	Entry price	Ambition level on the CO <sub>2</sub> PL	Fictitious discount/ award advantage	Fictitious price considered when evaluating bids	Award of the contract and price paid
A	EUR 9.7 million	none	0%	EUR 9.7 million	No
B	EUR 10 million	Level 3	4%	EUR 9.6 million	No
C	EUR 10.3 million	Level 4	7%	EUR 9.58 million	Yes, EUR 10.3 million

Suppliers are not required to have CO<sub>2</sub>PL certification to bid for the public contract—its use is always optional. If they do seek to qualify for the optional award criterion, compliance with the requirements of the CO<sub>2</sub>PL can be demonstrated at either the organization level or the project level, granting flexibility to contractors. Furthermore, SKAO recommends that companies are not required to already have the submitted ambition level at the time of bidding. Instead, if a company wins the contract using the CO<sub>2</sub>PL, the submitted ambition level should become a contract performance clause, which the company must meet within 1 year of the start of the contract.

The contracting authorities are required by EU procurement law to make sure the award criterion is related to the subject matter of the contract and also to accept equivalent proof



that a company meets the requirements. More on how the CO2PL complies with these requirements can be found in the [Legal FAQs](#) document.

### Box 1. Further information about the CO2PL

You can find more information on the CO2PL website:  
<http://www.co2performanceladder.com>.

The [Procurement Guide 3.1](#) is the most recent version of the document that forms the core of the CO2PL as a tendering tool. There is also a [practical guide](#) for companies who want to get certified on the CO2PL, a CO2PL [handbook](#) that contains all the normative requirements of the CO2PL certification scheme, and a document that answers [frequently asked legal questions](#).

The CO2PL is also explained in the following videos:

- Animation: [Procurement with the CO2PL](#)
- Animation: [Obtaining a certificate on the CO2PL](#)
- Explainer video: [What is the CO2PL? The essentials in 4 minutes](#)
- Explainer video: [How to use the CO2PL? An explanation in 10 minutes](#)
- [Webinar](#) about the CO2PL and practical experiences from Belgium and the Netherlands

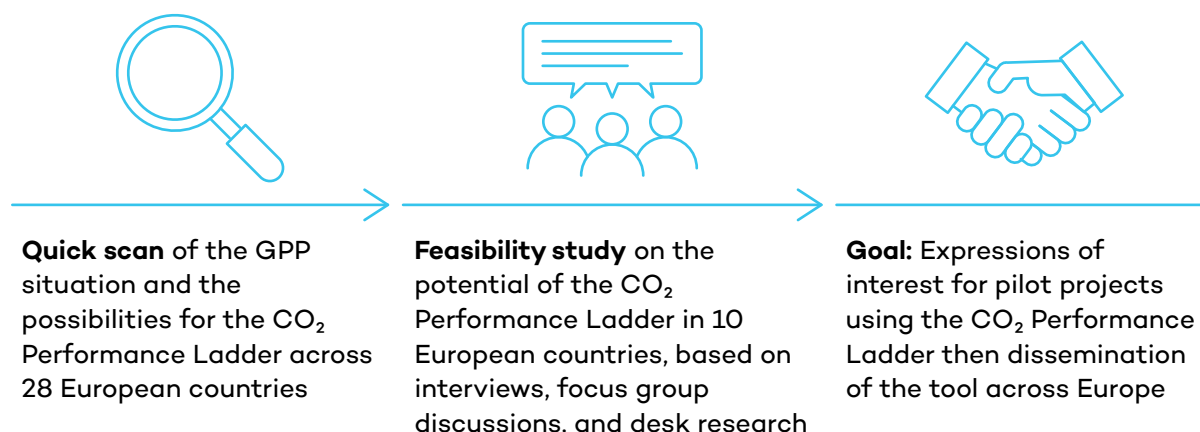
## Methodology

This feasibility study is part of a collaboration between IISD and the SKAO, the independent owner and manager of the CO2PL. IISD supported SKAO in identifying European countries and buyer networks that could potentially implement the CO2PL. This project started with a [quick scan](#) of 28 European countries and a selection of buyer networks; we narrowed down that list to 10 countries for the present feasibility study: **Austria, Denmark, Germany, Ireland, Italy, Poland, Slovenia, Spain, Sweden, and the United Kingdom.**

Looking in depth at these 10 countries, this feasibility study provides insights into their procurement contexts, presenting the main activities related to sustainable and low-carbon procurement and providing information about other GPP and low-carbon instruments that may already be used. The study provides targeted information for SKAO on the potential future of the CO2PL in Europe, offering an overview of key procurement stakeholders, explaining the challenges for rolling out the tool in the different countries, and presenting important opportunities and synergies. The objective of this report is to inform SKAO's efforts to scale up the CO2PL in Europe and, equally, to inform European authorities and stakeholders about the feasibility of using the CO2PL in their country. The overall aim is to inform relevant stakeholders on best practices to decarbonize economies using the power of procurement (see Figure 2).



**Figure 2.** Research process



The feasibility study is based on interviews with procurement experts in each of the 10 countries assessed. We reached out to over **85 stakeholders** and conducted hour-long semi-structured interviews with over 40 of them. The interviewees included public procurers and procurement policy-makers, academics, senior government officials, civil society representatives, and business leaders. A full list of the organizations consulted, as well as the interview guide, can be found in Appendices 1 and 2, respectively.

In addition to interviews, we analyzed secondary data such as EU GPP updates, technical reports, procurement policies, and thematic reviews cited throughout the report. The role that these secondary sources played in the country assessments varied based on how much data we were able to collect through interviews.

**Table 2.** Method overview

<b>Desktop research</b>	<b>Expert interviews</b>	<b>Coding and synthesis</b>
<ul style="list-style-type: none"> <li>• EU reports/GPP updates</li> <li>• Academic publications</li> <li>• Technical reviews</li> </ul>	40 one-hour-long interviews with contracting authorities and procurement experts	Organization of interview transcripts by theme

Moreover, IISD and SKAO organized focus group discussions in a selection of these 10 countries to present and consolidate the findings and discuss potential ways for piloting the CO2PL. The focus group discussions with experts took place in Italy, Ireland, the United Kingdom, and Denmark in the autumn of 2022 and winter of 2023. Ultimately, the goal of these discussions was to secure expressions of interest for undertaking pilot projects with the CO2PL in the next phase of the project, starting in spring 2023.

Importantly, the findings of this feasibility study should not be used to rank countries' efforts on GPP, nor should they be considered comprehensive. The focus of the research is on capturing the status of GPP in the 10 countries, and low-carbon procurement in particular, in order to identify potential synergies for the CO2PL to be scaled up in Europe.



## Box 2. Green or sustainable public procurement (SPP)?

According to the European Commission, **SPP** is “a process by which public authorities seek to achieve the appropriate balance between the three pillars of sustainable development—economic, social and environmental —when procuring goods, services or works at all stages of the project” (European Commission, n.d.).

**GPP** is a subset of SPP that focuses on reducing the environmental impact of goods, services, and infrastructure purchased throughout their life cycle. Many public authorities implement GPP as part of a broader approach to sustainability in their purchasing, which also addresses economic and social aspects.

**Low-carbon procurement** is a subset of GPP, describing efforts to procure goods, works, and services with lower carbon footprints over their life cycle.

In this report, the terms SPP and GPP are used interchangeably. This is because the priorities and common terms varied across the countries that were studied. Some countries deliberately aim to advance many social, environmental, and economic objectives through procurement and thus refer to it as SPP, while other countries focus their efforts on reducing environmental impacts and usually use the term GPP.

## Structure of the Feasibility Study

This study presents the findings for 10 European countries: Austria, Denmark, Germany, Ireland, Italy, Poland, Slovenia, Spain, Sweden, and the United Kingdom. Each country chapter has the same structure and covers the following information:

- Sustainable Public Procurement
  - Priorities and activities
  - Use of tools, instruments, and labels
- Low-carbon procurement
  - Carbon profile and reduction objectives
  - Low-carbon procurement in goods and services
  - Low-carbon procurement in infrastructure
  - Carbon data collection and monitoring
- Potential for the CO<sub>2</sub>PL
  - Main stakeholders
  - Challenges for the use of the CO<sub>2</sub>PL
  - Opportunities for the use of the CO<sub>2</sub>PL

The conclusion section synthesizes some of the main cross-cutting observations and provides recommendations to SKAO for scaling up the CO<sub>2</sub>PL in Europe.

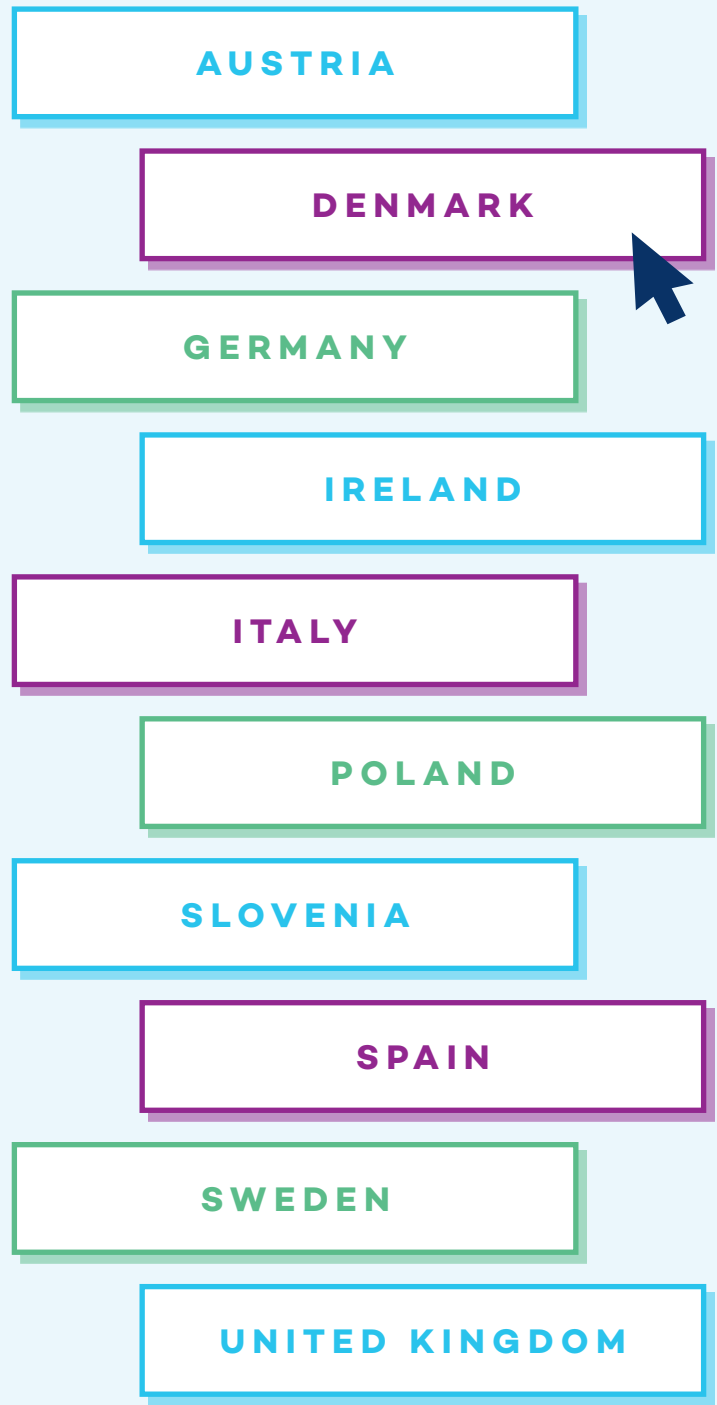


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See how the CO<sub>2</sub> Performance Ladder can be implemented in...







# 1.0 Austria





## 1.1 Key Observations

- Procuring authorities in Austria have advanced experience with sustainable procurement and use diverse instruments, such as environmental management systems (EMSs), eco-labels, and to a lesser extent, carbon calculators.
- Procurement policies, technical specifications, and award criteria include various aspects of sustainability, with a strong focus on fostering a circular economy.
- The frequent use of sustainable award criteria and EMSs creates an enabling environment for the CO<sub>2</sub>PL.

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## 1.2 Sustainable Public Procurement

### 1.2.1 Priorities and Activities

SPP in Austria aims to consider sustainability holistically, minimizing environmental and climate impacts while maximizing economic and social benefits. Prominent themes are creating a circular economy, sustainable food and farming, energy efficiency, and avoiding hazardous substances. Carbon emissions are increasingly considered in procurement but represent only one aspect of sustainability among many others.

Austria's [SPP action plan](#) (Aktionsplan für nachhaltige öffentliche Beschaffung, or naBe for short) forms the federal backbone of SPP efforts in the country. On July 11, 2010, the Austrian government decided by resolution of the Council of Ministers to develop an Austrian Action Plan on Sustainable Public Procurement, thus making the decision to promote sustainability in its three core dimensions: environmental, social, and economic. On June 23, 2021, the federal government adopted the updated naBe action plan, including the naBe core criteria. The naBe plan includes SPP criteria for 16 product categories, including vehicles, civil engineering, and buildings (Bundesministerium für Klimaschutz et al., 2021).

Federal public procurers such as all federal ministries, the central purchasing body (Bundesbeschaffung [BBG]), and the federal real estate company (Bundesimmobiliengesellschaft [BIG]) must take the naBe action plan into account in a binding manner, using the criteria for federal ministries. To steer its implementation, the ministries self-committed via directives in the departments and named contact persons for that matter. All other public entities, which are subject to federal procurement law, like federal states, cities, municipalities, the railway group (ÖBB), and the roads agency (ASFINAG), are advised to use the criteria as well.

BBG follows strategic procurement objectives like promoting SMEs; the economic, ecological, and social sustainability facets of sustainability; and innovation and regionality in an international context in their procurement processes. BBG is not only the host of the naBe platform but also offers various solutions for sustainable procurement, including an environmentally friendly product range and an e-shop where solutions with a contribution to





climate protection can be found easily. To help procurers make sustainable choices, sustainable contracts, and products in BBG's e-shop are highlighted with a naBe sustainability logo.

Based on their own SPP initiatives, many regional governments and municipalities in Austria have several years of experience integrating social and environmental considerations into their procurement. For example, all procurements in Vienna need to comply with the city's ÖkoKauf SPP criteria.

## 1.2.2 Use of Tools, Instruments, and Labels

The naBe SPP action plan includes examples of award criteria, technical specifications, and contract terms for each of its 16 product categories. The naBe plan is meant to provide a harmonized set of criteria based on regional GPP efforts and international standards.

For several product categories, the naBe plan mandates or suggests EMSs as selection criteria or as award criteria. It also promotes the use of LCC, which so far remains limited in Austria. Eco-labels and certificates are often applied in German procurement and form a central part of many naBe criteria. Interviewees underlined that many GPP tools are available but that procuring authorities need more knowledge and capacity building to mainstream the use of such tools.

## 1.3 Low-Carbon Procurement

### 1.3.1 Carbon Profile and Reduction Objectives

Austria aims to reach net-zero—reducing emissions as much as possible and offsetting any remaining emissions—by 2040 and reduce emissions by 40% by 2030. The naBe plan explicitly refers to sustainable procurement as a lever for climate change mitigation. The national energy and climate plan, in turn, includes public procurement measures—for example, related to LCC (Bundesministerium für Nachhaltigkeit und Tourismus, 2019).

In 2015, the more than 7,700 public entities in Austria procured goods, works, and services worth EUR 61 billion, equivalent to 18% of the GDP (ANKÖ, n.d.). About half of the tenders and contract volume above EU thresholds were in construction, underlining the large purchasing power and influence of public procurement in this field.

### 1.3.2 In Goods and Services

Carbon emissions are sometimes considered in the procurement of goods and services. Notably, the naBe criteria mandate the purchase of certified electricity from renewable sources. The electricity needs to fulfill the strict requirements of the Austrian eco-label. Federal ministries must already entirely procure electricity that meets these criteria, while other federal procurement bodies need to steadily increase their share of this green electricity to reach 100% in 2030.

The naBe plan proposes some specific actions related to carbon emissions. It suggests using reductions in transport-related GHG emissions as award criteria for procuring textile services.





It also proposes including an award advantage for vehicles with lower carbon emissions than required in the technical specifications and has mandatory technical specifications across a range of product groups—for example, for graphic paper, the naBe plan includes mandatory technical specifications that procured paper must have a Paper Profile certificate and must not emit more than 1,100 kg of CO<sub>2</sub> per tonne of paper. Paper Profile<sup>1</sup> is an Environmental Product Declaration (EPD) scheme, and declarations include information on CO<sub>2</sub> emissions from burning fossil fuels.

The federal administration aims to lead by example to meet Austria's net-zero target by 2040. An action plan for a carbon-neutral federal administration by 2040 is being prepared and will come into force in 2023 (GPP Advisory Group, 2022). It will outline how emission reductions will be achieved through building renovations; the procurement of zero-emission vehicles and organic, seasonal food; and the use of EMSs in the public procurement process.

### 1.3.4 In Infrastructure

The naBe criteria for civil engineering refer to recycled materials, Eco-Management and Audit Schemes (EMAS), and transport-related emissions. For example, bituminous-bound surface, binder, and base layers must consist of at least 10 % recycled asphalt. In addition to this mandatory technical specification, the contracting authority may provide an award advantage for companies with EMAS or ISO 14001 and for the increased use of recycled material for asphalt and concrete. About 1,300 organizations in Austria have an ISO-certified environmental management system in place (ISO, 2022), and about 270 organizations are EMAS certified. Finally, the naBe plan provides a formula for considering transport-related GHG emissions as an award criterion.

All public building projects (such as office buildings and schools) need to meet the “klimaaktiv” standard silver level and prioritize energy efficiency and the use of low-emission building materials. The criteria for low-emission building materials harmonize several requirements of local SPP frontrunners, such as ÖkoKauf (Vienna), Nachhaltig:Bauen in der Gemeinde (Voralberg), and N:Check – Nachhaltiges Beschaffungsservice (Lower Austria). The optional naBe criteria in this category refer to award criteria for EMAS, recycled content, and GHG emissions from transportation. The mandatory technical specifications require building materials to comply with certain thresholds of Oekoindex, a life-cycle assessment tool considering global warming potential, acidification, and non-renewable primary energy content. Oekoindex is a mandatory requirement in the Austrian building certification scheme klimaaktiv but can also be used as a stand-alone life-cycle analysis (LCA) criterion in procurement (European Commission Directorate-General for Environment, 2021).

In addition to the naBe, Austria's circular economy strategy aims to make use of some criteria mandatory for all authorities (Bundesministerium für Klimaschutz, Umwelt, Energie, Mobilität, Innovation und Technologie, 2022). In the strategy, public procurement is identified as a means for market creation for circular products and services, especially in construction

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<sup>1</sup> Paper Profile was developed as an EPD scheme but according to interviewees, it may not meet the requirements of the International Organization for Standardization (ISO) Standard 14025 for EPDs. Information about Paper Profile is available here: <https://paperprofile.com/>





and infrastructure (GPP Advisory Group, 2022). As a priority measure, the circular economy strategy mandates that all public procurers use the naBe criteria for procuring public buildings and civil engineering, and it proposes the application of these criteria in private projects.

One instrument for infrastructure procurement in Austria that stands out is the Austrian railway's (ÖBB's) "TCO CO<sub>2</sub>" tool, which was developed by the Graz University of Technology. The tool monetizes the environmental impacts of carbon emissions from production, construction, and operation (necessary data comes from EPDs) and thus allows for adding the cost of carbon emissions to the calculation of the total cost of ownership (TCO) (Landgraf & Schirmer, 2021). ÖBB applies TCO CO<sub>2</sub> in all major procurements, and aims to further develop the tool before considering potential alternatives. According to ÖBB, market players showed a "fundamental willingness to calculate CO<sub>2</sub> levies or to include environmental costs in the awarding of public contracts" (Landgraf & Schirmer, 2021).

### 1.3.5 Carbon Data Collection/Monitoring

The naBe action plan envisages ongoing monitoring and evaluation of the usage of the mandatory criteria. Currently, detailed SPP monitoring and the collection of emission-related data are not common in Austria. A comprehensive monitoring system for central procurement bodies is under development (GPP Advisory Group, 2022) and will start in 2023. It will be based on the naBe criteria, including environmental impacts and carbon emissions. Interviewees underline that collecting carbon-related data and monitoring SPP—and compliance on SPP more generally—represents a major challenge for procurers in Austria because of data management (or a lack thereof).

## 1.4 Potential for CO<sub>2</sub>PL

### 1.4.1 Main Stakeholders

Austria's central purchasing body (BBG) procures goods and services, hosts the naBe SPP platform, and represents a main SPP stakeholder. While BBG could theoretically apply the CO<sub>2</sub>PL, interviewees are cautious because such innovation would require backing from the diverse authorities for whom BBG provides procurement services. Interviewees repeatedly recommended ÖBB (rail), ASFINAG (roads), and BIG (real estate) as major procurers of public works who could potentially implement the CO<sub>2</sub>PL. In 2020, BIG won the Procura+ award for outstanding innovation procurement in ICT (Procura+ network, n.d.). In the same year, BBG was a runner-up for the Procura+ award for the procurement initiative of the year and participated in the GPP 2020 project about procurement for a low-carbon economy.

The Ministry for Climate, Environment, Energy, Mobility, Innovation and Technology (BMK) manages the Austrian eco-label (Österreichisches Umweltzeichen) and supervises the use of EMAS in Austria. Their team for circular economy and labelling is therefore considered an important national stakeholder for exploring the use of the CO<sub>2</sub>PL.

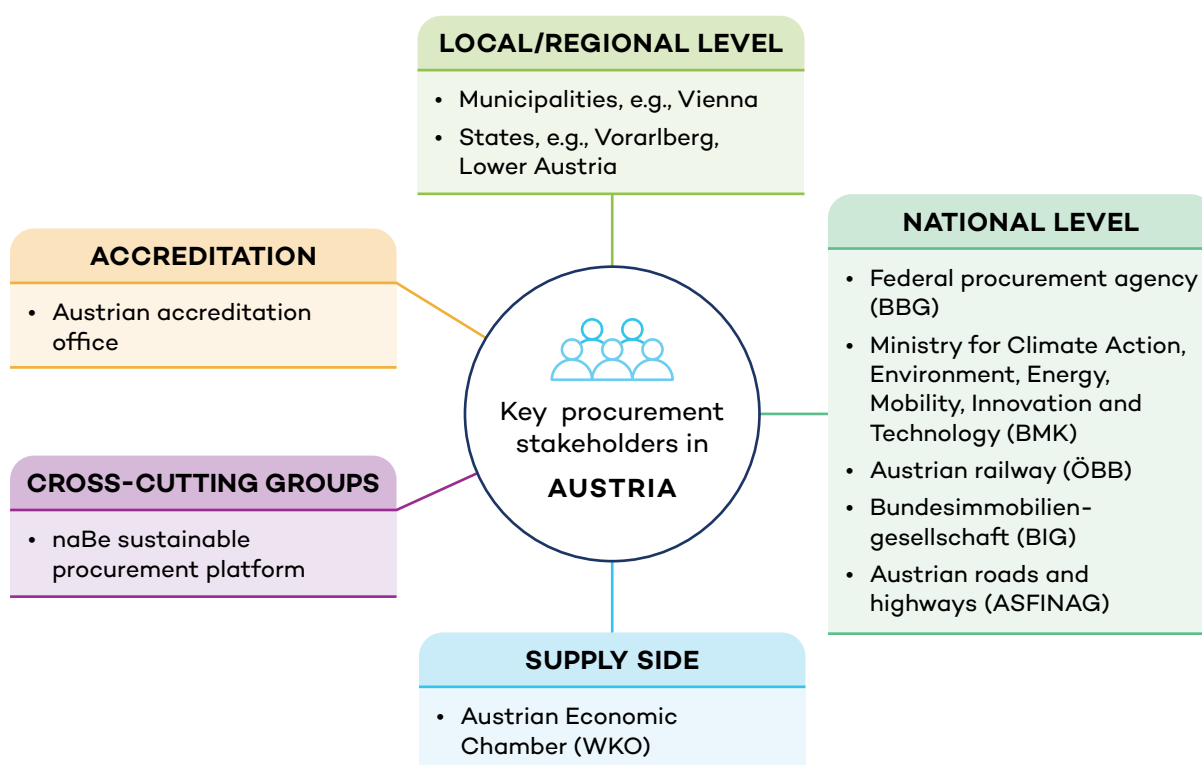




Many municipalities and regions in Austria have many years of experience with GPP and ambitious plans going forward. Especially larger municipalities, such as Vienna, and larger authorities with extensive GPP capacity could be promising partners for piloting the CO<sub>2</sub>PL.

Other relevant stakeholders for implementing the CO<sub>2</sub>PL could be the Austrian accreditation office, which is part of the federal ministry of work and economy (BMAW), and the Austrian Economic Chamber (WKO).

