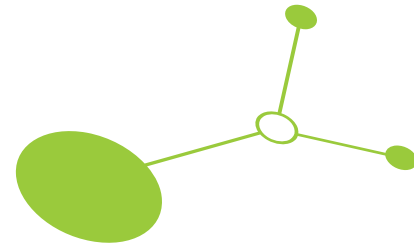


CE-PRINCE

CE-PRINCE

WP 2 Activity 2.2

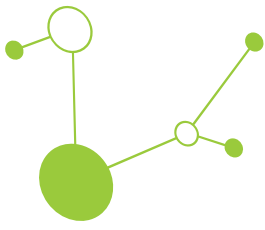


Del. 2.2.1 Analysis of circular criteria for GPP

Version 5

04 2026



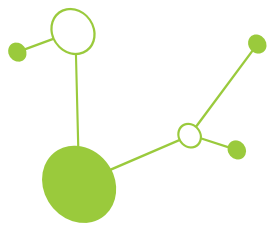


DELIVERABLE D.2.2.1

ANALYSIS OF CIRCULAR CRITERIA FOR GREEN PUBLIC PROCUREMENT (GPP)

Outline

1. Introduction and purpose of the deliverable
2. Methodology for EU and National GPP criteria analysis
 - 2.1. Excel template structure
 - 2.2. Selection of criteria and circular principles assessment
3. Results and Discussions
 - 3.1. Overview of the European and national GPP context
 - 3.1.1. European Union (EU GPP)
 - 3.1.2. Italy
 - 3.1.3. Slovenia
 - 3.1.4. Austria
 - 3.1.5. Germany
 - 3.1.6. Croatia
 - 3.1.7. Hungary
 - 3.1.8. Poland
 - 3.1.9. Cross-country synthesis
 - 3.2. Circular principles across economic sectors
 - 3.2.1. Most recurring circular principles
 - 3.3. Sectoral analysis
 - 3.3.1. Construction - Structurally the Most Advanced Sector
 - 3.3.2. Manufacturing - High Environmental Depth, Limited Business Model Innovation
 - 3.3.3. Tourism-Related Goods and Services - Operational Circularity
 - 3.3.4. Agri-food - Sustainability-Oriented but Less Design-Driven
 - 3.4. Comparison Between EU and National Practices
 - 3.4.1. Areas of Strong Alignment
 - 3.4.2. Areas Where National Practice Expands EU Baseline
 - 3.4.3. Shared Structural Gaps
 - 3.4.4. Overall Assessment
 - 3.5. Identification of the largest gaps
 - 3.5.1. Systemic Circular Business Models
 - 3.5.2. Product Life Extension
 - 3.5.3. Imbalance Between Environmental Protection and Value Retention
 - 3.6. Implications for Developing Upgraded Criteria
 - 3.6.1. Strategic Direction for Upgraded Criteria
 - 3.7. Reference to National Criteria Tables



1. Introduction and purpose

This deliverable presents the methodology, structure and preliminary findings of the analysis of Green Public Procurement (GPP) criteria with a focus on circular economy principles. The work forms a core element of Work Package 2 (WP2) of the CE-PRINCE project, which aims to strengthen circular and green procurement practices in the Public Administration of Central Europe.

The project recognises that public procurement is a powerful instrument for advancing the circular economy by influencing markets, shaping demand for circular products and services, and encouraging innovation. To achieve this, partner countries must first understand the status of existing GPP systems—both at EU and national levels—and identify where circularity is already embedded or where it remains weak.

This deliverable therefore provides the analytical framework of circular aspects existing in EU and national GPP Criteria and it forms the basis for the next phase of the project: developing upgraded and transnational circular criteria (Del. 2.2.2) in the four key economic sectors of the project (Agrifood, construction, manufacturing and tourism-related goods and services), which will be then tested in at least one real-case public tender per country (Del. 2.2.3). Such work is developed in parallel with WP3 and it is prepared with the circularity assessment of pilot tenders for private companies (Activity 3.2).