**Figure 3.** Key procurement stakeholders in Austria



### 1.4.2 Challenges for the Use of the CO<sub>2</sub>PL

Despite considerable achievements in integrating sustainability considerations into procurement, interviewees shared that there are still some prevailing challenges. For one thing, including social and environmental criteria in tenders is often perceived as an additional burden for procurers. Many procuring authorities assume there will be higher costs for procuring sustainably. In addition, interviewees expressed a desire to focus on tools that address multiple environmental impacts—not just carbon emissions.

These concerns are exacerbated by capacity constraints in procuring authorities, especially in smaller entities. Importantly, interviewees called for increased capacity building and knowledge sharing to empower all procuring parties to systemically use SPP tools and appreciate the value of buying green. Political will and leadership are also needed to shift mindsets away from focusing on the upfront price to considering LCC.





Another potential barrier to using the CO<sub>2</sub>PL in Austria is related to the need for legal certainty and confidence in the instrument. Procuring authorities and policy-makers are hesitant to apply the CO<sub>2</sub>PL (or other new tools) unless they clearly understand how it works in practice and how it adds value to procurement processes. However, compared to other countries included in this study, contracting authorities in Austria frequently use environmental and social award criteria to reward the sustainability performance of bids. They voiced fewer concerns about the SPP criteria's links to the subject matter.

Finally, interviewees also voiced concerns about ensuring the compliance of companies with the CO<sub>2</sub>PL, which emphasizes the importance of the third-party audits and financial penalties for non-compliance that are central elements of the CO<sub>2</sub>PL. The Austrian procurement experts also underlined that implementing the tool would require extensive training of both procurers and suppliers. While there is interest in learning about the tool, so far, no clear demand to explore its use further in Austria has been expressed.

### 1.4.3 Opportunities for the Use of the CO<sub>2</sub>PL

The main opportunity for the CO<sub>2</sub>PL in Austria is that procurers and the market are familiar with using award criteria as a tool for sustainable procurement. The naBe plan encourages applying sustainable award criteria—for example, related to EMAS or transport emissions—and procuring authorities have experience in using these provisions. Procuring authorities and suppliers are also experienced in using eco-labels and certification schemes, as these form a central part of the long-standing SPP efforts. This means that the design of the CO<sub>2</sub>PL as a voluntary award criterion fits well into the current SPP practice.

The CO<sub>2</sub>PL could also complement the existing criteria of the naBe plan and help to foster carbon reduction ambitions beyond the technical specifications and the use of more general EMSs.

**Table 3.** Summary of key challenges and opportunities for the CO<sub>2</sub>PL in Austria

Challenges	Opportunities
SPP “mindset”—it can still be perceived as a (financial) burden	Openness to using award criteria for SPP implementation
A desire for tools that address several environmental and social issues	Experience with labels and certifications
Capacity constraints and legal confidence to learn new approaches	Complement more product-specific naBe criteria





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# 2.0 Denmark





## 2.1 Key Observations

- Danish procurers have long-standing, frontrunner experience with GPP and maintain a culture of regular dialogue with suppliers, similar to the practice in the Netherlands.
- Reducing GHG emissions of public procurement is high on the agenda of procurers and policy-makers, who are also aiming to monitor emissions accurately.
- The implementation of Denmark's GPP strategy represents a clear path for piloting the CO<sub>2</sub>PL at the national level.

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## 2.2 Sustainable Public Procurement

### 2.2.1 Priorities and Activities

The Danish *Strategy for Green Public Procurement* sets the direction for a green transition of public procurement in three dimensions, which all focus on procurement areas with a large climate footprint at the national level (Ministry of Finance, 2020):

- The first dimension of the GPP strategy, Green Action Now, mandates the use of eco-labels and a TCO approach for multiple product categories.
- The second dimension, Long-Term Green Development, outlines the emission reduction target for public procurement, the roadmap for an emission-free public vehicle fleet by 2030, and mandatory eco-labelling for all procurements by 2030. It also includes increased capacity building and coordination on GPP. A final component of the long-term GPP dimension is the development of “green value-based” contract models that allow value-based remuneration of suppliers to provide incentives for innovation throughout the contract duration.
- The third dimension, Green Knowledge and Tools, involves the annual calculation of the climate footprint of procurement, a digital platform for procurement tools, and improved GPP guidelines.

At the local level, many municipalities in Denmark actively foster a green transition and SPP. For example, Aarhus's Go Green initiative aims to bring Denmark's second-largest city on track for net-zero by 2030. The related climate plan includes GPP as an important measure, and the city created an action team for procurement and tendering to build GPP competencies and integrate climate considerations into procurements. The Danish capital, Copenhagen, is another frontrunner in sustainable procurement. Together with the city of Odense, Copenhagen won the Procura+ Award in 2021 for using the Sustainable Development Goals (SDGs) as a guide for food procurement (Procura+ Network, n. d.). Aalborg, Copenhagen, and Kolding are members of the Procura+ Network.

The [Partnership for Green Public Procurement](#) is a voluntary community of municipalities, regions, and public organizations that want to buy sustainably. It has about 30 members who are responsible for about 30% of the procurement volume in Denmark (GPP Advisory Group,





2022). Members must follow the common procurement goals of the partnership, which include environmental requirements and are jointly developed and updated. They also need to have a publicly available procurement policy stating their GPP ambitions. The partnership is managed by the Secretariat for Green Procurement at the Danish Environmental Protection Agency and involves municipalities, as well as regional and national institutions. The partnership helps to keep GPP implementation high on the agenda of many procuring agencies in Denmark and serves as an example to inspire others.

## 2.2.2 The Use of Tools, Instruments, and Labels

Procuring authorities in Denmark often use eco-labels to include environmental and social considerations in their procurements. The two officially approved eco-labels in Denmark are the EU Ecolabel and the Nordic Swan Ecolabel. There are ambitions laid out in the 2020 GPP strategy to have all public procurement using eco-labels (or equivalent qualifications) by 2030. Only about 10 organizations are EMAS certified. In contrast, more than 900 organizations in Denmark have a certified ISO 14001 management system in place (ISO, 2020).

Procuring authorities also apply Excel-based tools for calculating the TCO of procurements, including the costs of carbon emissions. So far, the Danish Environmental Protection Agency has developed about 20 TCO tools for different goods, such as computers, lighting, and vehicles, which are publicly available through the online portal, [Den Ansvarlige Indkøber \(The Responsible Purchaser\)](#). The portal also provides GPP criteria (technical specifications and award criteria) that procuring authorities can copy into their tenders and offers guidance for implementing GPP.

Interviewees indicate Danish procurers intend to increasingly use EPDs and Product Environmental Footprints (PEFs) to access comparable data and evaluate the sustainability of their procurements. They also state that the Danish regions, which have a key role in the health sector, regularly use LCA tools. LCA tools also exist for the building sector and include the costs of carbon emissions. Yet, LCA tools are only suggested in a few Danish guidelines on GPP, and their use remains behind the popular application of TCO approaches.

## 2.3 Low-Carbon Procurement

### 2.3.1 Carbon Profile and Reduction Objectives

Denmark aims to reduce GHG emissions by 70% by 2030 and reach net-zero by 2050. These efforts are spearheaded by the Integrated National Energy and Climate Plan (Danish Ministry of Climate, Energy and Utilities, 2019) and ambitious activities on the local level as part of the DK2020 project.

To send clear signals to the market, Denmark introduced Europe's highest carbon tax in 2022 (Reuters, 2022). By 2030, some companies will have to pay DKK 1,125 per tonne of carbon emitted (EUR 151 per tonne). The CO<sub>2</sub> levy will consist of a DKK 375 fee in addition to the projected 2030 price of EU carbon permits of DKK 750. Companies not subject to the European Emission Trading System will pay a carbon tax of DKK 750.





### 2.3.2 In Goods and Services

Denmark's strategy for GPP has a strong climate focus and explicitly aims to contribute to reaching both the country's ambitious climate goals and the SDGs (Ministry of Finance, 2020). For example, the strategy recommends vegetarian meals in government canteens, mandates highly energy-efficient LED lighting, aims for an emission-free vehicle fleet in 2030, and will require all public procurement to be eco-labelled by 2030.

As part of the DK2020 project, Danish municipalities develop ambitious climate action plans that are in line with the Paris Agreement (Concito, n.d.). They receive technical help developing, updating, and adapting the climate work so that it lives up to [C40's Climate Action Planning Framework](#). About 100 municipalities have already completed their climate action plans or are currently developing them, which means that by 2023 all Danish municipalities will have concrete plans for climate adaptation and mitigation. Some of these plans can include provisions for low-carbon procurement—for example, in Aarhus, Frederikshavn, and Fredericia. Participation in DK2020 requires high-level commitment from the mayor and local council and thus demonstrates that climate action is high on the agenda in Denmark.

Previously, 71 out of 98 Danish municipalities participated in the Klimakommuner (climate municipalities) project, which ran from 2007 to 2021 (Danish Society for Nature Conservation, n.d.). In the project, the municipalities made agreements with the Danish Society for Nature Conservation to reduce their CO<sub>2</sub> emissions by at least 2% per year. The municipalities developed inventories of their carbon emissions, prepared climate action plans, and monitored their progress.

As an example of low-carbon procurement in the catering sector, the city of Aarhus required alternatives to plastic cups to have the lowest possible CO<sub>2</sub> footprint throughout the entire life cycle. Bidders had to submit validated information—for example, using the [Greenhouse Gas Protocol tools](#) (European Commission Directorate-General for Environment, 2021).

### 2.3.3 In Infrastructure

Copenhagen aims to be the world's first carbon-neutral capital city by 2025, though it was delayed at the time of writing this report due to funding issues for the city's carbon capture and storage plans (Szumski, 2022). The city's public procurement contributes to this goal through stricter requirements for transportation, promoting eco-labelling, fostering circularity, and using TCO tools in tenders. In the infrastructure sector, Copenhagen fosters the market availability and public procurement of fossil fuel-free and/or emission-free non-road motorized machinery. The city estimates that using emission-free machinery in public works could save up to 75,000 tonnes of CO<sub>2</sub> per year. Copenhagen implements these activities as part of the zero-emission construction sites working group of the [Big Buyers](#) initiative.

Copenhagen's 2010 *Sustainability in Construction and Civil Works* document contains binding standards for construction, remodelling, renovation projects, and civil works that involve the city. All of the city's climate and environmental requirements (including construction and





machinery) are set forth in Copenhagen's *Green Encyclopedia* for sustainable procurement (City of Copenhagen, 2022)

At the national level, the Danish building code mandates high-energy efficiency in new buildings (Sattrup, 2021). As decided in March 2021, new buildings larger than 1,000 m<sup>2</sup> cannot emit more than 12k g of CO<sub>2</sub> per m<sup>2</sup> per year by 2023. Further reduction targets will be defined regularly until 2030.

### 2.3.4 Carbon Data Collection/Monitoring

The Danish Agency for Public Finance and Management calculates the climate footprint as part of its green procurement strategy. The climate impact of public procurement for 2019 was estimated at 12 million tonnes of CO<sub>2</sub>e for purchases worth DKK 185 billion (about EUR 25 billion). The agency used the calculation model EXIOBASE (Okonomistyrrelsen, 2020). Experts explained that more disaggregated data on emissions related to public procurement is needed to analyze potential emission savings in specific spending categories (e.g., food procurement, infrastructure, etc.). Danish municipalities also collect data about their emissions, for instance, as part of DK2020.

## 2.4 Potential for CO<sub>2</sub>PL

### 2.4.1 Main Stakeholders

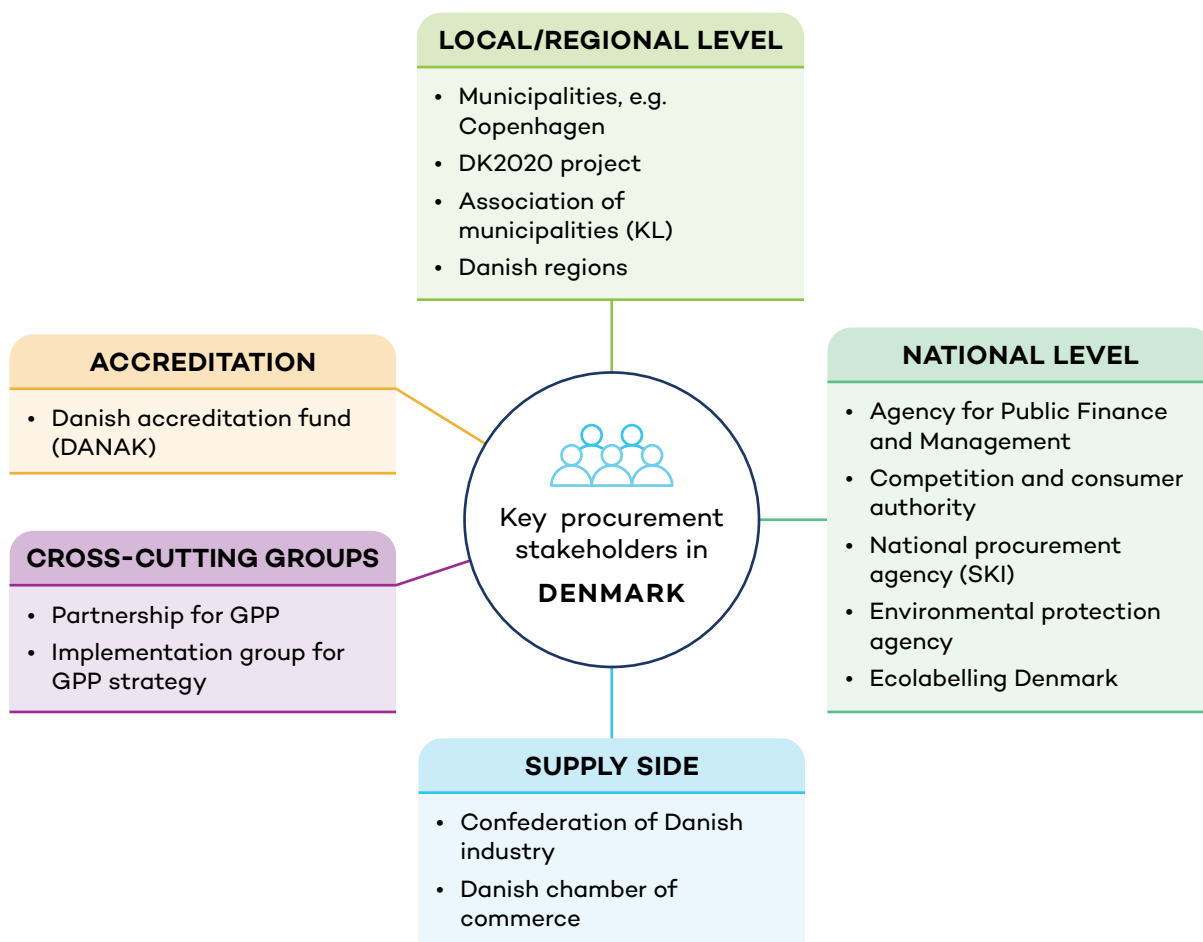
Danish regions and municipalities have many years of experience in GPP and collaborate in Partnership for GPP and the climate-focused DK2020 project. As such, we consider these local and regional frontrunners promising stakeholders for potential pilots in Denmark. In the private sector, the Confederation of Danish Industry and the Danish Chamber of Commerce are considered important organizations for creating buy-in from the supply side.

At the national level, the implementation group for the GPP strategy gathers key stakeholders around the table. Coordinated by the Agency for Public Finance and Management, the group implements the three dimensions and various initiatives of the GPP strategy. Official endorsement from the group for testing the CO<sub>2</sub>PL as part of the initiative on green value-based contracts can be a crucial factor for rolling out the instrument in Denmark. The implementation group consists of high-level representatives from various national institutions, such as ministries, the National Procurement Agency (Statens og Kommunernes Indkøbsservice [SKI]), the Competition and Consumer Authority, the Environmental Protection Agency, and Ecolabelling Denmark. The Environmental Protection Agency is a key actor in fostering GPP through guidance, tools, and managing the GPP forum and partnership and could also play a vital support role when piloting the CO<sub>2</sub>PL. In addition, the Danish Accreditation Fund (DANAK) could be important for rolling out the use of the instrument.





**Figure 4.** Key procurement stakeholders in Denmark



### 2.4.2 Challenges for the Use of the CO<sub>2</sub>PL

Interviewees voiced some legal concerns about using the CO<sub>2</sub>PL. Specifically, they underlined the need for a clear link between the procurement criteria and the subject matter of the contract. Danish authorities have experienced this issue in procurements where the use of eco-labels could not be justified because of the absence of a clear link to the subject matter. The legal concerns may differ among Danish ministries because of different interpretations of the EU Procurement Directive. Information materials, such as the FAQ about legal considerations related to the CO<sub>2</sub>PL, can help overcome this challenge.

A second challenge is to demonstrate how the CO<sub>2</sub>PL complements the already existing and widely used tools, such as the eco-labels and TCO approaches and the monitoring tools that track emissions from public procurement. In order to respond to local needs, it would be necessary to make sure that the CO<sub>2</sub>PL allows for collecting the emissions data that procurers need.

Interviews also highlighted that securing private sector support for the CO<sub>2</sub>PL will be key for implementing the tool in Denmark. For successfully piloting and rolling out the CO<sub>2</sub>PL, companies need to appreciate its added benefits and understand the practical requirements for getting certified.





### 2.4.3 Opportunities for the Use of the CO<sub>2</sub>PL

There is clear political intent to use EPDs and PEFs, as well as strategies for GPP, and political will to monitor carbon emissions related to public procurement. This provides many entry points for the CO<sub>2</sub>PL.

Moreover, stakeholder consultations in Denmark revealed a clear interest in piloting the CO<sub>2</sub>PL. The Agency for Public Finance and Management, for instance, is searching for instruments that foster sustainability performance during the contract implementation as part of the GPP pillar on green value-based contracts. As the commonly used eco-labels are rather static, the agency is open to testing various instruments and strengthening knowledge about available tools through an online platform.

The Agency for Public Finance and Management coordinates the implementation group for the national GPP strategy and is therefore well connected to the key stakeholders of a potential pilot, such as Ecolabelling Denmark, the SKI, and the Consumer and Competition Authority. With official endorsement from the implementation group, a CO<sub>2</sub>PL pilot project could be comprehensively implemented by these actors.

Another opportunity for the CO<sub>2</sub>PL lies in the open, dialogue-based relationships between procurers and suppliers. Dialogue with the supply side is an important element in many Danish procurements, and the experts consider such engagement key for successful GPP. The similarity to the Dutch, market-driven origins of the CO<sub>2</sub>PL can be an important success factor for using the tools in Denmark. Both procurers and suppliers have long-standing, advanced experience with GPP and eco-labelling schemes.

**Table 4.** Summary of key challenges and opportunities for the CO<sub>2</sub>PL in Denmark

Challenges	Opportunities
Risk aversion on legal aspects of public procurement, especially about the link to the subject matter	Political will and intent to keep GPP high on the agenda as a tool to deliver climate goals
Demand for methods to systematically quantify and monitor carbon emissions	Strong interest in a pilot at the national level and a well-connected, enabling stakeholder network
Need to complement existing tools	Regular dialogue between procurers and suppliers





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# 3.0 Germany





## 3.1 Key Observations

- Procuring authorities are searching for practical, easy-to-use tools to consider and reduce carbon emissions through their processes.
- Ensuring the legal certainty of GPP approaches, generally, and the use of the CO<sub>2</sub>PL, specifically, is a challenge to be addressed.
- Support from the supply side is key for success and will require close engagement and dialogue with suppliers.

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## 3.2 Sustainable Public Procurement

### 3.2.1 Priorities and Activities

Procurement is highly decentralized and organized locally, with about 30,000 procuring entities. Many SPP activities take place through the 16 federal states and in municipalities.

At the federal level, climate action is a priority, together with themes such as circularity, renewable resources, and clean mobility. The sustainability action plan (*Maßnahmenprogramm Nachhaltigkeit 2021*) sets forth GPP ambitions and measures for central authorities, including low-emission mobility, sustainable business travel and events, and energy-efficient buildings, to achieve carbon neutrality by 2030.

One of the key regulations that fosters GPP in Germany is the circular economy bill (Kreislaufwirtschaftsgesetz, 2012). Section 45 mandates that procuring entities on the federal level need to prefer goods and works that have been manufactured using production processes that save raw materials, energy, and water and are low in pollutants or waste; that are suitable for reuse and recycling; and can be easily repaired or lead to less waste.

The German city-states (Berlin, Hamburg, and Bremen) and several municipalities implement ambitious SPP activities. Several of them have created their own SPP competence centres to advance their SPP priorities, such as circularity, fair trade, and low-carbon emissions. For example, the cities of Stuttgart and Ludwigsburg created small competence centres with dedicated staff that supports procurers in integrating and evaluating sustainability in their tenders.

[Kompas Nachhaltigkeit](#) is an online SPP platform with knowledge materials, tools, and a database with GPP examples. It lists council resolutions related to SPP in about 50 municipalities and examples of tenders with GPP criteria from about 70 municipalities (Kompas Nachhaltigkeit, 2022). The examples span procurements in 16 categories, including textiles, food, and natural stones, but procurements of public works or infrastructure are not included. The federal Competence Centre for Sustainable Procurement recently compiled the relevant [regulations for GPP](#), such as the climate action bill, the circular economy bill, and the sustainability action plan (Kompetenzstelle für nachhaltige Beschaffung, 2022).





## 3.2.2 The Use of Tools, Instruments, Labels

Eco-labels are widely used in German procurement at both the federal and local levels. For example, the city of Stuttgart is committed to socially responsible, fair procurement and therefore requires all procurements to comply with the fundamental conventions of the International Labour Organization and, where possible, fair trade certification. The nearby city of Ludwigsburg prioritizes circularity and therefore aligns its procurement with the cradle-to-cradle standard (Spec, 2018). In addition, products need to adhere to the International Labour Organization's fundamental conventions.

The national sustainability action plan recommends using labels like [Blue Angel](#) and the [EU Ecolabel](#). Blue Angel is the eco-label of the German Federal Ministry for the Environment, Nature Conservation, Construction, and Reactor Safety (BMUV). It is issued by RAL gGmbH and can be found on over 12,000 environmentally friendly products and services, covering product groups such as furniture, cleaning products, electrical appliances, paper, vehicles, and various building materials (Institut Bauen und Umwelt e.V, n.d.). To navigate and compare the abundance of available labels, procuring authorities can consult the online platforms [Siegelklarheit](#) and [Kompass Nachhaltigkeit](#).

While the use of LCC is increasing, more than 50% of procuring entities in Germany still rarely or never apply such instruments (KOINNO, n.d.)—especially smaller procuring authorities with a limited capacity struggle to implement LCC.

EMs like the EU EMAS are often used for larger procurements. The federal sustainability action plan suggests using EMS as a pre-qualification criterion for sustainable events (Bundesregierung, 2021). The city of Stuttgart follows the same approach when tendering for larger contracts. More than 1,200 organizations with 2,400 (production) locations are currently EMAS certified in Germany (EMAS, 2022). In addition, about 10,000 companies are ISO 14001 certified. This makes Germany one of the countries where the standard is most widely adopted (Statista, 2022).

## 3.3 Low-Carbon Procurement

### 3.3.1 Carbon Profile and Reduction Objectives

Germany aims to be climate neutral by 2045, which is driving substantial climate mitigation efforts on the national and local levels (Bundes-Klimaschutzgesetz, 2019). By 2030, the goal is to reduce emissions by 65% compared to 1990. The federal climate action bill also underlines the role of the public sector in leading by example and sets the goal of making the federal administration climate neutral by 2030 (including in buildings, construction, and mobility). It demands that all public procurement of federal authorities give preference to the most climate-friendly products and services. In a current [research project](#), Öko-Institut is developing methodological guidance for integrating these climate aspects, as well as demands from the circular economy bill, into public procurement (Öko-Institut, n.d.). The coordination office for a climate-neutral federal administration is tasked with developing a GHG balance for the federal administration.





While the climate action bill sets the overarching reduction objectives, many states and cities have their own climate plans. Most German states have climate action bills or strategies with ambitious emission reduction targets that partly even exceed the national goals (Haufe Online Redaktion, 2022). For example, the city of Stuttgart aims to reach net-zero by 2035, Ludwigsburg is working toward net-zero by 2050, Bremen aims for emission reductions of 60% by 2030, and Berlin is working toward reducing emissions by 70% by 2030 and reaching net-zero by 2045.

### 3.3.2 In Goods and Services

Climate-friendly procurement is a prominent theme on the federal level in Germany because, as presented above, all central authorities need to be climate neutral by 2030. To implement this goal of the climate action bill (Klimaschutzgesetz), a general administrative provision ([AVV Klima](#)) mandates procuring low-carbon goods, services, and public works (Allgemeine Verwaltungsvorschrift zur Beschaffung klimafreundlicher Leistungen, n.d.). It orders federal procurement agencies to use LCC, including costs of carbon emissions, for goods, services, and public works. It also encourages the use of eco-labels (Blue Angel) and EMAS as pre-qualification criteria. The Competence Centre for Innovative Procurement (KOINNO) provides an [online toolbox](#) with GPP and LCC instruments and guidelines to support implementation.

At the local level, sustainable public procurement mainly manifests itself through the use of eco-labels, which do not exclusively focus on reducing carbon emissions. LCC, which includes the cost of carbon emissions, is not widely used. The city of Stuttgart participated in a small research project that estimated the emission reduction potential of GPP. Yet, the authority lacks the capacity to calculate emission reductions for all procurements and to translate emission information into tender requirements and rules for awarding contracts. The city of Ludwigsburg is currently developing carbon-related quality criteria that shall become part of the internal procurement regulation. The criteria aim to reward companies with strong climate action, with compliance being evaluated by the procuring authority.

### 3.3.3 In Infrastructure

When procuring public buildings, contracting authorities in Germany regularly use LCA instruments to consider the environmental impacts of these projects. The Bewertungssystem Nachhaltiges Bauen ([BNB](#)) assessment system for sustainable buildings considers the ecological quality of the building, including global warming potential and primary energy demand. The LCA instrument is based on the EN15978 standard. Starting in 2012, federal authorities must apply the instrument for building projects with a budget above EUR 2 million (European Commission Directorate-General for Environment, 2021). When using LCC, the tenders usually include these costs as award criteria.

The BNB system is very similar to the [DGNB building certification system](#), which is widely used in the German construction sector. To foster LCC, the federal building ministry also developed an online tool called [eLCA](#) and the [Ökobaudat](#) database with comprehensive data sets on building materials (including information on resource use and environmental impacts), as well as construction, transport, energy, and disposal processes.





The State of Berlin is a GPP frontrunner in terms of innovation in the construction sector—it issued new regulations to make sure that its public procurement contributes to the capital’s climate goals (Land Berlin, 2022). New public buildings need to reach the silver rating of the BNB sustainability assessment system. Moreover, the projects must exceed the BNB requirements by also using recycled concrete, developing a recycling concept for the project, and greening the building. Berlin’s civil works must follow the city’s zero-waste strategy—for example, by using recycled asphalt instead of natural stones. A study by Öko Institut estimated that Berlin could reduce the carbon emissions from procurement by nearly 50% through GPP while also cutting costs by nearly 4% (Gröger et al., 2015). According to the study, the largest potential for emission reductions lies in the procurement of renewable energy, building renovations, the recycling of commercial waste, and the refurbishment of streetlights.

The German railway conglomerate Deutsche Bahn is a major public buyer, and it uses [EcoVadis](#) for low-carbon procurement and encouraging sustainability in its supply chain. EcoVadis is the world’s largest provider of business sustainability ratings and also offers an online platform to track and share progress. The ratings are presented in a scorecard covering four categories (environment, ethics, labour and human rights, sustainable procurement), including GHG emissions. Deutsche Bahn uses EcoVadis assessments either as a pre-qualification criterion or as an evaluation criterion that involves a discount for certified bidders. Based on the experiences of using it for procuring infrastructure goods and services over the last 5 years, the railway company aims to further refine the use of EcoVadis. In a pilot project, Deutsche Bahn also calculated the carbon footprint of some goods, but researching the required details of carbon emissions data proved to be highly challenging.

The regulation of procurement of public works in Germany is separated from the framework that regulates the procurement of goods and services. Most interviewees from GPP Competence Centres were primarily working on goods and services and less on sustainable infrastructure. The main knowledge platform about sustainable procurement, [Kompass Nachhaltigkeit](#), presents GPP examples for 16 groups of goods and services, including natural stones but no other building materials or public works.

### 3.3.4 Carbon Data Collection/Monitoring

The latest procurement monitoring report estimates that public procurement amounts to EUR 300 billion annually, equivalent to 10 % of the GDP (Bundesministerium für Wirtschaft und Klimaschutz [BMWK], 2022a). An alternative estimate from the OECD (2021) is that the German public sector awarded contracts worth 18% of its GDP in 2020.

The national monitoring report about the German procurement system includes insights about GPP, for the year 2021, covering contracts worth EUR 24 billion (BMWK, 2022a). In total, procurements worth EUR 6 billion included sustainability criteria. Out of these procurements with sustainability criteria, 44 % of the contracts and about 18% of the volume were in the construction sector. Procurers used sustainability criteria in 18% of the tenders above EU thresholds, representing 30% of the procurement volume. Award criteria are only rarely applied for SPP in Germany, with just 4.4% of the larger tenders making use of environmental award criteria. Green technical specifications are more common, with such





criteria in about 11% of the tenders. For procurements below EU thresholds, about 9% of tenders included environmental criteria.

To improve data collection and monitoring, a new nationwide procurement statistics system was launched in 2020 (GPP Advisory Group, 2022). Procuring authorities from the federal, state, and local levels must submit information about all tenders above EUR 25,000, including the tender value, the type of procedure used, the award criteria that were applied, and sustainability aspects. The Federal Statistics Office is responsible for collecting and evaluating the data and setting up a web portal for sharing part of the data with the public. According to the first monitoring report covering the first half of 2021, 60% of public contracts were awarded based on the lowest price, and 10% considered both price and quality criteria (data gap in statistics) (BMWK, 2022b). In the first half of 2021, procuring entities at the local, state, and federal levels procured goods, works, and services worth EUR 53 billion.

Germany's sustainability action plan includes national-level monitoring of emissions of public buildings and the public fleet. To implement the goals of the Climate Action Bill and AVV Klima, the coordinating office for the climate-neutral federal administration works on tracking federal emissions to support achieving net-zero.

The cities of Stuttgart and Ludwigsburg both aim to develop their own monitoring systems for their SPP efforts. So far, the annual monitoring of Stuttgart's climate action plan only includes rough information about the use of green criteria in procurement.

Interviewees underlined that German procuring authorities have very little experience collecting and tracking carbon data. Even for experts, obtaining emissions data about production processes and comparing carbon data remain highly challenging.

## 3.4 Potential for CO<sub>2</sub>PL

### 3.4.1 Main Stakeholders

German municipalities, such as Dortmund, Ludwigsburg, and Stuttgart, are interested and have action plans on SPP in place that provide the opportunity for the CO<sub>2</sub>PL to be piloted. Experts from the city-states of Hamburg, Bremen, and Berlin were not available for interviews, but their ambitious SPP activities indicate that further efforts to make contact may be worthwhile. Two German procurement stakeholders are part of the Procura+ Network: the city of Regensburg and Freiburg's public transport operator.

In Germany, several competence centres bring together expertise for green, innovative, and fair procurement: the [KNB](#) competence centre for sustainable procurement, the [KOINNO](#) competence centre for innovative procurement, and the [SKEW](#) service office, which fosters fair and sustainable procurement. In addition, the federal environment agency (Umweltbundesamt) compiles guidelines and tools for GPP. These units provide information and training on sustainable procurement, and involving one or several of them in pilot projects could provide vital expert knowledge. On the federal level, the Ministry for Economic Affairs and Climate Action is responsible for procurement regulations and aims to foster sustainable,

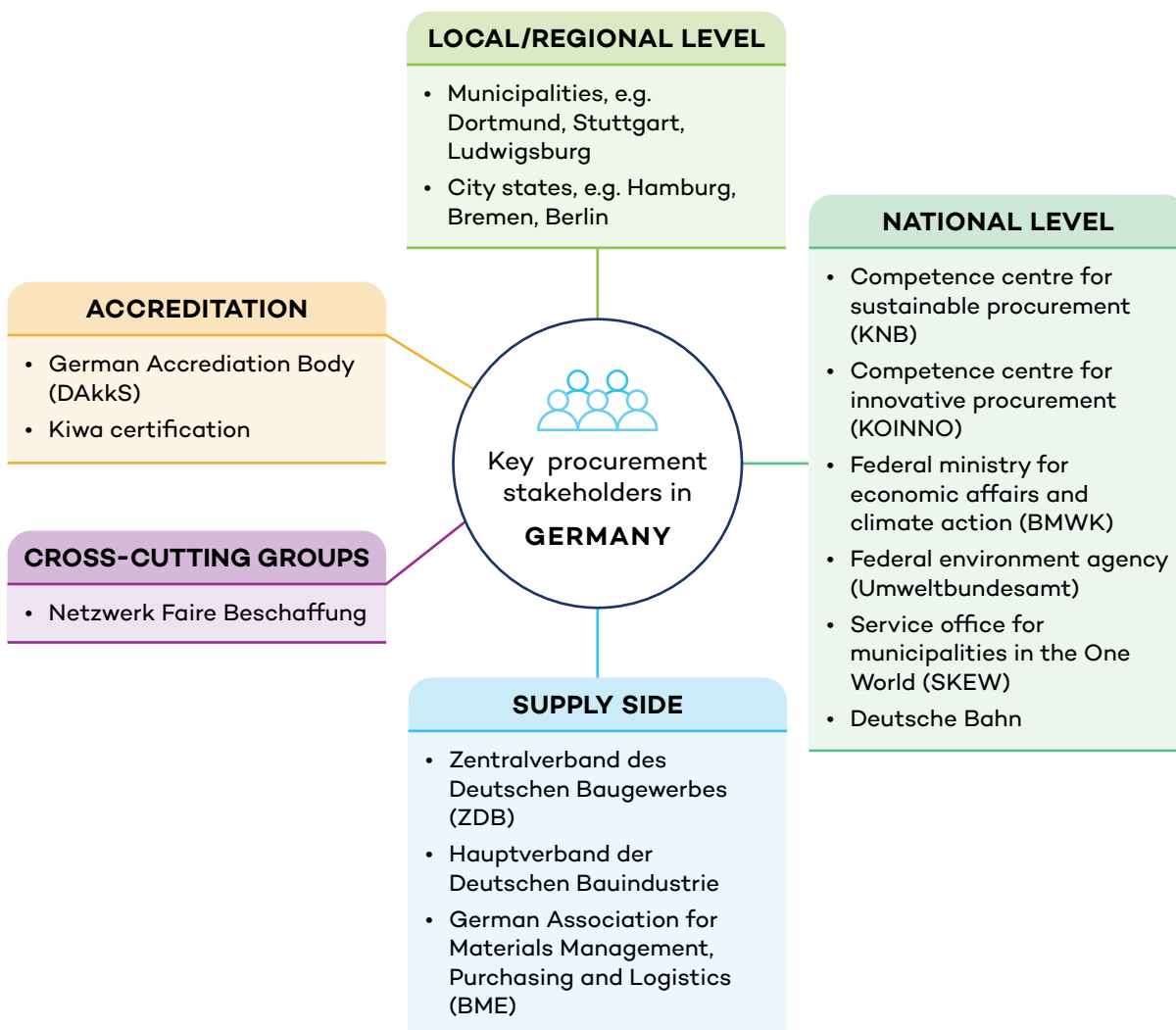




strategic procurement. The central purchasing body, Kaufhaus des Bundes, bundles the procurements of several federal agencies.

Contact with Deutsche Bahn indicated that the company is already far advanced in using the EcoVadis tool for sustainable procurement, and so currently does not have the need for other tools. Contact with other infrastructure and construction stakeholders has been limited, but it could be a worthwhile approach for exploring pilot opportunities in Germany. Relevant industry organizations could be the Zentralverband des Deutschen Baugewerbes (ZDB), the Hauptverband der Deutschen Bauindustrie (HDB), and the Federal Association for Materials Management, Purchasing and Logistics (BME). In addition, the German Accreditation Body (DAkkS) and certifying institutions like Kiwa can play an important role in implementing the CO<sub>2</sub>PL.

**Figure 5.** Key procurement stakeholders in Germany





### 3.4.2 Challenges for the Use of the CO2PL

Demonstrating the legal certainty of the tool in procurement processes represents the main challenge for using the CO2PL in Germany. Interviewed experts consider the present procurement legislation to be the main barrier to low-carbon procurement. In particular, they underline the practical difficulties of encouraging emission reductions in tenders while also ensuring a strong link with the subject matter of the contract (also see BMWK, 2021). Similarly, the use of sustainability criteria and eco-labels needs to be proportionate to the value and goals of procurement, which is considered a barrier to implementing GPP (BMWK, 2021). The procurement monitoring reports indicate that environmental award criteria are rarely used, which suggests that many procuring authorities might be unfamiliar with this way of using the CO2PL.

In their daily practice, procuring authorities also find it challenging to balance sustainability requirements and demand for the economical use of funds—for example, when fair trade products have higher purchase prices. Even though the legislation allows the consideration of environmental and other quality considerations in procurements, purchasing based on the lowest price is a practice that prevails.

Capacity constraints in procuring organizations are another challenge. Many procuring entities lack the staff and SPP skills to implement increasingly complex procurement procedures (BMWK, 2021). Piloting and implementing the CO2PL will require lead-time training for developing necessary structures and procedures within the procuring entities. Training and awareness raising on the supply side are also required. Once this initial need for capacity building is addressed, the CO2PL could unfold its benefits as a tool that is relatively easy to use for procurers and suppliers.

Preparing suppliers for the use of the CO2PL is particularly important because interviewees indicated that procuring authorities will hesitate to use the tool unless they are confident that economic operators will get certified and participate in tenders with the CO2PL. Currently, authorities already struggle to receive sufficient competitive bids (BMWK, 2021). They are cautious not to further restrict competition and/or burden suppliers. Interest and widespread uptake of the CO2PL on the supply side are therefore key factors for implementing the CO2PL in Germany. No interviews with German industry organizations were conducted for this study, so exploring and leveraging supply-side interest would be an important step for piloting the CO2PL in Germany.

Interviews also suggest that many SMEs find it challenging to use certification systems. Facing the costs of getting third-party certified, the smaller businesses sometimes prefer to participate in tenders using alternative, self-made evidence for meeting the criteria.

### 3.4.3 Opportunities for the Use of the CO2PL

The current momentum for climate-friendly procurement, low-carbon construction, and a circular economy represents a key opportunity for the CO2PL in Germany. Procurements at the federal level need to consider circularity aspects like energy use, the use of recycled content, or the reduction of waste. As companies and projects that use the CO2PL







systematically reduce their energy use and often prioritize recycling and/or reuse, the CO<sub>2</sub>PL could potentially be used to demonstrate compliance with the requirements of the circular economy bill.

There is demand for an easy-to-use tool that allows authorities to consider the carbon emissions of procurement without adding too much burden on the already capacity-constrained procurement agencies. The third-party verification of the CO<sub>2</sub>PL is particularly attractive to procurers, as it could reduce their burden to check whether bids fulfill the sustainability criteria. The CO<sub>2</sub>PL could empower more procurers to consider climate impacts without relying on GPP experts. There is interest from a German certifying organization (Kiwa) to support the audit of companies.

Many procuring entities at the federal, regional, and local levels have long-standing experience with SPP. There are many labels, certification schemes, and tools for sustainable procurement, as well as comprehensive institutional support. German procurement authorities, especially those with advanced GPP experience, are equipped to use environmental criteria as award criteria, which facilitates the use of the CO<sub>2</sub>PL as such a criterion. Ludwigsburg's activities of developing award criteria related to the climate mitigation efforts of suppliers underline that cities could be open to using the CO<sub>2</sub>PL. The German guidelines on sustainable procurement also recommend wider use of award criteria to drive sustainability impacts—for example, related to organic farming, fair trade, and GHG emissions. Furthermore, the process through which Deutsche Bahn uses EcoVadis as an evaluation criterion shows how a “bonus” system like the CO<sub>2</sub>PL can work well for big companies.

Finally, procuring authorities in Germany increasingly appreciate the benefits of market engagement and dialogue with suppliers to partly address the risk of implementing a new tool.

**Table 5.** Summary of key challenges and opportunities for the CO<sub>2</sub>PL in Germany

Challenges	Opportunities
Need for legal certainty	Momentum for circular and low-carbon construction and demand for tools
Capacity constraints in procuring authorities	Easy-to-use tool based on third-party certification
Supplier support for using the CO <sub>2</sub> PL	Experience with labels and certification schemes





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# 4.0 Ireland





## 4.1 Key Observations

- Net-zero commitments and the introduction of sectoral carbon budgets are driving demand for low-carbon public procurement tools. Circular economy and waste management legislation are driving broader GPP activity.
- There is promising stakeholder engagement with both contracting authorities interested in pilot projects and local NGOs to host and guide the CO2PL in Ireland.
- There is demand for capacity building on carbon management in the construction sector, particularly for SMEs, and for more information on how the CO2PL could support Irish industry transition to more sustainable practices.

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## 4.2 Sustainable Public Procurement

### 4.2.1 Priorities and Activities

Ireland is at a transition point on their SPP journey. To date, activity has taken place on a voluntary basis, guided by a National Public Procurement Policy Framework and several non-binding government “Circulars” related to the social and environmental aspects of procurement. Starting in 2023, however, all public procurement will need to incorporate green criteria, as set out in the 2020 Programme for Government.

In addition, in July 2022 the Circular Economy and Miscellaneous Provisions Act became national law (Irish National Parliament, 2022). The act is designed to encourage the recycling and reuse of materials by putting a levy on waste recovery and some single-use materials and by streamlining processes (reducing delays) for using waste materials. In the construction sector, for example, this will make it easier to use waste materials from demolition and reduce the need for the extraction of aggregates like rock, sand, and gravel for concrete. The Circular Economy and Miscellaneous Provisions Act 2022 explicitly mentions procurement as a strategy for implementation through the use of circular economy criteria (Article 7).

In terms of guidance material, in 2021 the Environmental Protection Agency (EPA) published the 2nd edition of *GPP Guidance for the Public Sector* (EPA, 2021). It provides context and practical approaches for implementing GPP in Ireland and goes into each of the 10 Priority GPP Sectors, for which dedicated GPP criteria have been developed (see Table 6). These criteria are based on the common EU criteria, with adaptations to reflect the Irish market and procurement practices.



**Table 6.** Irish GPP criteria in 10 priority sectors

Road transport vehicles and services
ICT products and services (including data centres)
Food and catering services
Cleaning products and services
Design, construction, and management of office buildings
Indoor and outdoor lighting
Heating equipment (including boilers, cogeneration, trigeneration and heat pumps)
Energy-related products (white goods/appliances, electronic displays, vacuum cleaners)
Paper products and printing services
Textile products and services (including uniforms and laundry services)

#### 4.2.2 Use of Tools, Instruments, and Labels

To facilitate the use of the GPP criteria listed above, in 2022 the Office of Government Procurement (OGP) launched the [GPP Criteria Search](#). This online search tool allows procurers to rapidly find, select, and download the GPP criteria relevant to a specific procurement (Government of Ireland, n.d.). This tool was developed in collaboration with the EPA and the Department of the Environment, Climate and Communications—a collaboration that leveraged financial support from the Public Service Innovation Fund. The tool is not meant to provide an exhaustive list of GPP criteria but rather strives to encourage the contracting authority to actively consider applying green criteria.

In selecting environmentally preferable goods, services and infrastructure procurers often rely on labels and certification systems such as the EU Energy Label, the EU Ecolabel, the Forest Stewardship Council (FSC), and the Programme for the Endorsement of Forest Certification (PEFC). ISO standards are used in procurement processes as selection criteria. According to the European Commission’s EMAS register, no Irish organization has such an environmental management system in place (European Commission, 2022). In contrast, there are 880 certificates for ISO 14001, covering 1,200 sites in Ireland (ISO 2021).

EPDs are gradually being introduced into more procurement processes in Ireland, specifically in infrastructure, with the objective of measuring and comparing the CO<sub>2</sub> impact of products and services.

In many cases, utilities might have their own sustainable procurement practices and tools in place. Transport Infrastructure Ireland (TII), for instance, has a sustainability implementation plan that is aligned with the SDGs and the European Green Deal. It strives to balance social, environmental, and economic sustainability in its work, with a specific focus area on procurement and supply chains.





## 4.3 Low-Carbon Procurement

### 4.3.1 Carbon Profile and Reduction Objectives

The Irish government is now on a legally binding path to net-zero emissions no later than 2050 and to a 51% reduction in emissions by the end of this decade.

An important development for implementing this net-zero goal is the new initiative to have sectoral carbon budgets, as mentioned above. The 2021 Climate Action and Low Carbon Development (Amendment) Bill introduced these 5-year carbon budgets into the Irish economy, which set national GHG emission ceilings per year, to be divided across sectors across the economy and reported annually. The sectors covered are energy; industrial processes; agriculture; land use, land use change, and forestry; and waste. In line with the Programme of Government, the commitment is to an average reduction of 7% in overall GHGs from 2021 to 2030 (a 51% reduction over the decade) and achieving net-zero emissions by 2050. Procurement is not mentioned explicitly as a means to reduce carbon emissions in the new bill, but the fact that the new carbon budget will have specific allowances per sector is expected to drive increased activity in low-carbon procurement.

In the coming years, municipalities will be required to develop their own climate action plans to support state ambitions regarding climate action. Recent research by the Local Government Management Agency shows that many have a good track record already, including through their procurement practices (Clarke & O'Donoghue Hynes, 2020).

### 4.3.2 In Goods and Services

Low-carbon procurement in goods and services mostly concerns the energy-related criteria within the minimum GPP criteria in the 10 priority sectors, which include appliances, heating, ICT, and the management of office buildings. There are also discussions on lowering emissions from the procurement of food and catering services. Agriculture in Ireland contributes 35% of national GHG emissions—the highest share of emissions from agriculture across the EU. There are current debates surrounding to what extent farms can and should be required to implement decarbonization practices.

### 4.3.3 In Infrastructure

In infrastructure, most research and activity on reducing carbon emissions addresses the built environment. Notably, in May 2022, the Irish Green Building Council launched a draft roadmap to decarbonize Ireland's built environment (funded by the IKEA Foundation and the Laudes Foundation), which has just gone through a public consultation period. It shows that construction and the built environment are responsible for 37% of Ireland's GHG emissions (23% is operational, and 14% is embedded carbon in materials), and it provides scenarios and clear recommendations for governments (Irish Green Building Council, 2022).

It is expected that in the near future, the Irish GPP criteria related to buildings will explicitly incorporate the EU Level(s) framework to ensure all environmental impacts across the life cycle of built assets are addressed in a consistent and measurable way (EPA, 2021). To date,





many indicators of the EU Level(s) framework are already part of the minimum requirements for buildings, and stakeholders aim to consider embodied carbon emissions more consistently in the future.

In addition, as per the EU Energy Performance of Buildings Directive, all new buildings must meet nearly zero energy building standards; for renovations, energy rating standards must be achieved too. Finally, building construction will aim to increasingly incorporate the circular economy approach, with a focus on the use of recycled materials and the installation of low-carbon energy sources.

Decarbonization is a priority for the major utilities in Ireland. TII, for instance, has a climate adaptation strategy and circular economy policy in place and has developed several in-house tools to support decarbonization:

- The Carbon Assessment Tool is used for roads and rail. It covers Scope 1–3 emissions, focusing on Scope 3 (embodied carbon) and uses EPDs to generate calculations. The tool is designed to be used in procurement processes, as companies with more ambitious carbon reductions get awarded additional points in the bid evaluation process. It is a web app tool using the “R” environment and is aligned with PAS 2080.
- The Road Emissions Tool calculates vehicle fleet emissions. TII asks contractors to use it when calculating emissions when developing and submitting projects.
- EMAS and ISO are also sometimes used as qualification criteria for bidders—for example, they have a requirement that contractors or operators are ISO 50001 accredited on energy efficiency.
- TII is part of a decarbonization working group with the Conference for European Directors of Roads.

The Energy Supply Board (ESB) is a state-owned utility that procures a range of goods and services for power generation and transmission across Ireland. The ESB 2040 Strategy sets the goal of achieving net-zero by 2040 by investing in renewables, storage, reinforced networks, and consumer electrification. ESB has made transparency and environmental, social, and governance reporting a priority in recent years, and they engage with the Carbon Disclosure Project, Global Reporting Initiative, Sustainalytics and others. For larger projects, ESB uses LCC tools and specific assessments on fuel efficiency; it conducts spend analyses to calculate their carbon impacts. At the time of research, ESB was looking for tried and trusted approaches to add to its toolbox—particularly for procurement—in order to measure, track, and reduce carbon emissions in line with its net-zero policy.

#### 4.3.4 Carbon Data Collection/Monitoring

In 2019, public authorities in Ireland spent over EUR 12 billion on public contracts for goods, works, and services. Moreover, under the National Development Plan set out in 2018, EUR 116 billion in capital works expenditure is being rolled out until 2030 in order to update infrastructure and prepare for future growth.