This deliverable provides:

1. A structured comparative overview of EU and national GPP criteria across the four economic sectors of the project, highlighting key similarities, differences and gaps in the integration of circular-economy principles.
2. A qualitative assessment of how circular economy principles are embedded within existing GPP criteria, based on a harmonised analytical framework and principle mapping.
3. A common analytical baseline for identifying underrepresented circular principles and priority areas for upgrading GPP criteria within the CE-PRINCE project.
4. Input for the development of upgraded and transnational circular GPP criteria under WP2, ensuring coherence with existing EU and national frameworks.
5. Contextual analytical input to support subsequent pilot activities and strategic work within CE-PRINCE, without prejudging implementation outcomes.

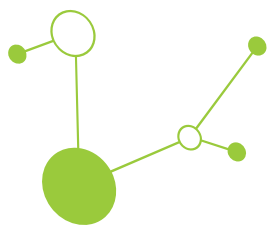
The Excel tables (provided on the attached links) serve as the empirical backbone of this deliverable.

The CE-PRINCE project aims to accelerate the adoption of circular public procurement by:

- identifying gaps between EU-level indications and national practices,
- strengthening the capacity of public authorities to apply circular criteria,
- promoting resource-efficient products and services, and
- preparing partner countries for real-life procurement pilots.

The analysis delivered here directly supports these objectives by revealing:

- how advanced each country is in integrating circular principles,
- which economic sectors offer quick wins or require additional support, and
- where harmonisation of criteria is both possible and beneficial.



This information is essential for developing consistent transnational circular criteria and ensuring the success of pilot actions later in the project.

2. Methodology

A shared and structured methodology was designed to allow all partner countries to analyse their national GPP criteria against EU GPP criteria and circular economy principles.

2.1 Excel template structure

A shared Excel template was prepared for analysing and comparing EU voluntary GPP criteria with national GPP criteria.

Criteria are categorized using the four standard procurement types:

- SC - Selection Criteria: Qualification or capability of tenderers (e.g. EMS, competence, resources).
- TS - Technical Specifications: Mandatory technical or performance requirements for products or services.
- AC - Award Criteria: Evaluation criteria used to score offers (e.g. recycled content, efficiency).
- CC - Contract Performance Clauses: Obligations during contract execution (e.g. reporting, maintenance, take-back).

To support visual clarity, a colour legend was applied to the 4 categories of procurement:

Category	Code	Colour
Selection Criterion	SC	Orange
Technical Specification	TS	Blue
Award Criterion	AC	Green
Contract Clause	CC	Magenta

One tab per economic sector is pre-set for the analysis of criteria, and one file per country is prepared for the task.

2.2 Selection of criteria and circularity principle assessment

The assessment of Green Public Procurement (GPP) criteria within CE-PRINCE is based on a predefined set of circular economy principles derived primarily from **ISO 59004:2024**, complemented by the European Commission's Circular Economy Action Plan (2020) and related EU policy guidance. These principles provide a standard conceptual framework for identifying and interpreting circular aspects within procurement criteria and ensure methodological consistency across countries and economic sectors.

The circular principles used in the analysis cover the full life cycle of products and services, including upstream design and sourcing, use-phase optimisation, life-cycle extension, and end-of-life management. For this deliverable, a total of nineteen circular economy principles were considered (Table 1), each briefly



described to support a common understanding among project partners and to reduce interpretative differences during the assessment process.

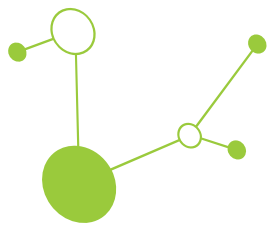
Table 1: the list of circular economy principles applied in the analysis, together with a short description of each principle, as agreed within the CE-PRINCE partnership.