Monitoring the carbon impact of new infrastructure will come, in part, through monitoring requirements under the Climate Action Plan. The Climate Change Advisory Council develops





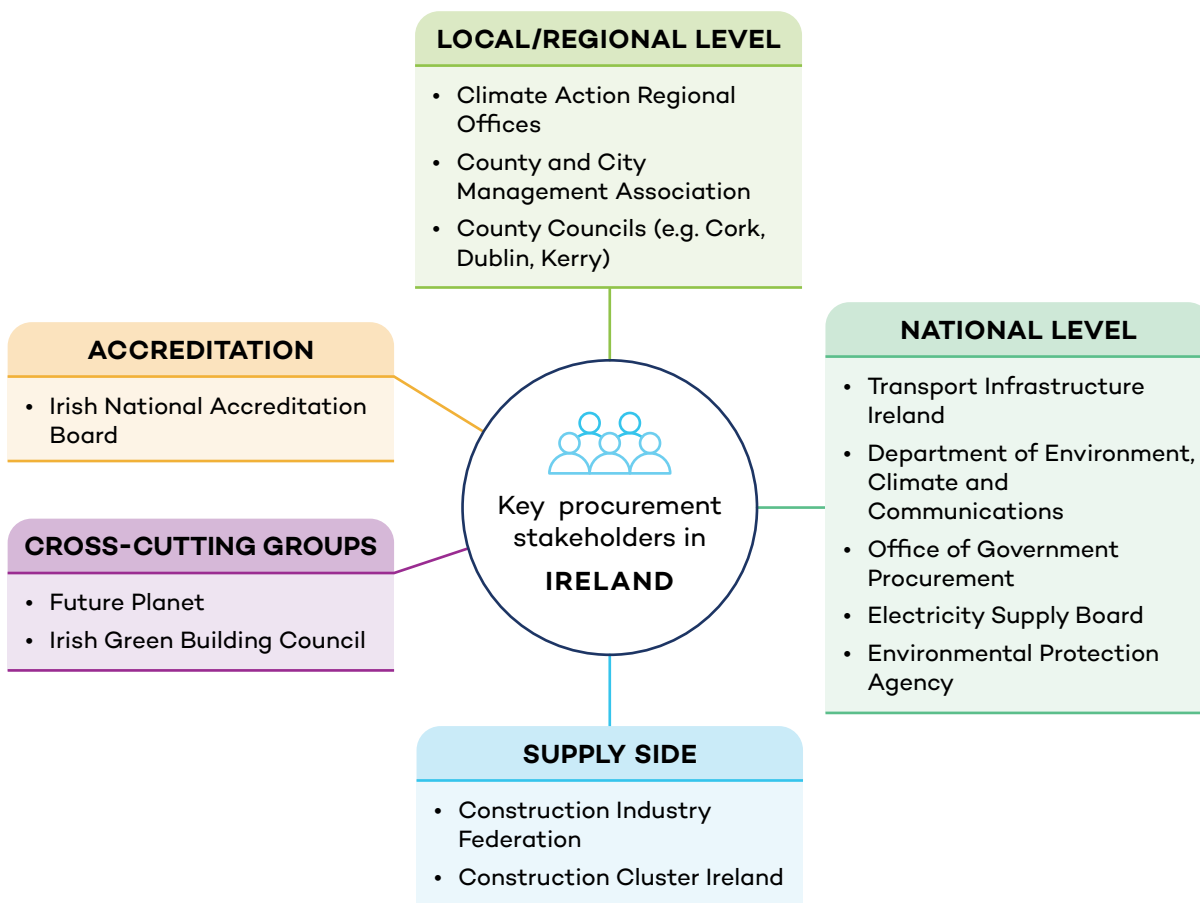


the budgets and monitors progress and will be required to monitor the 5-year carbon budgets. For GPP specifically, the 2019 Climate Action Plan (and 2021 amendment) assigned lead responsibility to the EPA for measuring and reporting on GPP on an annual basis, starting with the 2020 calendar year. The EPA published its first report on GPP for the year 2020, collating and analyzing data from across government departments (EPA, 2022).

## 4.4 Potential for CO<sub>2</sub>PL

The Irish Green Building Council is taking a leading role in research and action toward discussions about decarbonization in the built environment and works with the construction sector players as well as public authorities. The Irish Green Building Council could provide local support for potential pilot projects and disseminate knowledge. Another local champion for the CO<sub>2</sub>PL in Ireland could be the Future Planet consultancy, which has expressed support for the use of the tool in procurement.

**Figure 6.** Key procurement stakeholders in Ireland





In terms of public offices, the OGP would be valuable for high-level support, as they are responsible for procurement policy in Ireland. The Office of Public Works is another potential partner, as they are currently preparing a guide for sustainable design to promote more sustainable public works. Conversations with utilities such as the Electricity Supply Board and TII also revealed a strong demand for new carbon tools and potential interest in exploring using the CO2PL.

Finally, engagement with the supply side in the infrastructure sector could be facilitated by working with two platforms: the Construction Industry Federation and Construction Cluster Ireland. Information sharing and capacity building could be directed through these platforms for maximum reach to large and small companies. For implementing the CO2PL, the Irish National Accreditation Board would also, eventually, be a relevant stakeholder.

#### 4.4.1 Challenges for the Use of the CO2PL

The capacity and professionalism of procurers to implement new GPP approaches were raised in interviews, highlighting the importance of the easy interface provided by CO2PL and the third-party accreditation, which can do some of this work for them. It was suggested through interviews that it would also be important to have account managers participate in training. Because they have an important function in executing procurement transactions, they would need to be on board.

Interviewees also shared that public procurers are relatively risk averse compared to their EU counterparts. Particularly since Brexit, Ireland is now one of the only common law countries in the EU (along with Malta); in common law traditions, there is a reliance on case law and precedent as opposed to codification representative of civil law, so it will be important to emphasize that there has never been a legal case against the use of the CO2PL in procurement in either the Netherlands or Belgium.

Some challenges specific to the construction sector emerged during discussions. Currently, the demand for construction works is so high that procuring authorities often receive very few bids for their public contracts. Interviewees indicated that the construction market tends to push back against new ideas and that public procurers, therefore, hesitate to introduce new environmental requirements. To address this challenge, it would be important to involve the market very early on in a pilot project and to inform suppliers of the benefits of certification and the process involved. Furthermore, implementing the CO2PL would require market dialogue lead time, and ideally, the specific pilot projects would need to be large and meaningful to gain interest.

An important contextual note is that, at present, construction companies are not regulated in Ireland, meaning that any individual or group can propose construction services. Some interviewees suggested that the maturity of the suppliers in construction is overall low. Initiatives are in place to encourage contractors to upscale (e.g., currently, there are trial requirements for training a certain amount of staff during the contract). There is an interest in bringing more regulation of the sector in the future to tighten regulations for evaluating tenders and introduce tools such as EPDs. At the time of the interviews, stakeholders were waiting to have the official register of contractors completed.





Protecting SMEs is an important policy priority of the Office for Government Procurement, so initiatives that introduce new requirements or certifications for companies bidding for public contracts would have to be accessible, affordable, and not discriminate against smaller businesses. More generally, the principle of non-discrimination across economic operators and the need to link tender awards to the subject matter of the contract need to be clearly established when piloting the CO2PL.

#### 4.4.2 Opportunities for the Use of the CO2PL

In spite of the challenges specific to the construction sector cited above, actors along the supply chain realize that sustainability is demanded, and some observe that the market is moving quickly to respond. Companies can increasingly articulate their sustainability credentials. As the construction sector becomes more regulated, there may be a role for CO2PL certification to help distinguish companies that are committed to implementing carbon management and reduction targets and to award them for this initiative through procurement contract award advantages.

Overall, the activity on GPP implementation has focused on technical specifications for materials and products, and some stakeholders expressed an interest in certification that can also assess differences across companies and their carbon management practices. Certainly, procurers recognize that third-party verified certification is a valuable and quick way to assess differences without delving into hundreds of pages of documents.

As large utilities consider how to implement net-zero policies and stay within the carbon envelopes allocated to their sectors, they are looking for clear ways to link their management structures to climate goals. As in other countries, a recurring request during interviews was the need for better ways to measure carbon impacts, evaluate carbon impacts, and record this information and report on it. There is a general demand from public and private sector actors for information on verifying carbon measurements, particularly from international suppliers. In this respect, there is substantial interest in having the CO2PL to help deal with this complexity and to show action and results. TII is particularly interested in using the CO2PL. A pilot at TII would have to investigate how the CO2PL can complement the existing tools, such as their Carbon Assessment Tool.

**Table 7.** Summary of key challenges and opportunities for the CO2PL in Ireland

Challenges	Opportunities
Capacity and risk appetite of public procurers to try new approaches	Demonstrated interest in company-level certification
Low level of regulation in the construction sector	Demonstrated demand for carbon tools and measurements
Ensuring inclusion of SMEs in new procurement approaches	Potential for a pilot in the infrastructure sector





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# 5.0 Italy





## 5.1 Key Observations

- GPP in Italy is based on the mandatory use of Minimum Environmental Criteria (criteri ambientali minimi [CAM]) and is often put into practice through eco-labels and certification schemes.
- For implementation in Italy, the CO<sub>2</sub>PL would need to be integrated into the CAM or complement the existing system as an easy-to-use tool to reward sustainability performance beyond the minimum criteria.
- Piloting the CO<sub>2</sub>PL would require comprehensive capacity building and support for interested procuring entities.

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## 5.2 Sustainable Public Procurement

### 5.2.1 Priorities and Activities

The CAM are at the heart of GPP efforts in Italy. As these Minimum Environmental Criteria cover a wide range of sustainability aspects for 18 product groups (such as lighting, catering, buildings, and vehicles), there are no clear priorities on distinct topics in Italian GPP efforts (Direzione Generale Economia Circolare, 2017). All procuring authorities at national and subnational levels must adhere to the CAM. More specifically, they are obliged to use the technical specifications and contract performance clauses of the CAM in their tenders; applying the CAM's selection criteria and award criteria is voluntary.

The CAM are defined by the Italian GPP Management Committee. As part of this committee, working groups composed of experts and representatives of trade associations elaborate the criteria, which are then discussed with economic operators and approved by the Management Committee. The final drafts of the CAM are then reviewed by relevant ministries and finally adopted by decrees of the Minister of the Environment. The CAM are updated regularly; current product categories under revision include design and construction services, and road construction and maintenance (Direzione Generale Economia Circolare, 2021).

[Italy's GPP action plan](#) forms the basis of GPP efforts in the country. The plan, which was adopted in 2008 and updated in 2013, establishes the role of the CAM as the central reference for sustainability considerations in public procurement (Ministero dell'Ambiente e della Tutela del Territorio e del Mare, 2013). Interviews with Italian experts indicated that European funds—for example, the National Recovery and Resilience Plan—will be important drivers of GPP in the country. They also indicated that the GPP action plan is somewhat outdated and is not being sufficiently monitored.

### 5.2.2 Use of Tools, Instruments, and Labels

The CAM oblige procuring authorities to use detailed technical specifications and contractual clauses—for example, for purchasing furniture, printers, lighting, textiles, vehicles, food, and buildings. Yet, monitoring reports indicate that the CAM GPP criteria are still not widely used,





and environmental considerations play a minor role in most procurement processes (Falocco et al., 2021).

The CAM for the award of design services and works for the new construction, renovation, and maintenance of buildings refer to multiple labels and certification schemes (Gazzetta Ufficiale della Repubblica Italiana, 2017). In the technical specifications, tender documents, for example, need to demand 15% of the building material to be recycled. This must be demonstrated by an environmental declaration in accordance with the EN 15804 or ISO 14025 standards, a certification of the material with the labels ReMade in Italy, Plastic Second Life or the equivalent, or through an environmental self-declaration compliant with ISO 14021 that is verified by a conformity assessment body. Similarly, procuring authorities must demand eco-labelled wood products through labels like FSC, PEFC, ReMade in Italy, or third-party-verified environmental self-declarations. These examples illustrate that eco-labels and EPDs are key tools for GPP in Italy. They also show that contractors need to demonstrate that they meet the tender requirements through declarations that are third-party verified.

The CAM for buildings also specify award criteria and selection criteria that contracting authorities can use. For example, they may require contractors to have an environmental management system in place and award bonus points to bidding companies with qualified staff for bids that exceed the performance level of the minimum criteria and to bids with shorter transportation distances of materials. The contracting authorities can individually decide on the weighting of the award criteria and the bonus points. The CAM for buildings do not specifically consider carbon emissions. In general, the use of award criteria is voluntary in Italian procurement, and experts indicate that procuring authorities only rarely apply them.

Interviewees confirm that EPDs, EMAS, and ISO standards are widely used for GPP in Italy. More than 1,000 Italian organizations have registered EMSs, according to the EU [EMAS registry](#), making Italy one of the top three countries for the system. Moreover, about 16,800 companies have certificates for the ISO 14001 environmental management system (Statista, 2022). This makes Italy the European country with the most ISO 14001 certificates and further underlines the dominance of the system in Italy. An interviewee indicated that companies received one-off rewards for implementing these management systems, which, unfortunately, does not incentivize continuous follow-up and improvement.

## 5.3 Low-Carbon Procurement

### 5.3.1 Carbon Profile and Reduction Objectives

Italy aims to reduce its carbon emissions by 60% by 2030 compared to 1990 and reach net-zero by 2050. The CAM and the national GPP action plan aim for emissions reductions, thus linking procurement to climate action. Yet, little information is available about specific measures or targets for reducing emissions from public procurement. Public procurement in Italy represented about 11% of the GDP in 2019, but emission data linked to procurement is not available (OECD, 2021).





Remarkably, about 5,000 Italian cities and towns have signed the Covenant of Mayors, representing half of all signatories. As part of their commitments, they must submit sustainable energy and climate plans to reduce their emissions.

### 5.3.2 Low-Carbon Procurement: Goods, services, infrastructure

A strategic objective of the Italian [GPP action plan](#) is to reduce the environmental impacts of procurement, especially through reductions in CO<sub>2</sub> emissions. It therefore aims to foster energy efficiency and renewable energy. In the CAM, this mainly manifests in provisions for energy-efficient goods and the use of recycled and recyclable materials. In some sectors, such as buildings and vehicles, the consideration of emissions is mandated through other EU Directives and integrated into the CAM.

Regional contracting authorities sometimes use LCA-related criteria that also consider carbon emissions. For example, the region of Calabria demanded a carbon footprint in line with ISO 14064-1 when procuring laundry services, and the Emilia-Romagna region demanded an EPD showing the carbon footprint in the procurement of sanitary paper (European Commission Directorate-General for Environment, 2021). The contracting authority of Emilia-Romagna, Intercent-ER, also won the Buygreen Award for demanding an LCA study from a waste service provider during the contract execution.

At the more local level, the Metropolitan City of Rome has advanced experience with GPP. As part of the GPP 2020 project, for example, the central purchasing body (Consip) worked with Rome on low-carbon procurement (GPP 2020, n.d.). Rome is also a member of the Procura+ Network and is regularly recognized on this platform for their GPP activities.

Italian procurement experts that were interviewed emphasized that LCA methods are generally too complex to use for most contracting authorities, especially in the face of time and capacity constraints (European Commission Directorate-General for Environment, 2021). To limit the legal risks and burdens on procurers, they therefore focus more on third-party verified eco-labels, product declarations, and EMSs. Interviewees also indicated that, to that time, low-carbon procurement had not played a major role in the decarbonization of the infrastructure sector.

### 5.3.3 Carbon Data Collection and Monitoring

GPP monitoring in Italy is limited and does not include information about carbon emissions. There is no evidence of official GPP monitoring at the government level, and the most comprehensive monitoring is performed by the GPP Observatory. Civic monitoring by the GPP Observatory shows that about a third of the larger municipalities apply the CAM in most of their tenders (Falocco et al., 2021). Interviewees also indicated that despite a long history of GPP and the introduction of mandatory CAM about 5 years ago, environmental considerations only play a minor role in Italian procurement. Municipalities experience a lack of training for GPP, find it difficult to draft green specifications, and fear unsuccessful tenders (Falocco et al., 2021).







## 5.4 Potential for CO2PL

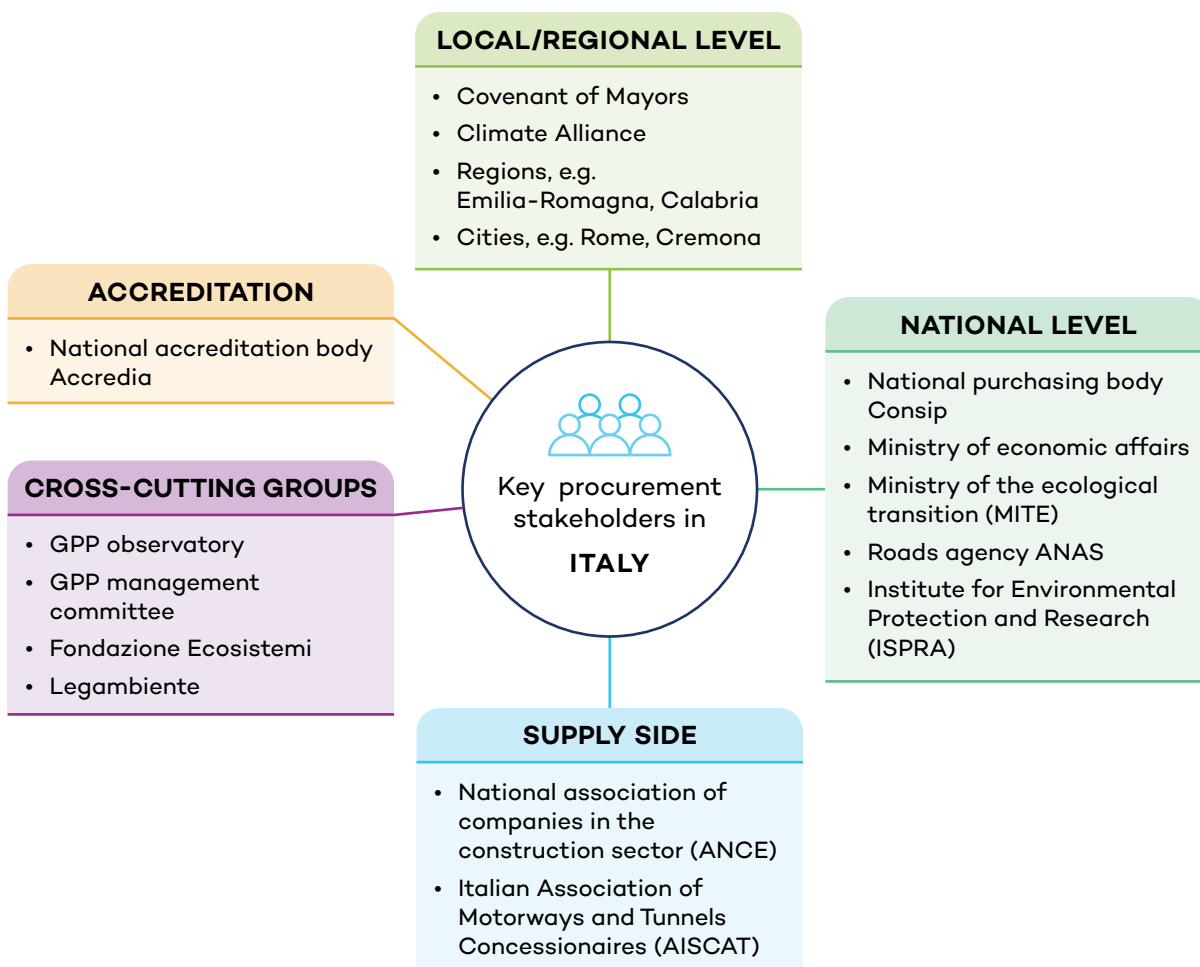
### 5.4.1 Main Stakeholders

Integrating the CO2PL into the CAM system is a key opportunity in Italy. Therefore, it would be important to initiate and continue conversations with national stakeholders of the GPP Management Committee, such as the Ministry of the Ecological Transition, the Ministry of Economic Affairs, Consip, and the Institute for Environmental Protection and Research (ISPRA).

Due to very limited GPP capacity within Italian procurement authorities, potential pilots seem most promising in larger, well-equipped procuring entities. Several NGOs can play a key role in supporting the CO2PL on the ground and building capacity, such as Fondazione Ecosistemi, Legambiente, and Climate Alliance.

Relevant industry associations could include the National Association of Companies in the Construction Sector (ANCE) and the Association of Motorways and Tunnels Concessionaires (AISCAT). The national accreditation body Accredia would also eventually be relevant for implementing the CO2PL in Italy.

**Figure 7.** Key procurement stakeholders in Italy





## 5.4.2 Challenges for the Use of the CO<sub>2</sub>PL

Italian procurement agencies are most familiar with GPP through the use of the CAM as part of technical specifications. This could potentially pose a challenge to using the CO<sub>2</sub>PL as an award criterion. To implement the CO<sub>2</sub>PL in Italy, further dialogue and research on the complementarity between the CO<sub>2</sub>PL and the CAM, potentially with a focus on specific categories of spending, may be needed.

Interviewees underlined that capacity constraints among procurers are a major barrier to using a GPP tool like the CO<sub>2</sub>PL. Even though the interviewees observe increasing interest in GPP, procurers often lack the capacity and GPP skills to put sustainability ambitions into practice. Especially in smaller municipalities, the application of the CAM proves to be challenging. These challenges for the CO<sub>2</sub>PL could be exacerbated by a limited risk appetite in procuring authorities. Interviewees also indicated the importance of having guidance materials, criteria, and tools available in Italian, especially to secure wider uptake at the subnational level.

Finally, interviewees highlighted that piloting and scaling up the CO<sub>2</sub>PL in Italy would require strong political support and policy guidance, as well as prospects of tangible outcomes within the short election cycles.

## 5.4.3 Opportunities for the Use of the CO<sub>2</sub>PL

In the Italian GPP system, which is focused on CAM, the CO<sub>2</sub>PL could stimulate sustainability ambitions beyond minimum performance and provide an easy-to-use tool to be used in the award phase. Currently, there does not seem to be any other tool providing that opportunity—in particular, not on carbon emissions. It would directly support the strategic objective of the GPP action plan to tackle carbon emissions. Moreover, the procurement experts interviewed consider the CO<sub>2</sub>PL to be in line with the Italian procurement legislation and do not see legal obstacles to its implementation.

Considering the capacity constraints for GPP in Italy, the CO<sub>2</sub>PL is a proven tool and method for reducing carbon emissions through procurement—and it is easy to use. Experiences in the Netherlands and Belgium show that the CO<sub>2</sub>PL is straightforward and has low transaction costs for procuring authorities because the suppliers get certified by a third party. This characteristic of the instrument could be a key driver for its uptake in contexts where procuring authorities have little experience or capacity to implement complex GPP tools.

Piloting the CO<sub>2</sub>PL is an important next step for building confidence among procurers on how the instrument can be used. Interviews suggest potentially testing the instrument in ICT procurement, as this sector is more mature and closely linked to Consip's work. Alternatively, interviewees mentioned that state-owned enterprises could have the capacity to undertake a pilot procurement with the CO<sub>2</sub>PL to demonstrate their climate commitments.



**Table 8.** Summary of key challenges and opportunities for the CO2PL in Italy

Challenges	Opportunities
Integration and/or complementarity with the CAM	CO2PL as a tool to stimulate sustainability beyond minimum environmental criteria
Capacity constraints in public procurement authorities	Good options for a local host with Fondazione Ecosistemi or Legambiente, already active in GPP
Need for political support and policy guidance	Demand for easy-to-use tools

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# 6.0 Poland





## 6.1 Key Observations

- The new State Purchasing Policy aims to foster GPP and could increase the momentum for sustainable procurement and the uptake of GPP tools in Poland.
- Procuring authorities and suppliers have little experience with GPP, and a risk-averse procurement culture represents an obstacle for the CO2PL.
- Introducing the CO2PL would require strong political support and legal backing at the national level, also to overcome prevailing legal concerns about GPP.

## 6.2 Sustainable Public Procurement

### 6.2.1 Priorities and Activities

At the national level, the State Purchasing Policy forms the new cornerstone of GPP activities in Poland. The policy was adopted in January 2022 and serves as a medium-term procurement strategy covering the years 2022 to 2025 (Council of Ministers, 2022). The underlying idea of the purchasing policy is to link public procurement with the state's strategic objectives. As its core priorities, the purchasing policy aims to support SMEs, professionalize procurement, and strengthen the competitiveness of the Polish economy through sustainable and innovative procurement—for example, for high-quality food, energy-saving devices, and ecologically produced goods.

To foster SPP, the policy

- Promotes the consideration of social, environmental, health-promoting, and innovative aspects in public procurement.
- Promotes LCC.
- Establishes a team for GPP with a coordinating role within the administration.
- Recommends allocating a budget to innovative procurement.

The implementation of GPP in Poland, however, remains very low. In 2020, only 1% of contracts, representing 7% of the contract value, included green or innovative criteria (Council of Ministers, 2022). Out of the 14,000 contracting authorities in Poland, less than 400 implemented GPP. The State Purchasing Policy sets the goal of increasing the number of tenders that include environmental criteria by 7% by 2025, from a baseline of about 1,100 green tenders. Previous GPP action plans had not succeeded in reaching their goals. Interviews suggest this is related to a lack of central guidance and legal requirements, as well as risk aversion among procurers to independently try new GPP approaches.

In order to support contracting authorities in implementing GPP, the purchasing policy sets activities for the government, such as building an online (learning) platform for market participants, sharing information through training sessions and events, establishing a GPP team, and developing standard documents and good practice examples.





The State Purchasing Policy also mandates contracting authorities to consider introducing procurement criteria about contractors' compliance with corporate social responsibility principles. Where it is justified by the subject matter of the contract, the policy recommends introducing regulations to ensure that contractors adhere to corporate social responsibility principles when carrying out the contract. Implementing the purchasing policy is mandatory for the central administration and for other public entities when they use government funds and programs.

Polish authorities mainly implement GPP in areas where it is mandatory based on EU regulations and national legislation—for example, related to clean vehicles and energy-efficient appliances and buildings (Urząd Zamówień Publicznych, 2022a).

At the city level, Warsaw developed a Green City and Climate Action Plan. It also joined the C40—a global cities network that takes leadership on climate action—in 2007 and, since then, has worked on low-emission transportation, improving the energy efficiency of buildings, and reducing air pollution. To address its sustainability challenges, Warsaw has procured electric buses, improved its metro, and upgraded the city's heating system. The city is also a member of the Global Lead City Network for Sustainable Procurement, ICLEI – Local Governments for Sustainability, and the Covenant of Mayors.

### 6.2.2 Use of Tools, Instruments, and Labels

The Polish Procurement Office promotes the EU GPP criteria. It also provides guidance documents and tools—for example, about LCC for buildings. The LCC method was developed based on regulation by the Ministry of Economic Development and Technology and is applied to public buildings.

To give procurers an overview of possible eco-labels, the procurement office presented multiple existing programs, including the EU Ecolabel, FSC, LEED, Energy Star, and Blue Angel in a recent report (Urząd Zamówień Publicznych, 2022a). Interviews indicate that eco-labels are not yet common in Poland and that only large companies are familiar with them.

Polish procurement legislation allows the use of criteria related to EMSs. The new State Purchasing Policy urges public authorities to use pre-qualification or evaluation criteria demanding EMS like ISO 14001 and EMAS. The policy highlights that this is particularly important in the construction industry, for infrastructure investments, in the chemical industry, and in other energy-intensive sectors. Yet, only 66 organizations from Poland have an EMAS in place, according to the EU [EMAS registry](#). ISO 14001 management systems are more common, with more than 2,700 certified organizations (ISO, 2022). Following the State Purchasing Policy, the Polish Agency for Enterprise Development promotes the benefits of EMS among Polish businesses.





## 6.3 Low-Carbon Procurement

### 6.3.1 Carbon Profile and Reduction Objectives

Poland remains the only EU country that has not committed to the EU climate goals. The country aims to reduce primary energy consumption by 23% by 2030 compared to 2020. Based on the National Energy and Climate Plan, CO<sub>2</sub> emissions will decrease by 7% by 2030 compared to 2005 (Ministerstwo Klimatu i Środowiska, n.d.). At the city level, the capital of Warsaw has committed to the Race to Zero challenge and aims to reduce its GHG emissions by 40% by 2030, compared to 2007.

### 6.3.2 Goods, Services, Infrastructure

Today, procuring authorities only rarely consider carbon emissions in their procedures. An exception is the procurement of low-emission vehicles and high-energy-efficiency standards for buildings. In these sectors, GPP is mandated through EU Directives (Urząd Zamówień Publicznych, 2022b).

Through the new State Purchasing Policy (2022), the government promotes the use of EMSs for businesses and for procurement in carbon-intensive sectors.

## 6.4 Potential for CO<sub>2</sub>PL

### 6.4.1 Main Stakeholders

The Public Procurement Office would be the central stakeholder in implementing the CO<sub>2</sub>PL in Poland. It provides SPP training and implements and monitors the implementation of the State Purchasing Policy. It would be key for encouraging the use of the CO<sub>2</sub>PL through guidance and regulations for procuring authorities. In terms of capacity, larger cities and procuring bodies are expected to be better equipped for using a tool like the CO<sub>2</sub>PL.

International sustainability initiatives can also hold potential for the CO<sub>2</sub>PL. The EBRD Green Cities Program and the Covenant of Mayors are especially relevant drivers for GPP in Poland. The World Bank is advising Poland's Ministry of Development and Technology on GPP and expressed interest in exploring the use of the CO<sub>2</sub>PL in Poland. It could also be worthwhile to collaborate with the Building Research Institute (Instytut Techniki Budowlanej [ITB]), which conducts construction-related research and functions as a certifying body for EMSs. The Polish Agency for Enterprise Development (Polską Agencję Rozwoju Przedsiębiorczości [PARP]) and the Polish Centre for Accreditation (PCA) could also be relevant stakeholders.





**Figure 8.** Key procurement stakeholders in Poland



### 6.4.2 Challenges for the Use of the CO<sub>2</sub>PL

Most procuring agencies in Poland are highly risk averse and, in the absence of political priorities on climate action and legal certainty for GPP, may not consider the CO<sub>2</sub>PL.

Policy documents underline the need for a strong link between GPP criteria and the subject matter of a contract, and experts voiced concerns about whether the CO<sub>2</sub>PL would be legally sound in this respect. A few years ago, an initiative to use the instrument in an EBRD project in Poland was not successful due to such legal concerns of the environment ministry. Capacity building with materials like the new legal FAQ about the CO<sub>2</sub>PL may help overcome this challenge.

Interviewees also mentioned capacity constraints on the side of procurers as well as suppliers, given that the market in Poland has little experience with certification schemes and labels for GPP. Cities with climate and sustainability action plans may be a better testing ground for the CO<sub>2</sub>PL.

Implementing new tools for GPP, such as the CO<sub>2</sub>PL, requires dialogues with the market to ensure the uptake of carbon management practices by suppliers. Such collaboration between market parties and public procurement authorities is currently not well established in Poland, and this may pose a challenge to effective implementation.

One public procurement expert challenged the practicality of using the CO<sub>2</sub>PL as an award criterion in Poland but recommended using it as a selection criterion or in contract performance clauses instead.







### 6.4.3 Opportunities for the Use of the CO2PL

In the Polish context, most GPP activities depend on political signals from the national level, and high-level support from a ministry would be key for introducing the CO2PL. Policies and regulations could pave the way for the instrument by creating legal certainty for risk-averse procuring authorities. The State Purchasing Policy has already increased the momentum for GPP, which could lead to opportunities for the CO2PL.

Polish authorities stand at the beginning of their GPP journey and have no established tools for green and low-carbon procurement. This could be an opportunity for the CO2PL to fill this space as an easy-to-use solution for companies and procurers.

**Table 9.** Summary of key challenges and opportunities for the CO2PL in Poland

Challenges	Opportunities
Risk aversion and legal concerns	Potential for top-down implementation
Low GPP capacities in procuring authorities	Open space for new GPP tools
Little dialogue with suppliers	Need for easy-to-use instruments

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# 7.0 Slovenia





## 7.1 Key Observations

- Current GPP activity at the national level is focused on the successful implementation of the 22 mandatory GPP product categories.
- Municipalities are, in some cases, frontrunners on climate neutrality, going beyond federal-level GPP requirements, which could make them strong potential partners for trialling the CO2PL.
- Challenges are related to limited capacity among public procurers and the need for further clarity on legal concerns.

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## 7.2 Sustainable Public Procurement

### 7.2.1 Priorities and Activities

GPP implementation in Slovenia is increasingly based on mandatory regulations. The July 2021 Decree on GPP establishes 22 product groups with mandatory GPP, including infrastructure categories such as electricity, the design and construction of buildings, and the design and construction of roads. The priority of the Ministry of Environment and Spatial Planning, which issues the decrees on GPP, is to a) advance GPP through regulations and b) make sure that procurers are aware of the changes. A GPP Helpdesk provides permanent professional assistance in the preparation of tenders and in the verification of the environmental qualifications of bidders (GPP Advisory Group, 2022).

Other recent GPP regulations in Slovenia include the following:

- In food procurement, in particular, building on participation in the [Best-ReMaP](#) project, sanctions have been put in place if GPP regulations are not followed (this is the first GPP product category with sanctions for non-compliance).
- In line with the 2019 EU Clean Vehicles Directive, there is also a requirement for procuring specific shares of clean and emission-free vehicles for road transport.
- For the procurement of public buildings, wood is required to comprise 30% of the building material, which is expected to rise to a 50% requirement in the future.
- Energy-efficiency regulations are cross-cutting in procurement, applying to procurement within and beyond the 22 mandatory GPP product groups.

In addition, moving toward a circular economy is a priority in Slovenia, and some of the current SPP activity falls under this overarching goal. In May 2018, the Slovenian government published its national strategy, *Vision for Slovenia in 2050*, in which it outlines its plans for becoming the world's first fully circular economy. In support of this vision, GPP regulations promote the use of reusable products, the repair and recovery of products, and waste use and recycling (GPP Advisory Group, 2022).





Slovenia is also active in several major EU projects, which have activities related to GPP. [GUPP](#): Upgrading Skills for EU Greener Public Procurements in Construction involves Slovenia, France, Ireland, and Greece. In 2019, the Care4Climate Project was launched in Slovenia under the EU Life Programme. Over the course of 8 years, diverse activities are being planned, including awareness raising, education, and training to transition to a low-carbon society. GPP is one of six focus areas of Care4Climate. Also in 2019, Slovenia adopted a proposal of the European Institute of Technology Climate Knowledge and Innovation Community (EIT Climate-KIC) on the circular economy, resulting in Slovenia being one of eight European locations doing a 3-year “Deep Dive” to transform their economy (EIT Climate-KIC, 2022). Some of the systemic changes being studied through this project relate to public procurement.

## 7.2.2 Use of Tools, Instruments, and Labels

Procurement authorities can implement the mandatory GPP regulations in different product areas through technical specifications with minimum environmental requirements through pre-qualification or award criteria. Procurers can consider standards and eco-labels in assessing suppliers’ environmental qualifications, particularly for the 22 product categories mentioned above. Interviewees mentioned that this approach has been successful. The EU Ecolabels Levels I and III (which both require external, third-party verification) are used in some procurement. To date, about 560 entities in Slovenia have an EMAS in place, according to ISO 14001, covering more than 2,000 sites (ISO, 2022). Only 10 organizations appear in the EU’s EMAS registry (European Commission, 2022).

[Green Star](#) is a new sustainability certification scheme for businesses and is available in the Slovenian language. It is based on a 115-point questionnaire to companies, resulting in five different levels of achievement. The hosts of the certification, the Sustainable Business Network Slovenia (CER), are seeking EU-wide recognition for the certification scheme, such as exists for EU Ecolabels. EU Ecolabels must be recognized by “competent bodies” at the national level in EU member states, which oversee the verification process in-country and report back to the European Commission. As the scheme is in its early stages of development, Green Star is currently not used in public procurement.

## 7.3 Low-Carbon Procurement

### 7.3.1 Carbon Profile and Reduction Objectives

In 2021, the National Assembly of the Republic of Slovenia adopted the Resolution on Long-Term Climate Strategy until 2050, with a goal to transition to net-zero emissions and become climate neutral by 2050. Slovenia aims to reduce GHG emissions by at least 15% by 2030 compared to 2005. The aim is to generate 27% of final energy consumption from renewable energy in 2030 and to improve energy efficiency by 32.5% compared to 2007.

In addition, municipalities are active in transitions to a carbon-free society. Ljubljana, Kranj, and Velenje were selected by the European Commission to join the [EU Mission on Climate-Neutral and Smart Cities](#) and will receive extensive support from [NetZeroCities](#), a platform





led by EIT Climate-KIC that will enable peer learning between the 100 European cities on their transition to net-zero.

### 7.3.2 In Goods and Services

The GPP regulations on energy efficiency, wood (as a low-carbon material), and electricity procurement are considered the principal ways of addressing GHG emissions reductions through procurement in Slovenia.

According to the GPP regulations, procurers are allowed to use tools to measure CO<sub>2</sub> emissions before, during, or after procurement and to understand and evaluate purchasing based on LCC. However, there is no obligation to use any carbon tools. In practice, LCC and other carbon calculator tools have rarely been used in public procurement to date, as they are considered too complicated. There are also approximately 2,200 public procurers in the country of 2 million people, and the capacity to learn how to integrate LCC into public procurement is limited. Especially in smaller institutions, public procurement experts are unlikely to have sufficient time and knowledge to implement such tools.

Slovenia's Ministry of Public Administration has gained some experience with low-carbon procurement through the GPP 2020 project, where its pilot tenders focused on energy efficiency (ICLEI, n.d.).

### 7.3.3 In Infrastructure

Activity on low-carbon procurement in infrastructure focuses on buildings and the built environment. The Slovenian National Building and Civil Engineering Institute (Zavod za gradbeništvo [ZAG]) spearheads this effort and coordinates national and international projects on the sustainability of construction projects.

LCC/LCA are conducted for new buildings, with a focus on evaluating materials and products used in construction (as opposed to operations). There is a focus on using different types of building materials to reduce emissions. These include both mineral resources and biogenic raw materials (wood, sheep's wool, cellulose fibres, hemp fibres, and poplar fibres), as well as recycled waste materials (ZAG, 2022). EPDs are used to evaluate building materials. ZAG manages its own system of EPDs (this system is known as ZAG EPD), as do some larger companies.

In addition, Sustainable Construction and Buildings is one of the six focus areas of the [Care4Climate](#) project, where they focus on construction waste.

### 7.3.4 Carbon Data Collection/Monitoring

Reports on GPP progress are prepared annually. In 2020, nearly 26% of all public contracts included at least one environmental aspect (GPP Advisory Group, 2022). A procurement expert indicated that, on average, 30% of tenders include one or more environmental criteria.

Care4Climate has various key performance indicators and aims to evaluate the share of green tenders and changes over time. This will help monitor GPP efforts in the built environment.





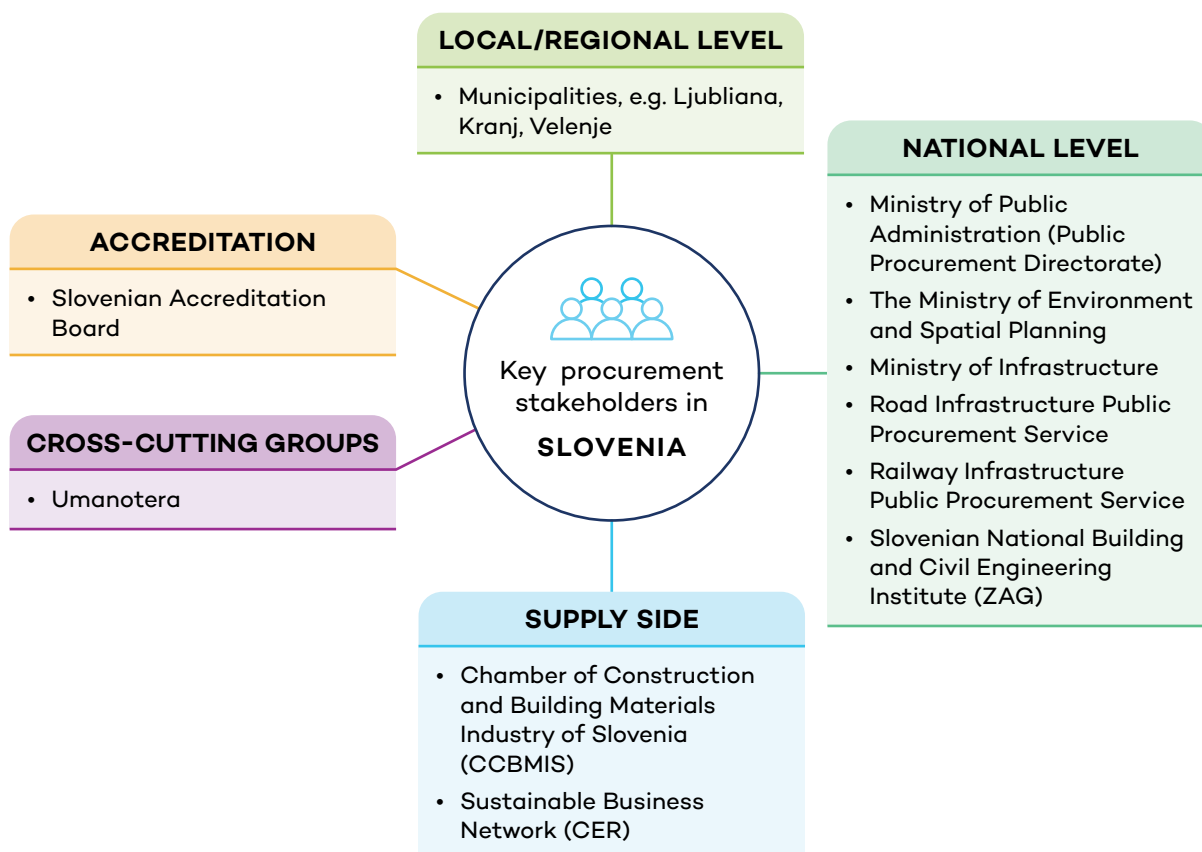
## 7.4 Potential for CO2PL

### 7.4.1 Main Stakeholders

In Slovenia, the Ministry of the Environment and Spatial Planning is a key stakeholder and partner for GPP activities and policies. It proved to be a constructive contact during the research and would also be a central stakeholder when further exploring the use of the CO2PL. Other relevant stakeholders could be the Ministry of Public Administration, the Ministry of Infrastructure, Road Infrastructure Procurement Services, and the Railway Infrastructure Procurement Service.

The cities of Ljubljana, Kranj, and Velenje have been selected for an [EU Mission for Climate-Neutral and Smart Cities](#). Working with these cities on integrating the CO2PL into their climate neutrality efforts represents a key opportunity in Slovenia. The Chamber of Construction and Building Materials Industry of Slovenia (CCBMIS), the Sustainable Business Network (CER), and the Slovenian Accreditation Board can also be relevant stakeholders in testing the use of the instrument.

**Figure 9.** Key procurement stakeholders in Slovenia





## 7.4.2 Challenges for the Use of the CO2PL

Throughout our interviews, the primary concerns for implementing the CO2PL were about ensuring the legal basis for the tool in Slovenian procurement. There is a hesitation to use the CO2PL as an award criterion, and guidance would be needed to ensure the link to the subject matter, that bidders are not unfairly excluded, and the acceptance of equivalent proof in relation to the award criteria outlined in the tender. It was suggested that the CO2PL could instead be used like an environmental management system (like EMAS)—as a pre-qualification or selection criteria for companies who participate in the tender—so as not to disrupt the awarding process.

A second challenge is the current absence of market dialogues or engagement in Slovenia. While it is recognized by contracting authorities as best practice, it is seldom done. Interviews underline that, particularly since the legal proceedings from the procurement of the Karavanka Tunnel and recent scandals in the health care sector, there has been a general perception that market engagement is risky. As a successful pilot of the CO2PL would require a platform for transparent engagement between suppliers and procurers, this poses a challenge.

A third challenge relates to the capacity of public procurers and suppliers to implement and use new tools, as well as the time and costs to suppliers to get certified. Finally, municipalities have been pursuing their own GPP efforts in a highly decentralized way. This may make it challenging to roll out the CO2PL at the national level.

## 7.4.3 Opportunities for the Use of the CO2PL

The biggest opportunity space for the CO2PL in Slovenia may be working with municipalities to adapt the CO2PL and its use to their local needs, priorities, and current procurement practices. According to interviewees, procurers in many municipalities are quite advanced and go beyond the federal-level requirements on GPP; however, we were not able to speak to any municipalities directly during this research.

Municipalities also procure infrastructure, which is a higher-impact category in terms of carbon emissions. For instance, in several municipalities, there are “housing funds” that want to develop new buildings in a circular way and are working with ZAG to develop criteria. As mentioned above, the municipalities of Ljubljana, Kranj, and Velenje will also be particularly focused on carbon neutrality through the EU Mission for Climate-Neutral and Smart Cities in the coming years; linking up with their city-scale initiatives provides an opportunity to pilot the CO2PL as an easy-to-use solution for carbon reduction.

Moreover, there is a sentiment that some companies in Slovenia are making a big effort to mitigate their environmental impact without reward or opportunity to demonstrate their leadership. This was the impetus behind the creation of the local Green Star certification. To complement the broader set of sustainability impacts in the Green Star certification program, the CO2PL could seek to help suppliers distinguish themselves based on their carbon reduction efforts.



**Table 10.** Summary of key challenges and opportunities for the CO2PL in Slovenia

Challenges	Opportunities
Concerns about legal compliance and award criteria	Potential to work with ambitious municipalities
Absence of pre-procurement engagement and dialogue with suppliers	CO2PL to distinguish sustainable suppliers
Capacity constraints among procurers and suppliers	CO2PL to complement mandatory GPP requirements

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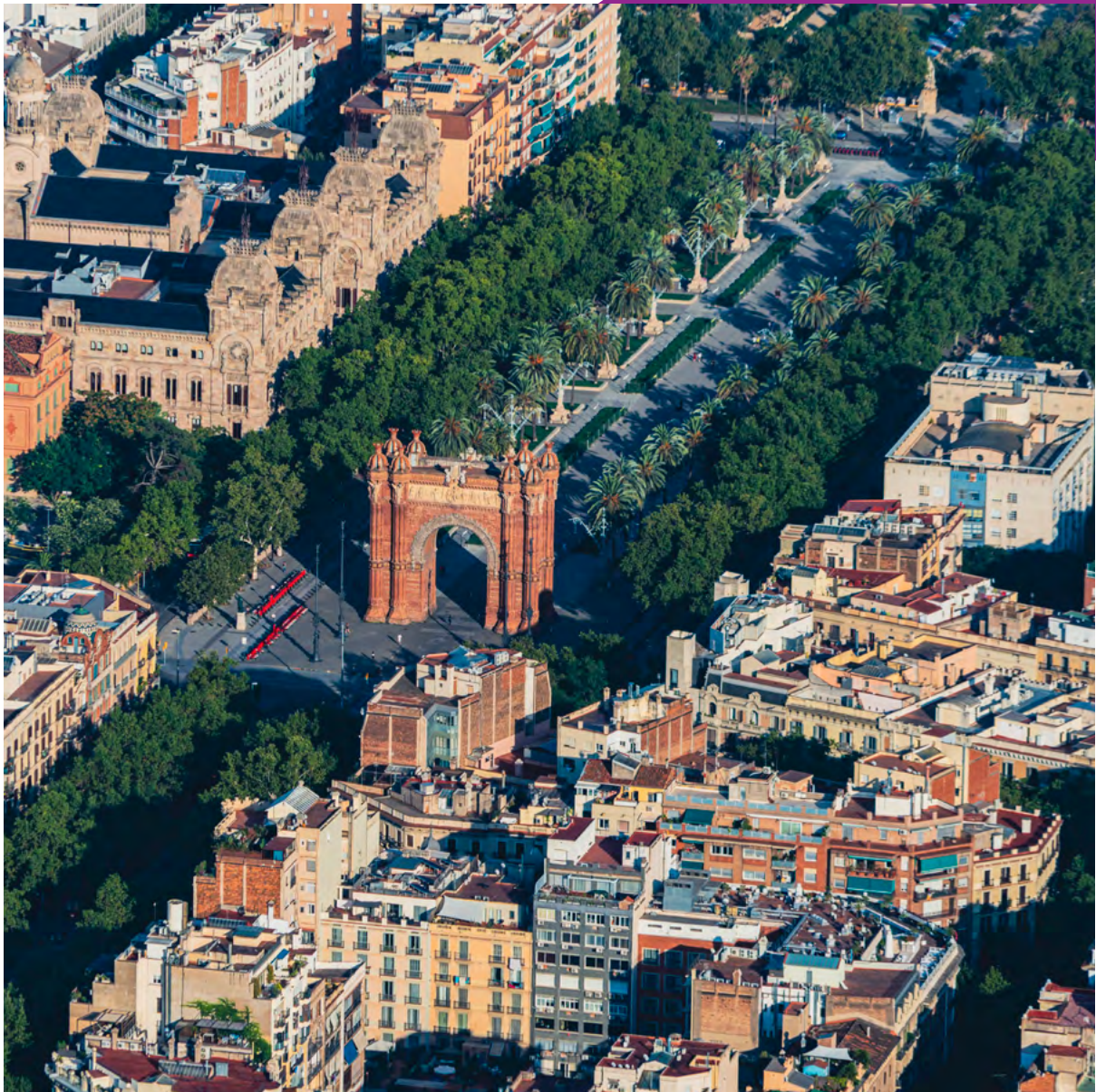
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# 8.0 Spain





## 8.1 Key Observations

- Reducing GHG emissions of procurement is high on the agenda of the national, regional, and local authorities in Spain.
- The Spanish procurement system is highly decentralized, and many GPP activities are implemented by local and regional frontrunners like Barcelona, Catalonia, and the Basque country.
- Procuring authorities are searching for practical, legally secure ways of integrating sustainability considerations in their procedures and making use of the legal space for GPP—for example, through award criteria.

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## 8.2 Sustainable Public Procurement

### 8.2.1 Priorities and Activities

The procurement system in Spain is very decentralized, with procuring authorities at the national level, in 17 autonomous regions, and in municipalities and metropolitan areas. Public procurement in Spain represented about 10% of the country's GDP in 2019, with local authorities responsible for about 50% of the tenders (Independent Office for Procurement Regulation and Oversight, 2020; OECD, 2021). Interviews indicate limited collaboration between the local and central levels of government and between the regions, which also shows in the diversity of GPP plans, policies, and criteria.

The national [GPP plan](#) (2018–2025) aims to reduce the environmental footprint of procurement, promote a circular economy, foster the inclusion of environmental clauses in procurement, and showcase the legal possibilities of GPP in Spain (Boletín Oficial del Estado, 2019). The 20 priority groups of products, works, and services identified in the plan include food, lighting, office buildings, roads, and transportation. For these priority groups, the GPP plan lists general criteria, similar to the EU GPP criteria, that may be used by contracting authorities—for example, related to organic food, renewable energy, energy efficiency, and recycling.

Spain's Sustainable Development Strategy 2030 aims to support the ecological transition and compliance with social rights by integrating social and environmental clauses into different phases of public procurement (Gobierno de España, 2020). Several autonomous regions have pledged to contribute to this goal through SPP.

Several autonomous regions, such as Catalonia and the Basque country, have their own plans for sustainable procurement, which list priority product categories and green criteria. The main focus areas in those plans are climate change mitigation and circular economy.

The Basque government has long-standing experience with sustainable procurement and published the latest Green Procurement and Contracting Programme in 2021 (Basque Government, 2021). The program aims to contribute to the priorities of the Basque Green





Deal, including the circular economy, climate change, energy transition, nature-based solutions, and biodiversity. As another key element, the GPP program emphasizes private sector engagement and innovation.

The Basque GPP program sets targets for 2025 and 2030 with regard to

- Percentage reduction in carbon emissions associated with the purchase and use of green products, works, and services (16% by 2025; 26% by 2030)
- Percentage of electricity supplied from renewable sources for entities bound by the program (70% by 2025; 100% by 2030)
- Percentage of recyclable and reusable packaging included in a significant way in tender processes (50% by 2025; 100% by 2030)
- Percentage of waste from works to be reused (80% by 2025; 95% by 2030).

By 2025, 55% of the contracts and the procurement volume in the 12 priority categories shall include green criteria. These priority categories include, among others, civil works and infrastructure, buildings, and heavy vehicles. The GPP program has open participation and promotes the voluntary adhesion of the entire Basque public sector that wishes to commit to green procurement and contracting.

In March 2022, the Government of Catalonia approved the regional GPP [action plan](#) 2022–2025 (Generalitat de Catalunya, 2022). According to the plan, by 2025, 50% of procurement value has to be awarded using environmental criteria. The plan includes 19 actions, including greening public works and vehicles and promoting the use of eco-labels. It also presents guidelines for green technical specifications and award criteria without prescribing specific criteria. Priority areas highlighted in the action plan are improved environmental quality, climate action, circular economy, sustainable mobility, biodiversity protection, and energy transition. To track progress, the GPP plan contains a set of monitoring indicators. The General Directorate of Public Procurement and the General Directorate of Environmental Quality and Climate Change will coordinate the implementation.

At the city level, the metropolitan area of Barcelona also has an action plan for the greening of public contracts (2014–2020). The City of Barcelona developed GPP criteria in a guidance document (Ajuntament de Barcelona, 2017). The GPP activities are part of the city's Barcelona Ajuntament + Sostenible program. Barcelona's GPP priority groups include food, wood, public works, and vehicles. All contracting authorities need to use the GPP criteria in their procurements to meet minimum environmental standards (Ayuntamiento de Barcelona, n.d.). For example, the [criteria for public works](#) ask for studies about low-carbon project alternatives, demand a life-cycle perspective, and promote the use of eco-labels and EPDs.

Also at the local level, through the EU [CityLoops](#) project, public entities from Sevilla, Vallès Occidental County, and Murcia collaborate with European partners to create a more circular economy for construction, demolition, and biowaste. They receive technical support from the Dutch infrastructure agency Rijkswaterstaat, which leads the project's work on circular procurement. In addition, several Spanish procuring entities are active members of the Procura+ Network and have been recognized for their GPP efforts—for example, the Basque public company Ihobe and the Catalan Government.





## 8.2.2 Use of Tools, Instruments, and Labels

The national GPP action plan promotes the procurement of eco-labelled goods and services. If that is not possible, procuring authorities can opt for ISO certifications or EPDs. The plan also encourages procuring entities to purchase from companies with certified EMSs like EMAS. According to the EU's [EMAS registry](#), more than 1,000 organizations in Spain have such an environmental management system in place. This makes Spain one of the top countries for registered organizations, together with Germany and Italy. Similarly, Spain is at the top of the list for ISO 14001 certifications, with about 12,500 certified organizations (Statista, 2022).

## 8.3 Low-Carbon Procurement

### 8.3.1 Carbon Profile and Reduction Objectives

Spain aims to reduce GHG emissions by 23% by 2030 and reach net-zero by 2050. The climate law specifically refers to GPP as a lever for decarbonization.

The Basque Country's [Climate Change Strategy](#) sets the goals of cutting emissions by 40% by 2030 and 80% by 2050 (Ihobe, 2015). Catalonia aims to reduce GHG emissions by 40% by 2030, 65% by 2040, and 100% by 2050 (Generalitat de Catalunya, 2017). The [carbon strategy](#) of the metropolitan area of Barcelona aims to reduce emissions by 43% by 2030 compared to 2005 (Àrea Metropolitana de Barcelona, n.d.). It applies to all publicly-owned companies and concessionaries of the region, including waste treatment facilities, water supply and treatment, park management, and mobility companies. Similarly, the City of Barcelona aims to cut emissions by 45% by 2030 and become carbon neutral by 2050 (C40 Knowledge, 2018).

### 8.3.2 In Goods and Services

The national action plan urges contracting authorities to procure goods and services from suppliers with the lowest possible carbon footprint. For the carbon footprint calculations, procurement agencies can refer to the organizations that are listed in the national [registry](#) of carbon footprints, compensation, and carbon dioxide absorption projects. Registered organizations calculate their footprint, have a CRP in place and can offset their emissions through projects listed in the registry. To be included in the registry, some organizations need to have their carbon footprint verified by an accredited third party, especially if they are a larger private company or wish to include Scope 3 emissions in their footprint. The GPP action plan mandates that by 2025, 50% of all contracts tendered need to include an award criterion related to the carbon footprint registry or similar scheme (Boletín Oficial del Estado, 2019).

Interviewees indicated that public entities in Catalonia and Barcelona are keen to consider carbon emissions in their procurement decisions. For example, the Catalan government encourages organizations to join a [voluntary agreement program](#) that includes calculating carbon footprints, reducing emissions, and receiving an official certificate for these climate mitigation efforts.





### 8.3.3 In Infrastructure

Through the EU Big Buyers initiative, several Spanish authorities implement GPP projects in the infrastructure sector. The cities of Valladolid and Barcelona participate in the working group on [circular construction sites](#), where they learn about conditions for circular infrastructure procurement and explore low-carbon solutions. In the working group on [zero-emission construction sites](#), Barcelona and Madrid work on using emission-free machinery for public works. Barcelona started its pilot with electrical machinery in the summer of 2022.

### 8.3.4 Carbon Data Collection/Monitoring

The national carbon footprint registry serves as the main vehicle for collecting carbon data. According to the 2021 annual monitoring report, about 2,000 organizations are registered, and the system contains about 5,000 carbon footprint entries (Gobierno de España, 2022).

Similarly, the Catalan climate change office offers a carbon calculator and emission inventory, in line with ISO 14064. Public and private organizations who want to take climate action can join the [voluntary agreement](#) to calculate, monitor, and reduce their emissions. So far, about 240 organizations are part of the voluntary agreements program. Organizations with high emissions and complex GHG inventories need to have their inventories verified by a third party. Other organizations can submit a self-declaration of their carbon inventory using an Excel-based [carbon calculator](#). The voluntary agreement program functions as a certification scheme, allowing organizations to understand and reduce their emissions, communicate about their GHG emissions through an official certificate, and receive discounts on environmental fees (Generalitat de Catalunya, 2019). There is no evidence that contracting authorities have used the voluntary agreement program in their procurements to date.

In the metropolitan area of Barcelona, emissions are monitored and reported using ISO 14064-1 certification. The Basque country monitors emissions from procurement through its procurement portal, [Kontratazio Publikoa Euskadin](#).

## 8.4 Potential for CO<sub>2</sub>PL

### 8.4.1 Main Stakeholders

Spain's decentralized administrative structure results in a multitude of public bodies dealing with procurement and considerable overlaps among their activities. In the Basque Country, the publicly owned environmental management company Ihobe would be an important stakeholder, though no contact could be established to date. In Catalonia, several levels of government might be interested in the CO<sub>2</sub>PL, such as the Government of Catalonia, the provincial council (Diputació de Barcelona), the metropolitan area of Barcelona, and the Barcelona city council.

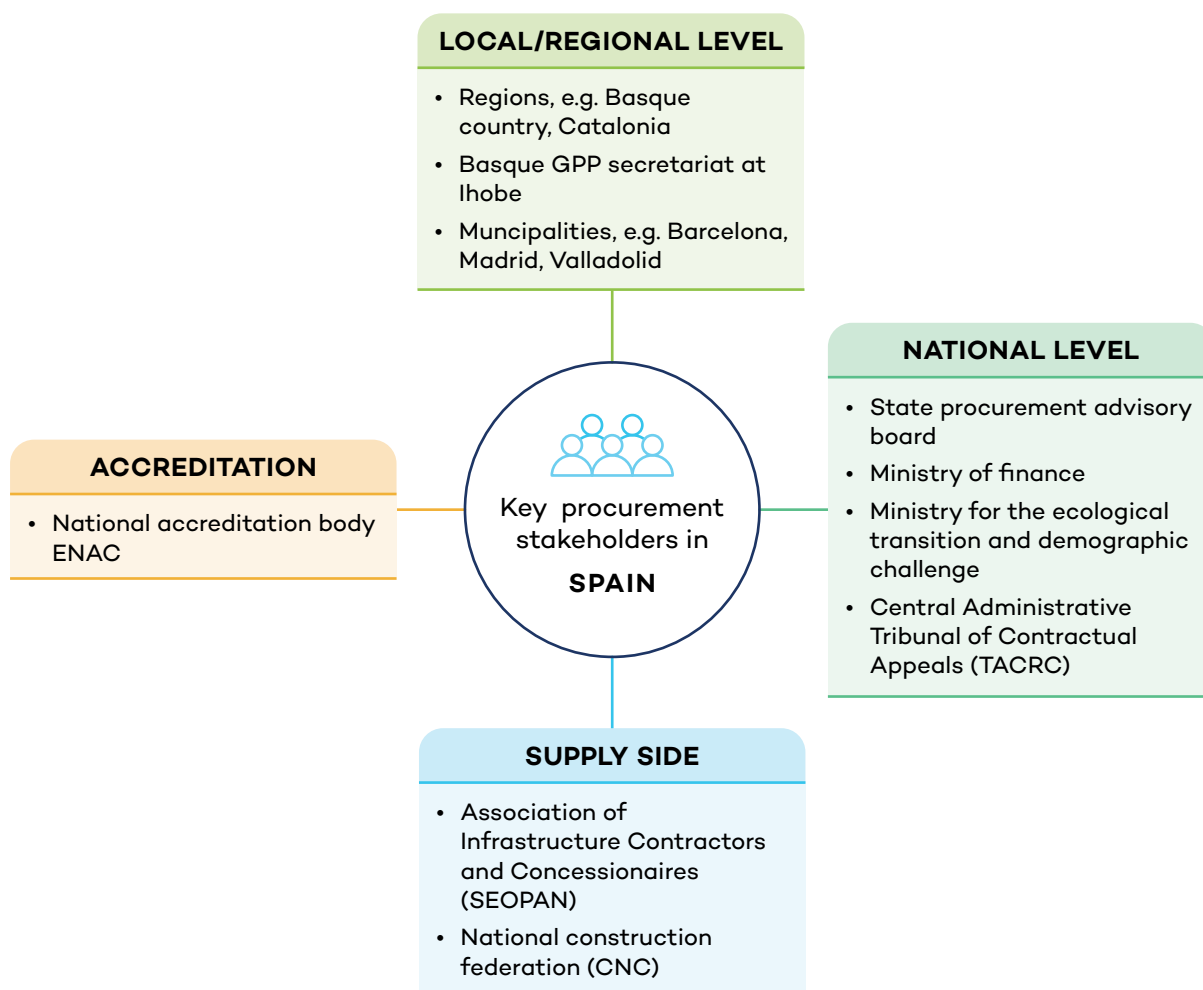
The [State Public Procurement Advisory Board](#) functions as a consultancy body for national and international procurement legislation and would be an important stakeholder at the national level in implementing the CO<sub>2</sub>PL in a legally compliant manner. Other important national stakeholders are the Ministry of Finance and the Ministry of Ecological Transition,





which are responsible for GPP policy, the National accreditation body (Entidad Nacional de Acreditación [ENAC]), and the Tribunal of Contractual Appeals (Tribunal Administrativo Central de Recursos Contractuales [TACRC]). Relevant industry associations could include the Association of Infrastructure Contractors and Concessionaires (Asociación de Empresas Constructoras y Concesionarias de Infraestructuras [SEOPAN]) and the National construction federation (Confederación Nacional de la Construcción [CNC]).

**Figure 10.** Key procurement stakeholders in Spain



### 8.4.2 Challenges for the Use of the CO<sub>2</sub>PL

The decentralized administrative system can pose a challenge to the wide dissemination of the CO<sub>2</sub>PL. While there is substantial autonomy for regions to test new ideas, the large number of procurement stakeholders and policies results in party-overlapping responsibilities that are difficult to navigate. The administrations of the regions work in different languages, and there is limited coordination between them. Local experts will be needed to drive the implementation of a CO<sub>2</sub>PL pilot forward. Interviewees also indicated that procurement capacities for GPP are limited, and having easy-to-use tools, as well as more training, is important, including for reducing litigation related to GPP.





Demonstrating legal compliance with the CO<sub>2</sub>PL will be important. Currently, efforts to integrate environmental criteria into procurement processes are often challenged in court, in particular, on issues such as insufficient links between the criteria and the subject matter of the contract. In 2021, the Tribunal of Contractual Appeals received an all-time high of nearly 2,000 appeals, 27% more than in the previous year (TACRC, 2022). Anecdotal evidence suggests that one of the main reasons for litigation is that procurers are inexperienced in implementing GPP. This may pose a challenge for piloting the CO<sub>2</sub>PL in Spain.

Finally, interviewees indicated the need for lead time for implementation. Suppliers will require time to understand the instrument and get certified. Procurement agencies would benefit from strong political commitments to implement pilot procurements with the CO<sub>2</sub>PL.

### 8.4.3 Opportunities for the Use of the CO<sub>2</sub>PL

Spain's efforts to track and certify carbon footprints represent an important opportunity for the CO<sub>2</sub>PL. At the national level, procurers are encouraged to use an award criterion in tenders to reward bidders with registered carbon footprints and carbon reduction plans. Similarly, Catalonia has a voluntary agreement program where organizations can register their carbon footprints and receive a certificate for their climate mitigation efforts. The CO<sub>2</sub>PL could function as an equivalent, more sophisticated scheme with a stronger focus on third-party accreditation and its use in public procurement.

Moreover, the political momentum in reducing GHG emissions through low-carbon procurement creates a window of opportunity for testing the CO<sub>2</sub>PL in Spain. For example, the national GPP action plan, the Basque GPP program, and policies in the region of Barcelona aim to use procurement strategically to reduce emissions, and procurers increasingly embrace the necessity to incorporate sustainability in their procedures.

There is no established tool for low-carbon procurement and green infrastructure procurement, making space for an instrument such as the CO<sub>2</sub>PL. Through GPP activities under the Big Buyers initiative, there are established links between Spanish procurement agencies and Dutch procurement experts that can be further exploited in piloting the CO<sub>2</sub>PL.

The decentralized system is both a challenge and an opportunity. It provides regional and local authorities considerable freedom to implement new GPP tools and policies without relying on approval at the national level.

**Table 11.** Summary of key challenges and opportunities for the CO<sub>2</sub>PL in Spain

Challenges	Opportunities
Limited coordination between regions, language barriers	Demand for tracking and rewarding carbon emission reductions through award criteria
Capacity constraints	Existing policy frameworks and plans for low-carbon procurement/GPP
Lead time and commitment to pilot CO <sub>2</sub> PL	The decentralized system offers a lot of autonomy for testing and pilot projects





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# 9.0 Sweden





## 9.1 Key Observations

- Procurement practices in Sweden are conducive to testing new approaches for SPP, as reflected in the large number of tools and certification systems already used, as well as the regular market dialogue with suppliers.
- There is high momentum for low-carbon procurement, with the transport and buildings sectors taking the lead in driving low-carbon innovation through procurement.
- Challenges for the CO<sub>2</sub>PL in Sweden relate to risk aversion in public procurement and the busy marketplace that already exists for low-carbon tools and approaches.

## 9.2 Sustainable Public Procurement

### 9.2.1 Priorities and Activities

SPP in Sweden takes place largely on a voluntary basis, with government agencies at all levels experimenting with different approaches, tools, certifications, and priority areas. Procurement is highly decentralized; for instance, in 2019, 68% of public purchases were made by municipalities, and 11% were made by regions (Upphandlingsmyndigheten, 2020). Overall, sustainability criteria were used in approximately 58% of all public procurements in 2020, down from 63% in 2018 (Nilsson Lewis & Machlowska, 2022). Public procurement in 2018 amounted to about EUR 70 billion (SEK 782 billion) (Upphandlingsmyndigheten, 2020).

The central purchasing body for the Swedish municipalities and regions, Adda, develops framework agreements and other tools that authorities can choose to use in their procurement. Adda has developed a comprehensive tool for analyzing sustainability risks, called the [Agenda 2030 Analysis](#). It is a process used in pre-procurement that is structured around the 16 SDG goals. As such, about half of the areas are social, several are economic, and several are environmental. Procuring agencies can voluntarily complete an Agenda 2030 Analysis template (over 100 pages long) before the procurement takes place (Adda, n.d.). A lot of emphasis is placed on transparency for completing this document, which takes a year on average, to verify that there are no legal issues or violations in the procurement. There is a category manager at Adda for each of the 16 SDG areas.

Circular procurement is also a priority in Sweden. There are tenders for reused furniture and IT products. Adda has also developed specific framework agreements for circular (reused) goods and services.

### 9.2.2 Use of Tools

GPP criteria exist for over 50 product groups in Sweden, covering over 900 different criteria. These criteria are searchable on the [National Agency for Public Procurement](#) website. Some of the criteria are modelled on the EU GPP criteria but were adjusted to be used more easily in the local context. Use of the GPP criteria is voluntary.





Certifications and labels are commonly used in Sweden, particularly the well-known Nordic Swan sustainability label that is frequently used in Nordic markets. There are several low-carbon procurement tools used (see below). More than 2,800 organizations and 9,300 sites are ISO 14001 certified (ISO, 2022). In contrast, the use of EMAS remains negligible, with only 10 certified organizations (European Commission, 2022).

## 9.3 Low-Carbon Procurement

### 9.3.1 Carbon Profile and Reduction Objectives

Sweden's national objective is climate neutrality by 2045—one of the most ambitious climate action goals among European countries. This climate target includes consumption-based emissions, making it the first country to also consider the carbon footprint of imported goods (Morgan, 2022).

In 2019, the contribution of public purchasing to GHG emissions was an estimated 23.5 million tonnes of CO<sub>2</sub>e (Upphandlingsmyndigheten, 2021). Emissions from construction and transportation processes are responsible for approximately one fifth of the annual CO<sub>2</sub> emissions; reductions in these sectors are therefore a major focus of the Swedish government (Sadri et al., 2022). Procurement is identified as an important tool to lower national emissions, particularly in the construction sector.

### 9.3.2 In Goods and Services

Sweden is a frontrunner in low-carbon procurement. As presented above, there are over 900 GPP criteria available for procurers, and there is extensive use of certifications and tools to meet these criteria. In addition, the Agenda 2030 assessment, while voluntary, has several categories related to carbon emissions that procurers must address, such as for energy use and in LCAs. Adda emphasizes the importance of transparency when considering the carbon emissions attributable to public procurement. It stresses that procurement authorities have to invest time and resources to understand the carbon emissions embedded in goods and services and in the supply chain (Scope 3 emissions).

In addition, Adda uses several climate-related requirements when negotiating framework agreements related to transport, including the delivery of goods and travel services (Adda Inköpscentral, 2022). When transport is the primary procurement objective, and Adda sees a high potential for reducing climate impacts, it demands the following:

- Policy commitment with objectives and an action plan in line with Sweden's climate goals.
- Climate policy for transport and/or travel.
- Procedures to minimize and optimize transport.
- Reporting of carbon dioxide emissions and share of fossil-free transportation.
- Fossil-free transport.
- The requirement to communicate commitment and practices.





Only part of these requirements applies in cases where transport is only a small part of the procurement or framework agreement. An interviewee underlined that ensuring compliance with these contract requirements demands close and labour-intensive follow-up from Adda.

### 9.3.3 In Infrastructure

Swedish authorities make extensive use of LCC and LCA in the procurement of infrastructure. For buildings in particular, a national law on emissions from new buildings came into effect in January 2022—the Boverket Climate Declaration Act. This law requires new buildings projects to disclose GHG emissions from construction. In practice, this will be using EPDs, which are already well established in Sweden. Companies in Sweden tend to already have their own systems or data to complete LCC analyses, and low-carbon tenders provide them with considerable incentives to use the best available data in their calculations.

There is also a focus on the use of functional or performance-based procurement to drive emissions reductions. For example, the extensive use of Design, Build, and Operate contracts pushes contractors to lower emissions not only in construction but also in the operation phase. In addition, climate-friendly requirements for construction materials such as asphalt and concrete are increasing.

Certification programs are frequently used in Sweden as a means for companies to demonstrate their environmental qualifications. Both the public and private sectors are familiar with their use.

Prominent examples include the following:

- [BREEAM](#) and [LEED](#) are certification systems for buildings in particular. [BREEAM Infrastructure](#), formerly known as CEEQUAL, is a sustainability rating scheme used in the design, construction, and maintenance of infrastructure.
- The Swedish Transport and Road Administration developed its own version of the Sustainability National Road Administrations (SUNRA) Framework 3 (Anderson-Sköld et al., 2022).
- The [Nordic Sustainable Construction](#) programme promotes shared standards and harmonization of LCAs in the region, among other activities.
- Building Information Modelling (BIM) is being used as a calculation tool for building projects based on LCA methods, simplifying environmental impact calculation (this is used throughout the Scandinavian region).

The Swedish Transport Administration (STA) or *Trafikverket* is the public agency responsible for road, rail, and marine transport infrastructure procurement in Sweden. Given the ambitious carbon reduction targets in the transport sector (70% by 2030 and net-zero by 2045), they are prioritizing electrification, increasing the share of renewable energy sources (particularly biofuels), and higher fuel prices (Trafikverket, 2021). They have developed an in-house approach to calculate and drive reductions in carbon emissions, called [Klimatkalkyl](#), which is applicable for procurements with a value over EUR 5 million. The climate impact of materials (and entire projects) is calculated using EPDs, and a threshold is set that cannot be surpassed by bidders. The reduction goals embedded in the tool are aligned with national





emission reduction targets and become more stringent over time. Bidders can be further rewarded if they reduce their emissions during contract delivery (possibility for a 10% bonus after contract fulfillment). For smaller projects, another process of target-setting applies. Municipalities also procure infrastructure; many have their own GPP practices and priorities, and several are using Trafikverket's *Klimatkalkyl* tool.

### 9.3.4 Carbon Data Collection/Monitoring

In terms of monitoring, the National Agency for Public Procurement follows up with monitoring GPP in general, and part of this is monitoring carbon emissions attributable to procurement. They have recently developed a tool to conduct a detailed [environmental spend analysis](#), which includes a carbon element, and therefore a climate impact estimation. The tool provides a carbon and environmental footprint of procurement and also provides the methodology for measuring externalities and calculating them (Upphandlingsmyndigheten, 2022). It remains to be seen if this measurement tool will be used regularly to monitor procurement and its impacts.

The National Agency for Public Procurement issues a biannual survey on public procurement practices and challenges. In 2020 the results indicated there was a “large development need” for procurement to better support the national climate goals (Upphandlingsmyndigheten, n.d.).

## 9.4 Potential for CO<sub>2</sub>PL

### 9.4.1 Main Stakeholders

The central purchasing body Adda, the National Agency for Public Procurement, and the National Procurement Services at Kammarkollegiet are key procurement stakeholders in Sweden. Adda is owned by the Swedish municipalities and functions as their central purchasing body—for example, negotiating framework agreements that are mandated by national law for some products. On the national level, Procurement Services fulfills this role. Other relevant stakeholders at the central level include the Ministry of Finance, the Ministry for Public Administration, the Swedish Competition Authority, and the national accreditation body Swedac.

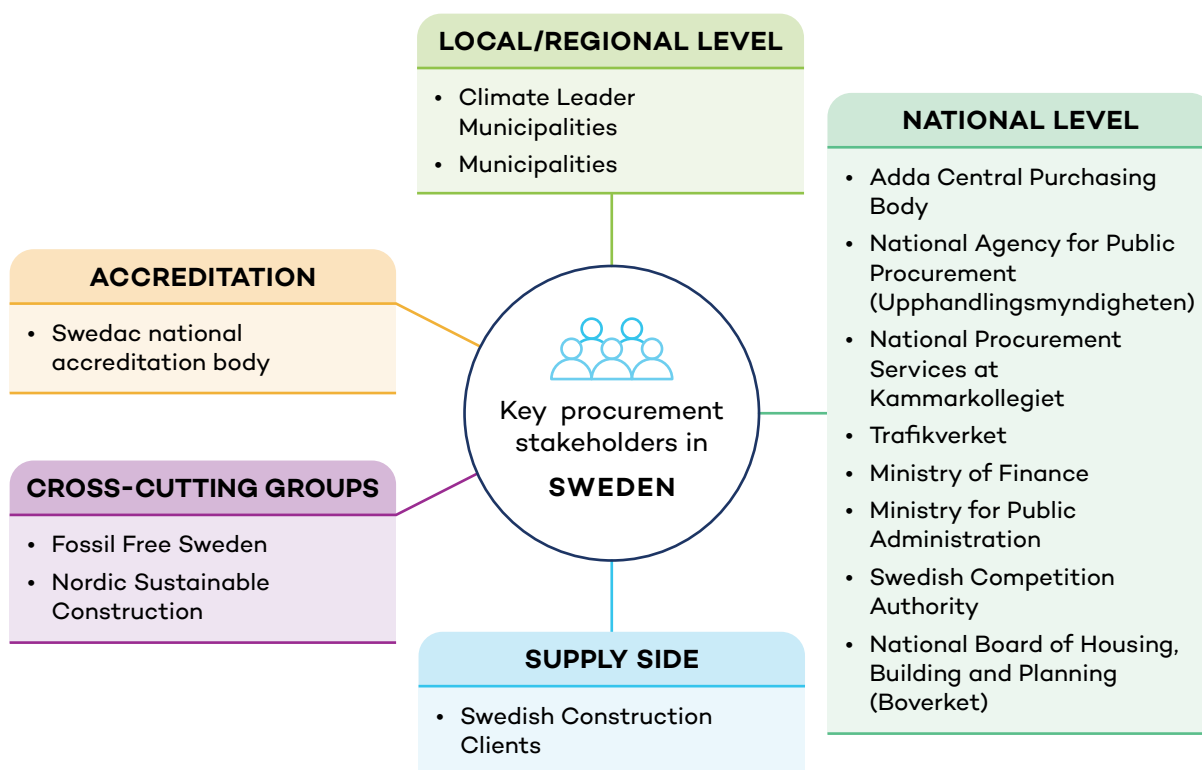
For piloting the CO<sub>2</sub>PL in the infrastructure sector, a collaboration with Trafikverket or Boverket (the Swedish National Board of Housing, Building and Planning) would likely be good starting points. Trafikverket is already very experienced in GPP, but there is room for a complementary tool like the CO<sub>2</sub>PL. On the supply side, a collaboration with Swedish construction clients could be worthwhile.

A collaboration with the cities of Malmö and Växjö could be fruitful for the CO<sub>2</sub>PL. Both cities are members of the Procura+ Network and were nominated for GPP awards in recent years. It could also be worthwhile to engage with cross-cutting, multistakeholder groups, such as the climate mitigation initiative Fossil Free Sweden and the Nordic Sustainable Construction program.





**Figure 11.** Key procurement stakeholders in Sweden



### 9.4.2 Challenges for the Use of the CO<sub>2</sub>PL

Interviews revealed risk aversion among procurement professionals in Sweden, despite the procurement culture of openness, voluntary initiatives, and trying new approaches. Competition between suppliers for public contracts is high, procurement law is strict, and there are many legal challenges to procurement approaches brought to court every year. As such, there is a need for procurers to better understand the CO<sub>2</sub>PL and its proven compatibility with the EU Procurement Directive. In particular, it would be important to communicate with the competition authority in Sweden on how the CO<sub>2</sub>PL use in public procurement shows a clear link to the subject matter of the contract and the need to accept equivalent means of proof for company activities related to the contract.

Another challenge will be to keep building interest from Sweden’s Trafikverket. Although it is a relatively new agency, it quickly developed an in-house tool to track and manage carbon emissions, and interviews revealed that it has a preference to work with a mandatory requirements approach based on the EPDs and their thresholds rather than use award criteria to give preference to companies. Nonetheless, the CO<sub>2</sub>PL could help address some of Trafikverket’s limitations on carbon management—as discussed in more detail below.

Finally, procurement authorities face time and resource constraints for learning about and implementing new tools, especially since there are already many carbon tools available. Emphasizing that the CO<sub>2</sub>PL is an “off-the-shelf” solution that is ready to be tested in Sweden without much effort on behalf of procuring agencies will therefore be important.





### 9.4.3 Opportunities for the Use of the CO2PL

There is potential for a pilot project with the CO2PL in Sweden because of a general openness and interest in trying new approaches. There is also an established tradition of pre-procurement market dialogue, with platforms for pre-procurement dialogues and market engagement, often organized by Adda or Trafikverket. Such dialogues would be conducive to discussing the use of new tools like the CO2PL. There is also familiarity among economic actors with certification systems. Procurement agencies also have a strong desire to use functional procurement to incentivize companies to innovate to reduce their emissions.

Alignment with ambitious climate action targets, as well as climate change law and policy, represents an important entry point for the CO2PL in Sweden. More specifically, Swedish climate change policy emphasizes carbon reductions, not compensation, which fits well with the design of the CO2PL, which does not allow carbon offsetting.

Research and interviews also indicate a strong innovation appetite from the private sector in Sweden and a general sense that regulation and standards in the public sector are behind on what the market can already deliver (Lingegård et al., 2021). From companies' perspectives, there are a plethora of tools, but they are paired with a need for more ambitious goals from the public sector to drive behaviours and practices. The CO2PL would need to illustrate how it can sufficiently and continuously push for emissions reductions and innovation. The CO2PL's five levels and emphasis on continuous improvement could address this challenge and facilitate peer learning in the construction sector.

A related point is the desire from the supply side for verification of companies' activities on carbon reductions. In particular, Trafikverket's carbon management system, Klimatkalkyl, has a penalty system in place for contractors who do not meet the carbon emission objectives set out in the contract. However, at the time of research, no auditing system is in place, which can be frustrating to the contractors. The CO2PL, on the other hand, embeds a system of third-party auditing of certified companies on an annual basis. This could provide an important entry point for the CO2PL in the Swedish transport infrastructure sector, with no obligation for Trafikverket or its agencies to spend additional resources on auditing.

Based on these points, one promising way forward would be to work with the Swedish private sector, like major Swedish and international suppliers to the Swedish public sector, to build awareness about the tool; certify companies; demonstrate its compatibility with other carbon standards, such as ISO and Greenhouse Gas Protocol; and build demand from the private sector side on a tool that can easily be used in procurement.

Interviews revealed that reliance on EPDs to measure carbon and compare bids is working well but that they can be difficult to use and define system boundaries for, and they do not provide guidance for companies. If SKAO can provide more coherent methods for measuring, managing, and communicating carbon emissions, this could be a valuable entry point. It will be important to emphasize the complementarity between EPDs, which are based on materials, and the value added of a process- or management-oriented certification program.

Working with Adda on their housing procurement (e.g., preschools and other three- or six-storey buildings) was proposed as a pilot project. Recently, Adda requested suppliers who won







contracts to submit EPDs after implementation—this proved to be a complicated process, and perhaps there is a role for a simpler tool like the CO2PL. Finally, working with ambitious municipalities such as Stockholm, Malmö, or Gothenburg could provide the necessary proof of concept of the CO2PL in Sweden.

**Table 12.** Summary of key challenges and opportunities for the CO2PL in Sweden

Challenges	Opportunities
Risk aversion on legal aspects of public procurement; there are many legal challenges in procurement every year	Advanced experience with certifications and high ambition to reduce carbon emissions
Stated preference for mandatory, not voluntary, carbon reduction in infrastructure procurement through the use of EPDs	Regular dialogue between procurers and suppliers
Time and resource constraints of public procurers	Supplier demand for third-party verification systems to differentiate sustainable companies

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# 10.0 United Kingdom





## 10.1 Key Observations

- Major procurement reforms are currently underway, which are expected to provide more flexibility and opportunity for contracting authorities to practice GPP.
- Carbon neutrality is a priority for value-based and socially responsible procurement frameworks, and there is potential for the CO2PL to complement the new Carbon Reduction Plans (CRPs).
- A challenge might be demonstrating the clear value added of the CO2PL in a busy marketplace for carbon tools.

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## 10.2 Sustainable Public Procurement

### 10.2.1 Priorities and Activities

Major reforms to public procurement were taking place at the time of preparing this report. The Procurement Bill (in Parliament at the time of writing in 2022) proposes the reform of four major bodies of regulations on public contracts, utilities contracts, concession contracts, and defence and security public contracts to be replaced by a new, single regulatory framework. This is expected to become law in 2023.

Some of the reforms in the Procurement Bill will have a direct—and possibly significant—impact on the ability of procurers to practice GPP and SPP. As set out in the 2020 *Green Paper: Transforming Public Procurement*, some of the most SPP-relevant changes will include the following:

- The new legislation proposes a change from the use of the term MEAT to most advantageous tender (MAT) in order to reinforce the message to contracting authorities that they can take a broad view of what can be included in the evaluation of tenders. This is expected to provide more flexibility to include qualitative and GPP objectives in evaluations.
- It also proposes relaxing the requirement to show a *link to the subject matter* of the contract in award criteria, in certain circumstances, and especially for larger contracts. In the public consultation process, stakeholders suggested that this will support the implementation of net-zero policies (Cabinet Office, 2021c).

Procurement Policy Notes (PPN) are the main source of SPP guidance in the United Kingdom, and they make reference to the relevant legislation and documentation in question. A 2021 Procurement Notice introduced a new “social value model” for central government so that social value benefits are explicitly evaluated in procurement rather than just “considered” as per the previous legislation. One of the themes explicitly addressed in the social value model is Fighting Climate Change, which provides a legislative basis for contracting authorities to refer to this in the evaluation of bids (Cabinet Office, 2020).





Under the existing procurement regulations, the central government has mandatory minimum GPP standards in 11 product groups, referred to as the Government Buying Standards (GBSs) (DEFRA, 2017). The GBSs were created by the Department for Environment, Food and Rural Affairs (DEFRA). These standards are encouraged—but not mandatory—for other levels of government. Moreover, any organization concerned about sustainable procurement can follow them or specify them in tenders. These align with the EU GPP product groups and include furniture, electrical goods, transport vehicles, construction materials, and others (DEFRA, 2017). For the 2021–2025 period, the central government will be focusing on compliance with the GBS and reporting on their activity (UK Government, 2021).

### 10.2.2 Use of Tools, Instruments, and Labels

The main SPP tools are the product specifications laid out in the GBSs. In meeting the GBSs' minimum requirements, procurers in the central government are familiar with using ISO and product-specific eco-labels and energy standards to assess and compare offers. For energy ratings, national standards apply in some cases, like the British Fenestration Rating Council for windows and doors and Energy Star for ICT procurement. Procurers are also familiar with EU Ecolabels and other international eco-labels. EMSs in line with ISO standard 14001 are widespread in the United Kingdom, with more than 17,300 certified organizations spanning over 30,000 sites (ISO, 2022).

For infrastructure, the [Construction Playbook](#) is the definitive guidance and best practice document. There are 14 main policy areas addressed, with related tools, templates, thresholds, etc. Some GPP-relevant provisions from the Construction Playbook include the following:

- Early supply chain involvement with tier 1 contractors and their subcontractors to discuss design is to be considered *part* of the procurement process.
- Focus on outcome-based procurement to drive innovation and continuous improvement and to link procurement to the achievement of national goals as outlined in the social value model.
- Projects are advised to develop Should Cost Models (SCMs) at the outset of a new project to give a forecast of projected costs and risks over their whole-life cycles (like a public sector comparator). With insights from the SCMs, contracting authorities can devise an evaluation model. SCM can be used as an evaluation or award criterion, and this needs to be communicated to the bidders.
- In developing tender evaluation models, it is suggested that a minimum weighting of 10% of the total score for social value should be applied (in line with PPN 06/20).

As major procurement regulation changes are underway, the status of other SPP tools, such as training, monitoring, and GPP prioritization tools, moving forward is uncertain (UK Government, 2014).





## 10.3 Low-Carbon Procurement

### 10.3.1 Carbon Profile and Reduction Objectives

In 2019, the United Kingdom introduced the legally binding target to achieve net-zero carbon emissions by 2050 (Climate Change Act, 2008; Climate Change Committee, n.d.). Progress toward meeting carbon budgets is set out based on the Climate Change Act and is monitored annually by an independent expert body. The Welsh and Scottish governments have even more ambitious aims to reach net-zero carbon emissions by 2030 and 2045, respectively.

Governments in the United Kingdom all explicitly identify public procurement as a priority area for action in meeting their net-zero goals through policy documents. At the central level, a National Procurement Policy Statement (June 2021) set out strategic priorities for public procurement, explicitly calling on contracting authorities to use procurement for addressing climate change and reducing waste (Cabinet Office, 2021a). The Welsh Government, in particular, stands out for empowering public officials “to challenge the status quo” in their procurement by making it “routine” to request zero carbon alternatives and using alternative business models (Welsh Government, 2021).

### 10.3.2 In Goods and Services

Some of the GBSs have criteria related to carbon emissions thresholds and/or reductions. Examples are the mandatory minimum emissions standards for procuring vehicles, the use of the Carbon Trust sector guidelines for procuring catering services, and the use of the U.S. government’s Energy Star label criteria for the procurement of ICT products.

More generally, the [AS2050](#) standard is frequently used by businesses in the United Kingdom to calculate—and provide product labelling on—the carbon footprint of goods and services. The [PAS 2060](#) standard builds on this and sets requirements for organizations to be considered “climate neutral” for events, products, and the organizations themselves. The British Standards Institution verifies companies for these PAS standards.

The [Carbon Trust’s suite of product carbon footprint labels](#), the [Greenhouse Gas Protocol Product Standards](#), and [ISO 14 067](#) are also widely recognized and used to understand and compare the full life-cycle emissions of products and focus efforts on the greatest GHG reduction opportunities.

### 10.3.3 In Infrastructure

A plethora of tools, approaches, standards, and certification programs aim to reduce carbon emissions through infrastructure construction and maintenance. Here, we present a few of the most relevant ones that are likely to be prioritized in the coming years and that could potentially be complemented by the CO2PL.

Notably, since 2021 there has been a new regulation in place to evaluate suppliers’ commitments to net-zero. Suppliers bidding for major central government contracts (over GBP 5 million per year) and framework agreements are required to prepare and submit a





CRP. It is not mandatory for local and regional levels of government, but it is encouraged. The CRP is submitted as an annex to a supplier's bid, details their organizational carbon footprint, and confirms their commitment to achieving net-zero by 2050 (at least in their United Kingdom operations). The CRP is specific to the bidding entity but, under some circumstances, may cover the bidding entity and its parent company. It is only necessary for suppliers to develop and keep one CRP up to date (Cabinet Office, 2021b). Companies that are certified on the CO2PL would be well prepared to complete their CRP forms and demonstrate their activity—an opportunity we explore below.

Generally, procuring authorities are now expected to request whole-life carbon assessments for construction projects. As such, there are many whole-life carbon tools available to companies in the United Kingdom. According to the Construction Playbook, whole-life carbon assessments should feature in the evaluation of bids: “Contracting authorities should require that solutions put forward by potential suppliers are accompanied by a whole-life carbon assessment. This should be conducted in collaboration with the wider supply chain, reflecting ways of minimising the GHG emissions across the life of the asset” (UK Government, 2022, p. 23).

Some of the more established carbon assessment tools and standards used include the following (several of which are used beyond the United Kingdom as well):

- [PAS 2080](#), the Publicly Available Specification for Carbon Management in Infrastructure Standard, is managed and verified by BSI.
- Construction Sector Transparency [Initiative](#) (COST)
- The GBSs (mandatory GPP) for the construction of new buildings and refurbishing are based on the application of the [BRE's Environmental Assessment Method](#) (BREEAM) standard, a formal sustainability assessment method for infrastructure and buildings.
- [Standard for Resilient and Sustainable Infrastructure](#) (SURE standard)
- The use of a BIM environment to calculate carbon emissions for buildings, based on LCA methods, is increasingly common (also in Scandinavian countries).
- [SCATTER](#) is a free tool available to all local authorities in the United Kingdom. It focuses on carbon emissions measurement and modelling, facilitating the standardization of GHG reporting and alignment to international frameworks, including the setting of targets in line with the Paris Agreement. The emission inventories cover Scope 1 and 2 emissions as well as some Scope 3 emissions.
- The National Highways Authority has been using carbon accounting for many years and has its own [carbon emissions calculator](#) tool to calculate carbon emissions from construction, operations, and maintenance. Its suppliers must regularly report on their activities using the tool.
- The Rail Carbon Tool is free to use for the railway industry (carbon calculator, footprint, reporting) and managed by the Rail Safety and Standards Board.
- The [Science Based Targets Initiative](#) provides tools for different sectors, including buildings, cement, power, steel, and transport. It helps companies to track emissions





and identify carbon reduction strategies (for Scope 1 and 2 emissions, at the time of writing) and it independently assesses and approves companies' targets in line with its strict criteria.

- The Chancery Lane Project [Net Zero Implementation Tools](#) provide a range of online tools to track, measure, and monitor carbon.

As this small sample shows, it is clear that the United Kingdom represents a busy marketplace for carbon tools.

### 10.3.4 Carbon Data Collection/Monitoring

Every year, the United Kingdom spends GBP 300 billion on the procurement of goods, works, and services (Government Commercial Function, 2022). And while climate change mitigation is a high-level political priority, measuring and reporting GHG emissions has been posing significant challenges for policy-makers (UK Parliament, 2022). For instance, in the current system, only central government departments are required to measure and report, leaving a huge part of the public sector, including schools, hospitals, and local government, out of the equation. Furthermore, monitoring requirements for central government are limited to Scope 1 and 2 emissions (UK Parliament, 2022).

DEFRA publishes annual progress reports for the Greening Government Commitments, tracking progress against the targets set out for the period, including on mitigating climate change (DEFRA, 2022). Progress has been noted—for instance, the most recent report states that there has been a 50% reduction in GHG emissions from central government departments since 2009 (DEFRA, 2021). The four nations of England, Wales, Scotland, and Northern Ireland have their own systems in place for monitoring and publishing carbon emissions and SPP activity.

## 10.4 Potential for CO<sub>2</sub>PL

### 10.4.1 Main Stakeholders

For the CO<sub>2</sub>PL, collaborating with existing industry networks and associations that advance low-carbon procurement is a promising way forward. The [Infrastructure Clients Group](#) and the [Construction Innovation Hub](#) are two examples. The former refers to itself as a “homework-sharing club” for the United Kingdom’s largest infrastructure companies where they can share best practices and mistakes in an atmosphere of trust and figure out how to become more sustainable. The Infrastructure Clients Group has a Carbon Taskforce that holds regular workshops on relevant topics, such as “carbon-conscious procurement.” The [Project 13 Group](#) aims to transform the entire business model around infrastructure procurement—basing it more on an enterprise model and less on traditional transactional processes. On the supply side, the Construction Leadership Council launched a zero carbon program in 2020 [CO<sub>2</sub>nstructZero](#), on how industry can rise to the challenge and drive this change.

At the local level, working with municipalities that are either particularly ambitious on carbon neutrality and/or have demonstrated interest in the CO<sub>2</sub>PL, such as Cardiff in Wales



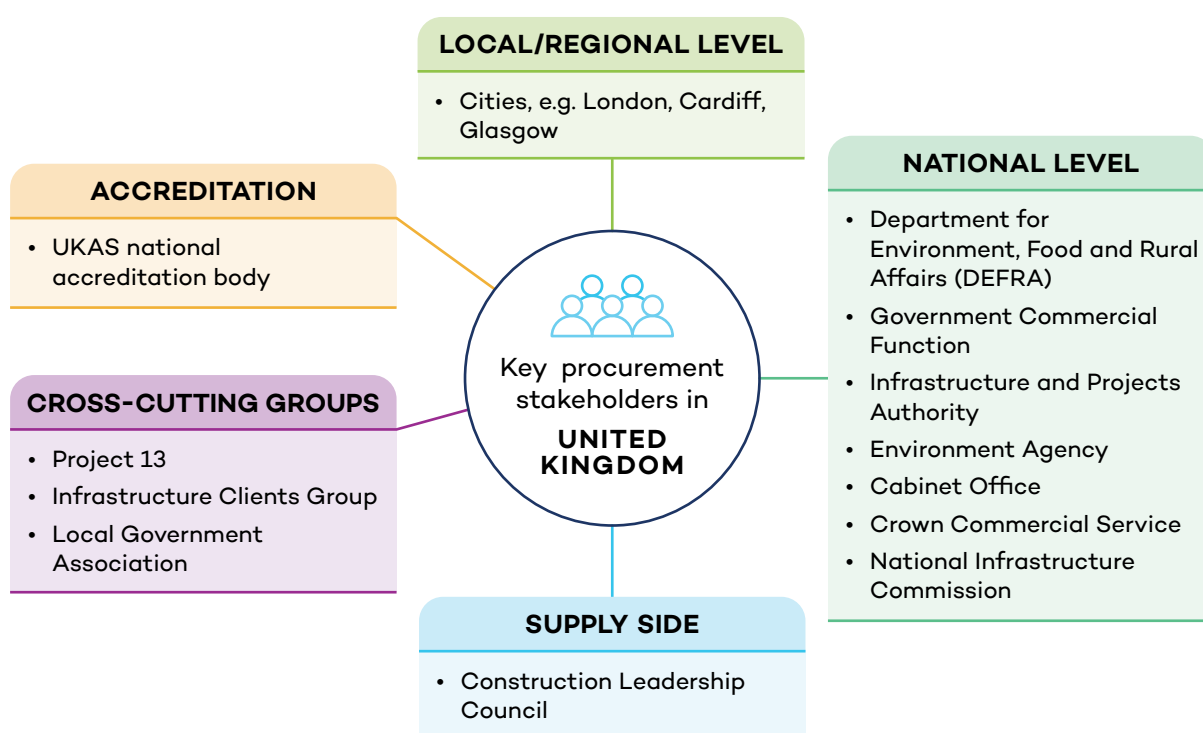




and Glasgow in Scotland, could be productive. Procura+ Network members with strong GPP activities include the Scottish Environmental Protection Agency and the Greater London Authority. The Local Government Association could be relevant for activities on the local level.

On the national level, relevant stakeholders can include the national United Kingdom Accreditation Service (UKAS), the Government Commercial Function as a central purchasing body, the Crown Commercial Services as an executive agency under the Cabinet Office, the Environment Agency, the National Infrastructure Commission, and the Infrastructure and Projects Authority.

**Figure 12.** Key procurement stakeholders in the United Kingdom



### 10.4.2 Challenges for the Use of the CO<sub>2</sub>PL

Several stakeholders interviewed were concerned about the private sector’s ability to get certified in order to be able to achieve the award advantage for potential pilot projects. While some large companies are advanced in implementing net-zero policies, the majority of companies—especially SMEs—still struggle to provide basic data on carbon reporting, and there is a perception that they are not ready to get certified for their activity. A related concern was that when preparing their bids, companies large and small might actually overestimate their performance on carbon and not be able to meet the level on the CO<sub>2</sub>PL they attest to on their bid before they are audited.

Finally, there was a general concern that 1 year would be insufficient time for a company to become certified, particularly given the large size of the British market (with many suppliers to





be certified) and the limited capacity of certifying bodies—or at least that this could become a bottleneck. This has not, however, shown to be problematic in the Netherlands to date, where companies easily certify within 1 year, particularly on levels 1 to 3 of the CO<sub>2</sub>PL.

Another concern is that there are many competing tools, standards, and certifications in the United Kingdom marketplace. PAS 2080, in particular, is a similar instrument already being used by the private and public sectors throughout the United Kingdom to manage carbon in infrastructure. PAS 2080 has been highly effective in communicating carbon reduction behaviours and in providing a consistent framework for carbon management, including the requirement for strong leadership (McCann et al., 2021). In this context, it would be important for the CO<sub>2</sub>PL to provide a clear and unique value added to the existing array of tools and approaches, as proposed below.

### 10.4.3 Opportunities for the Use of the CO<sub>2</sub>PL

The new procurement regulation, expected to become legislation in 2023, will present a range of new opportunities for contracting authorities to prioritize net-zero policy through procurement. As presented above, the new regulations will allow procurers to select bids based on the MAT and also relax the requirement to link to the subject matter of the contract, with certain conditions. Furthermore, the regulation is expected to streamline procurement processes, and make it easier to communicate and negotiate with suppliers. As such, concerns that other EU countries have expressed about legal barriers are unlikely to be problematic in the post-Brexit procurement landscape. Both the timing and the mindset required to use the CO<sub>2</sub>PL will be conducive to such new approaches.

In addition, CO<sub>2</sub>PL certification could be promoted to help suppliers show compliance with Net Zero 2050 on their CRPs. Suppliers for large projects have to demonstrate that they undertake a range of activities on carbon, such as transparently communicating about their activity; measuring Scope 1, 2, and a subset of 3 emissions; and demonstrating their efforts to reduce their emissions. All of these activities and others can be demonstrated by CO<sub>2</sub>PL certification. The fact that the CO<sub>2</sub>PL is third-party verified responds directly to a concern from the private sector that some companies might lie about or exaggerate their carbon mitigation efforts. In this context, the CO<sub>2</sub>PL could become recognized for its verification mechanism when contracting authorities are assessing the CRP documents, becoming the de facto best practice for companies bidding for large contracts.

In spite of the United Kingdom being a busy marketplace for carbon measurement and management tools, there seems to still be space and demand (at least from the private sector) for a tool that has a successful track record being used as an award criterion in procurement and is third-party verified. The PAS 2080 tool, for instance—which comes closest to the CO<sub>2</sub>PL and is a holistic carbon management certification—has not been used to provide an award advantage to bidders. A recent study found that the fact that government does not use the standard in procurement has limited its adoption (McCann et al., 2021). The study also noted stagnation in the use of PAS 2080 because organizations do not understand the benefits of certification. This provides an opportunity for the CO<sub>2</sub>PL to distinguish itself as a tool that is similar but has a 13-year track record of being used in public procurement processes.





While working with Westminster offers the possibility of scale, the Scottish and Welsh governments have shown bold leadership on climate action. In Wales, there is currently extensive public research into decarbonization and the circular economy and a commitment to addressing Scope 3 emissions in the procurement of goods and services (Welsh Government, 2021b). Low-carbon procurement in construction (roads), buildings (schools), and other goods (food and catering) are current priorities. In Scotland, Glasgow City Region aims to be carbon neutral by 2030 and uses its SPP strategy to target climate mitigation by reducing Scope 3 emissions and working with suppliers.

Finally, some of the big companies working in the United Kingdom that also work internationally are either a) already certified on the CO<sub>2</sub>PL or b) could quite easily become certified and could demonstrate leadership to other companies. This could stimulate discussion and certification among suppliers locally and facilitate the roll-out of a pilot tender.

**Table 13.** Summary of key challenges and opportunities for the CO<sub>2</sub>PL in the United Kingdom

Challenges	Opportunities
Concerns about private sector companies' ability to get certified in a timely manner	New regulations will facilitate GPP and selecting suppliers based on carbon reduction efforts
Busy marketplace for carbon tools	CO <sub>2</sub> PL can show compliance with the mandatory CRPs
Deciding on a strategic entry point and government level to pilot the CO <sub>2</sub> PL for impact	Still space for a carbon management tool to be used in procurement processes

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## Conclusion: Cross-cutting observations and recommendations

This report has provided a detailed assessment of green and low-carbon procurement activities in 10 European countries, with the aim of gauging the need and interest in using the CO<sub>2</sub>PL. We find that there is a clear opportunity to use the CO<sub>2</sub>PL across Europe, as it responds directly to the demand from public authorities for easy-to-use, practical tools to reduce carbon emissions. There is a clear interest in tried-and-tested approaches to stimulate decarbonization through public procurement processes, as well as a marked demand for third-party verified certification systems. In terms of the legal framework, the CO<sub>2</sub>PL is ready to be implemented, as it is already operational under the EU's Procurement Directive. Overall, the CO<sub>2</sub>PL is well positioned to support many European countries' objectives for carbon neutrality in the coming decades.

The following recommendations are suggestions for the next steps in scaling up the use of the tool in Europe, addressing common challenges, and establishing pilot projects.

### **1. Compared to other carbon tools and approaches, the CO<sub>2</sub>PL stands out for its track record of use in public procurement, its proven carbon mitigation impact, and its third-party verification system.**

There has been an exponential increase in the number of tools, standards, certifications, and approaches to measure, manage, and report carbon emissions. Many of these are used indirectly in public procurement—particularly carbon calculators or tools that provide an LCA of a product, service, or infrastructure project. Yet, there is no evidence of similar carbon-specific management standards being used to grant award advantages to bidders for government contracts. The CO<sub>2</sub>PL is unique in Europe as a tool that was specifically developed for low-carbon procurement in the railway sector and grew as a result of the power of public procurement to move markets in many different sectors. As carbon mitigation becomes more important and urgent across Europe—and demand for tested procurement approaches increases—lessons from the CO<sub>2</sub>PL become more important to share.

Interviews revealed that there is widespread interest and demand for carbon management tools that are third-party verified, particularly as many tools and approaches that support net-zero policies are emerging. For procurers, the benefits of third-party verification are that it shifts the burden of proof of compliance to an accredited auditing firm, lessening the time and financial resources needed to follow up with suppliers. From the supply perspective, third-party verification means that the investment into systems to track, monitor, manage, and reduce carbon can be recognized and rewarded, and set them apart from companies that are making less effort on carbon management.

The UK's PAS 2080 carbon management standard for infrastructure comes close to the CO<sub>2</sub>PL from a substantive standpoint. However, it has not been used in public procurement to date, either as a mandatory or voluntary award criterion, which has limited its uptake and impact. On the other hand, the new CRPs in the United Kingdom must be used systematically for procurement (above specific thresholds), but there is no requirement for third-party



verification of companies' stated commitments. This example shows the unique value of the CO<sub>2</sub>PL in Europe. The CO<sub>2</sub>PL fills a similar gap in several countries and can complement other existing instruments by addressing their shortfalls in a collaborative manner.

**Recommendation:** Emphasize the CO<sub>2</sub>PL's unique advantages as a GPP tool in Europe with a long track record in public procurement processes through events, publications, and social media activities.

**Recommendation:** Emphasize that the CO<sub>2</sub>PL is third-party verified and advocate more generally for the use of third-party verified standards and certifications, with both public and private sector stakeholders, to advance fair playing fields and the robustness of climate action.

## 2. Mandatory GPP is prevalent in many countries in Europe; however, it is not a prerequisite for nor an indicator of the potential use and uptake of the CO<sub>2</sub>PL.

While GPP evolved in Europe mainly on a voluntary basis, more and more governments are making GPP mandatory. While many such policies are implemented by central governments, there are also many examples of cities and regions doing so—some of which were presented in this report. Mandatory GPP is being practised mainly as the use of minimal threshold GPP criteria in specific product, service, and construction categories, such as minimum energy ratings for IT equipment, maximum chemical concentrations in cleaning products, or maximum emissions for new vehicles or fleets procured. Some countries use the EU's GPP criteria directly, and others tweak them or rewrite them completely to make them more relevant locally.

Mandatory GPP can also take the form of mandating suppliers to submit an LCA with their bids, but the process through which authorities use these LCAs to compare and select bids is often opaque. Yet another way is to mandate the minimum weighting for quality considerations in the awarding of bids (e.g., 20 points for quality, 80 points for price).

The CO<sub>2</sub>PL could work equally well in contexts with or without mandatory GPP. It can, of course, complement mandatory GPP mechanisms, described above, but does not require them to be present. In a country like Italy, for instance, where GPP activity is mainly based on the mandatory use of minimum GPP criteria, many of which have a negligible impact on carbon, the CO<sub>2</sub>PL can add value by introducing a voluntary means to incentivize and reward the private sector at the award stage. On the other hand, where GPP activities remain largely voluntary, like in Sweden, the CO<sub>2</sub>PL can fit into a procurement culture of multiple, co-existing, and voluntary approaches and benefit from other features of the procurement “ecosystem,” such as pre-procurement dialogue and innovation.

Finally, it is worth noting that a major procurer of infrastructure in the Netherlands—the Ministry of Infrastructure and Water Management—gives an award advantage to companies that are CO<sub>2</sub>PL certified *in addition to* (not within) the mandatory points allocated to quality. This further demonstrates how the CO<sub>2</sub>PL is adaptable and can operate on a parallel, complementary track to mandatory GPP.



**Recommendation:** As the CO<sub>2</sub>PL evolves in Europe, consider the mandatory GPP a complementary/parallel track but not an indication of the potential for uptake of the CO<sub>2</sub>PL. At most, it might represent early stages of interest in developing GPP activities in that jurisdiction.

**Recommendation:** In dialogue with procurement policy-makers and contracting authorities, SKAO can emphasize how mandatory GPP can—but does not necessarily—address the challenge of carbon emissions and that the CO<sub>2</sub>PL addresses this explicitly by motivating suppliers to go further with their carbon management practices.

### 3. Countries in Europe are facing similar measurement challenges in implementing net-zero/low-carbon policies through public procurement.

All the countries included in this study are grappling with the implementation of policies related to carbon emissions reductions, whether driven through national, EU, or international policy. While procurement is identified as a mechanism through which the public sector can “walk the talk” on climate action, there is a unanimous need for practical methodologies that allow suppliers to quantify and track the embodied carbon of the goods, services, and infrastructure they buy. Without widely accepted, standardized metrics, it is challenging for contracting authorities to compare bids and report to higher authorities. In response to this challenge, EPDs have become widespread across Europe as an LCA method to demonstrate environmental impacts, including embodied carbon emissions. There are still challenges to be addressed in the EPD system, such as defining boundaries for calculations and ensuring companies use the same processes and data to complete the calculations, therefore enabling accurate comparisons. However, we observe that the use of EPDs in public procurement is becoming more systematic.

**Recommendation:** As the CO<sub>2</sub>PL evolves in Europe, it will be essential to align with common carbon measurement methods, such as EPDs, and to integrate these into practical resources (e.g., handbooks and training) for users, facilitating harmonization and comparability.

### 4. Cities across Europe are positioned to lead on net-zero, making them good potential partners for future work.

Cities play a critical role in ensuring that decarbonization efforts are timely, equitable, and widely beneficial. Many carbon initiatives in Europe are being implemented at the city scale. In the sample of initiatives listed below, procurement is typically one of several strategies for taking action on climate change:

- [Daring Cities 2023](#) is a virtual forum that recognizes and empowers urban leaders to take courageous climate action. Created by ICLEI and the City of Bonn, Daring Cities offers events and resources for urban practitioners, policy-makers, and researchers.



- [NetZeroCities](#) is a 4-year project that aims to help cities achieve climate neutrality by 2030. It supports cities in overcoming the structural, institutional, and cultural barriers to climate action. NetZeroCities is coordinated by EIT Climate-KIC and brings together 33 stakeholders, including Climate Alliance, ICLEI, and Eurocities.
- The EU Mission for [Climate-Neutral and Smart Cities](#) involves local authorities, citizens, businesses, investors, and regional and national authorities to deliver 100 climate-neutral and smart cities by 2030 and to ensure that these cities act as experimentation and innovation hubs to enable all European cities to follow suit by 2050.
- [Eurocities](#) is a network of over 200 of Europe's largest cities working to improve the lives of residents. Along with ICLEI, they run the [Big Buyers for Climate and Environment](#) on behalf of DG Grow of the European Commission. In its working groups, purchasing organizations focus on specific unmet procurement needs—for example, related to zero-emission construction sites and circular construction.

**Recommendation:** Work with a selection of European cities, through an existing network listed above or otherwise, to disseminate knowledge about the CO<sub>2</sub>PL and promote open dialogue on concerns and opportunities for using the tool in procurement.

**Recommendation:** Collaborate with broader stakeholder networks like ICLEI to organize exchanges, capacity-building events, and peer learning between procuring authorities.

**Recommendation:** Cluster 3–4 leading cities together for a pilot project with the CO<sub>2</sub>PL to build synergies with other projects and to generate a critical mass of experiences and findings on its use and impacts on reducing carbon emissions.

## 5. Circular economy policies are becoming mainstream in legal frameworks in Europe.

Moving toward a more circular economy is a vital part of decarbonization efforts, as materials represent a significant portion (60% in industry overall) of carbon emissions. Like net-zero, circular economy policies are becoming integral parts of binding legal frameworks across Europe. Landmark legislation in Ireland on the circular economy demonstrates this trend, as do the circular economy strategy in Austria, Germany's circular economy bill, the national procurement policy in the United Kingdom, and framework agreements on circular procurement in Sweden.

**Recommendation:** Develop case studies on how CO<sub>2</sub>PL certificate holders are active in circular economy activities, particularly in the construction sector, and are “rewarded” for it by attaining higher levels on the CO<sub>2</sub>PL.

**Recommendation:** Explore how the CO<sub>2</sub>PL contributes to circularity by collaborating with networks and organizations advancing circularity in Europe. For example, SKAO could work with cities that signed the European Circular Cities Declaration.





## 6. Risk aversion in preparing public procurement tenders is common across contracting authorities in Europe, particularly on legal aspects.

Public procurement is a risk-averse profession, particularly as it relates to compliance with the legal framework. Legal concerns frequently emerged in interviews. Even in more “advanced GPP” countries like Spain, Denmark, Sweden, and Germany, contracting authorities may be hesitant to grant award advantage to companies based on CO2PL certification. In these countries and others, efforts to integrate environmental criteria into procurement processes are often challenged in court, reinforcing a culture of risk aversion.

**Recommendation:** Demonstrate compliance with the 2014 EU Procurement Directive through sharing of clauses from tenders in the Netherlands and Belgium with all interested parties. Share the *Legal FAQs* document widely, as a basis for discussion, in order to demystify the use of the tool in public procurement.

**Recommendation:** Develop a pool of procurement and legal experts to support countries in implementing pilot projects with the CO2PL, tailoring expertise to specific legal issues, barriers, and concerns.

**Recommendation:** Work closely with stakeholders in pilot countries to overcome concerns; develop dedicated working groups on legal barriers—as was the case for pilot projects in Belgium.

**Recommendation:** Explore the possibility of using the CO2PL as a pre-qualification criterion or as a mandatory quality criterion or performance clause in pilot projects. Like an EMAS, company-wide CO2PL certification (in the form of an Awareness Certificate) could serve as formal proof that a company meets a wide range of management criteria that are essential for meaningful carbon reductions.

## 7. Protecting the ability and potential for SMEs to bid for government contracts continues to be a priority for contracting authorities in Europe.

Contracting authorities interviewed for this study frequently raised concerns that the use of certification systems to give an award advantage to companies bidding for public contracts could discriminate against SMEs. The concern is that the costs of certification, along with the technical capacity and expertise required to go through certification and auditing, might mean that smaller businesses get left behind.

**Recommendation:** Address the concern for SMEs head-on by emphasizing the uptake of the CO2PL in the Netherlands by SMEs (over 75% of certifications) and widely disseminating information on the costs of certification, which vary for companies of different sizes.

**Recommendation:** Provide capacity-building opportunities on the implementation of the CO2PL for SMEs in areas where pilots take place—for example, by working with local NGOs and business networks.



**Recommendation:** Continue to demonstrate how the use of the CO<sub>2</sub>PL in public procurement aligns with the EU Procurement Directive, with the principle of non-discrimination across economic operators, the need to link tender award to the subject matter of the contract, and the necessity to accept equivalent proof.

## 8. Sufficient lead time for any new initiatives in procurement is essential.

A clear message came across through interviews that procurers, but particularly suppliers, would require sufficient lead time in order to implement the use of the CO<sub>2</sub>PL in a public tender. Companies need time to understand the instrument well: the certification and accreditation process takes time and knowledge, possibly requiring consultancy services to implement. And even for companies that decide to wait to get certified until after they have been awarded the tender, they must know the instrument well enough to know what level of the Ladder they could realistically obtain within the year.

Contracting authorities also need time to inform their departments, ministries, and competition authorities about their decision to pilot a new instrument and to build political commitment, even if the tool itself is ready “off the shelf” and relatively simple to put in place. Capacity constraints are a major roadblock for GPP across European countries, which can prolong the lead times for implementing the CO<sub>2</sub>PL and requires comprehensive support for procurers piloting the instrument.

**Recommendation:** As information and interest in the CO<sub>2</sub>PL spread around Europe, anticipate long lead times for pilot tenders; plan and fundraise accordingly.

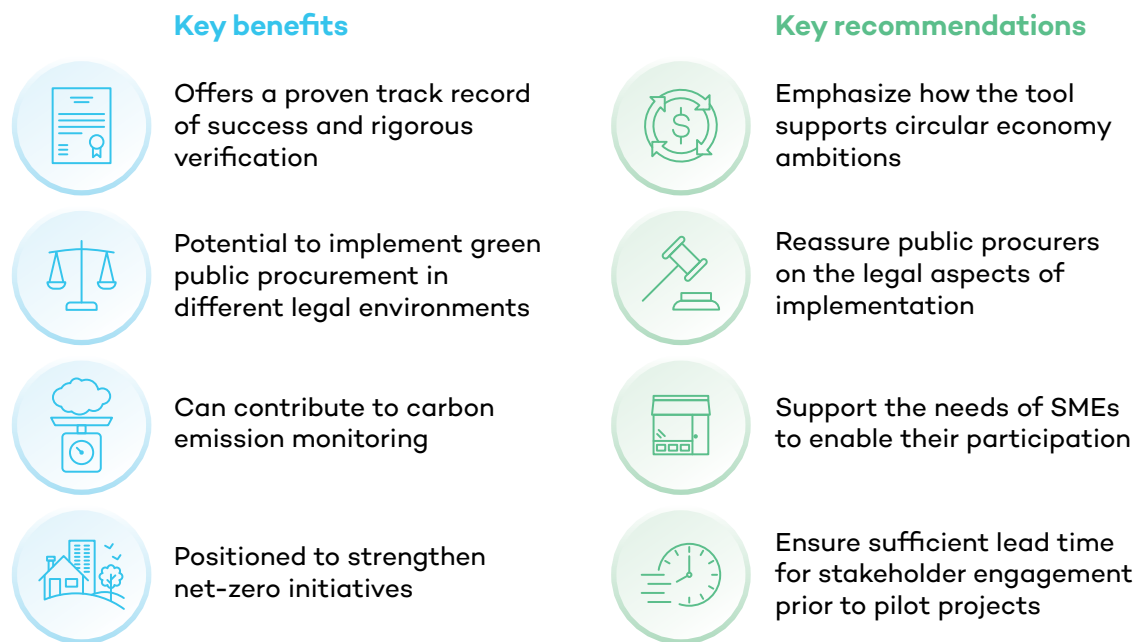
**Recommendation:** As soon as expressions of interest to use the CO<sub>2</sub>PL are indicated by contracting authorities, prioritize outreach and training to the relevant private sector players—for example, through technical capacity-building activities, development of business networks, and more general online training sessions for companies.

**Recommendation:** Consider establishing a “help desk” service for suppliers and public procurers to tailor expertise, assist with troubleshooting, and provide practical advice on implementation.

**Recommendation:** Work with certifying institutions in pilot countries early on to ensure that companies can get certified on the CO<sub>2</sub>PL in the timeline of the procurement process.



**Figure 13.** Summary of conclusions and recommendations



### Box 3. Next steps for the CO<sub>2</sub>PL in Europe

Starting in 2023, SKAO will organize pilot projects using the CO<sub>2</sub>PL in a number of European countries. Pilots will involve a coalition of interested parties with at least one procuring authority committed to testing the CO<sub>2</sub>PL in tenders and an organization to coordinate activities related to the pilot in that country. The local coordinator would, for example, collaborate with government agencies, business groups, and certifying bodies; organize training activities about the CO<sub>2</sub>PL; establish working groups; and maintain contact with SKAO. Funding will be available for these local coordinators.

If your organization would like to be involved in the pilot projects, please [get in touch](#) with SKAO.



## Annex 1. List of Organizations Consulted

Country	Organization
Austria	Procurement competence centre, BBG Bundesbeschaffung
Austria	naBe GPP platform, IFZ
Austria	Vienna, ÖkoKauf
Austria	Kommunalkredit Public Consulting
Denmark	GPP forum, secretariat at the environment agency
Denmark	University, Lyngby
Denmark	The Agency for Public Finance and Management
Germany	GPP competence centre
Germany	ÖkolInstitut
Germany	Deutsche Bahn
Germany	GPP unit Ludwigsburg
Germany	GPP unit Stuttgart
Germany	Procurement Office Dortmund
Ireland	Transport Infrastructure Ireland
Ireland	Procurement Expert Dublin City University
Ireland	Office of Government Procurement
Ireland	Irish Green Building Council
Ireland	Energy Supply Board
Italy	Legambiente
Italy	Fondazione Ecosistemi
Italy	Climate Alliance
Italy	Central Purchasing Body (Consip)
Poland	Office for Government Procurement
Poland	General Directorate for Roads Poland
Poland	SST Consult
Slovenia	Ministry for the Environment and Spatial Planning
Slovenia	Government Office for European Cohesion



<b>Country</b>	<b>Organization</b>
Slovenia	CER Sustainable Business Network Slovenia
Slovenia	Slovenian National Building and Civil Engineering Institute
Spain	EcolInstitut
Spain	Barcelona Metropolitan Region
Spain	State Public Procurement Advisory Board
Sweden	Miljogiraff
Sweden	Adda
Sweden	SPP research programme PROCSIBE
Sweden	National procurement agency (Upphandlingsmyndigheten)
United Kingdom	Sustainable Global Resources
United Kingdom	Cardiff Municipality
United Kingdom	Infrastructure Clients Group
United Kingdom	Government Commercial Function



## Annex 2. Interview Guide

### Topic 1: Introductory Question

- Please start by introducing yourself and your involvement/experience with public procurement and/or infrastructure.

### Topic 2: Procurement Landscape/Low-Carbon Procurement

- What are the current priorities in green public procurement in your country/agency?
- Is low-carbon procurement, in particular, a priority? If so, in what sectors? Any examples?
- What factors are hindering the reduction of carbon emissions and the implementation of low-carbon procurement?
- How do you keep track of GPP and carbon savings? Is there a tool or system in place to do this?

### Topic 3: Tools

- We would like to know more about what kind of tools are used for GPP in your country. Which, if any, of the tools listed below are currently used for green public procurement?
- What about certifications or eco-labels in particular? Do procurers and private companies have experience with using GPP tools?
- Are you aware of the use of low-carbon tools in infrastructure procurement, in particular?
- Do you see demand for new tools among procuring agencies and suppliers?
- What barriers and success factors do you see for establishing the CO<sub>2</sub> Performance Ladder?

### Topic 4: Stakeholders and the Way Forward

- Which procuring agency could potentially use the CO<sub>2</sub> Performance Ladder? National procurement agency, procurement office, department for public works, etc.
- Which agency or non-governmental organization (NGO) could potentially host/manage the CO<sub>2</sub> Performance Ladder? For example, an NGO, ministry, procurement agency, public sector support, etc.
- Do procuring agencies engage with private sector companies through networking, dialogue, and information sharing? Are there companies/sectors that are particularly keen on GPP?
- Is there anything else you find relevant to mention?
- Are you aware of any people involved in GPP and infrastructure procurement that we should talk to?

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