Circular principle	Description	Source
Design for circularity	design for disassembly, design for repair, design for recycling (e.g., recyclable or compostable)... design for product durability, design for performance-based approaches, design for product and resource recovery, design to minimize resource use and losses...	ISO 59004
Circular sourcing	minimize resource use and acquire recovered and renewable resources, while taking into account the life cycle impacts of these resources	ISO 59004
Circular procurement	purchasing products/services that seek to contribute to closed resource cycles within supply chains. To achieve this, circular economy principles should be embedded into the requirements for suppliers.	ISO 59004
Process optimization	optimizing resource efficiency and changing processes to reduce or eliminate waste as well as harmful losses and releases	ISO 59004
Industrial, regional or urban symbiosis	engaging traditionally separate organizations in a geospatial collaboration to share inflows and outflows and optimize their value network	ISO 59004
Reduce, reuse and repurpose	reducing demand for a product; reusing products or components that a user no longer needs for the same function for which they were originally used over multiple usage cycles (to this end, it is important to provide a method for the non-destructive collection and redistribution of used products and components); Alternatively, strategies to repurpose can be pursued, where a discarded product or its parts are used in a new product with a different function. When the negative impact(s) in the use stage exceeds the benefits from new replacement products, it can be better to replace the product.	ISO 59004
Maintenance and repair	If a product malfunctions or breaks it cannot be suitable for (re)use and risks being discarded. To avoid that, preventive or predictive maintenance is necessary. To enable maintenance and repair, the availability of spare parts, maintenance and repair instructions as well as services are essential.	ISO 59004
Performance-based approaches	product-as-a-service	ISO 59004
Sharing to intensify use	"sharing economy" (e.g., software-as-a-service)	ISO 59004
Refurbishing	reconditioning, restoring an item, during its expected service life, to a useful condition for the same purpose with at least similar quality and performance characteristics	ISO 59004
Remanufacturing	return an item to a like-new condition from both a quality and performance perspective using an industrial process	ISO 59004
Reverse logistics	e.g., take-back system. Reverse logistics transports post-use, undesired (in their current location) or unsold products, components or materials back into the same or another value chain or network for further use cycle management.	ISO 59004
Recycling	Through recycling, the resource remains in use and the creation of wastes is reduced. Recycling can involve a mechanical, physical, chemical process or biological processes, or a combination of these processes.	ISO 59004
Waste management	In a circular economy, waste is minimized by intention. However, waste will still be created throughout the transition towards a circular economy and needs proper management and treatment. Note: Waste management aims to reduce releases into air, water and soil to minimize adverse impacts on human health and the environment.	ISO 59004



Energy recovery	<p>Energy recovery is an end-of-life operation deployed to collect and generate heat or power from a resource that has surpassed its ability to flow through the circular economy. Energy recovery is most effective when coupled with an end-of-life resource recovery process, such as anaerobic digestion, which creates conditions to capture nutrients and produce an agricultural input while generating energy.</p> <p>Organizations should seek to apply actions with the most favourable environmental outcome from a life cycle perspective. Therefore, energy recovery efforts deployed without having considered a material's place in the circular flow and the broader environmental impact when compared to other actions are not considered circular. Energy recovery should be optimized, and the energy should be usefully employed to displace non-renewable alternatives.</p>	ISO 59004
Actions to regenerate ecosystems (soil, water, biodiversity)	<p>To align with the principle of ecosystem resilience, regeneration of degraded ecosystems can encompass removal of harmful substances and remediation of soil and water bodies, mitigation and adaptation to climate change impacts, and protection of biodiversity. These actions should ultimately lead to the conservation and continuous renewal of natural resources, improvements in water, soil and air quality, and prevention of land degradation. These activities help to ensure the long-term provision of critical ecosystem services such as food provision, water purification, flood control, carbon sequestration, disease control and nutrient cycling. Production using regenerative practices that an organization can perform includes agroecology, regenerative agriculture, restorative aquaculture, reforestation and permaculture. Regenerative practices provide food and materials as well as create positive outcomes for the biosphere.</p>	ISO 59004
Actions to support a circular economy transition	<p>Education and research, innovation, collaboration and networks, helping users change their behaviour, policy and legal system, financial services, digitalization</p>	ISO 59004
EU Ecolabel or other certifications		European Commission
Life cycle assessment (LCA)		CEAP 2020
N/A		

As a second step, a set of EU GPP criteria of specific product/service categories corresponding to the four economic sectors of the project was identified. At the country level, each partner was asked to select their national GPP criteria of the products' group most relevant to the scope of the project and most consistent with the selected European criteria in the four economic sectors (see EU and national GPP criteria matching with project economic sector Figure 2). Then, each partner was asked to select the most relevant national



GPP criteria in their national GPP legislation and to assess their alignment with EU criteria and circular economy principles following a harmonised analytical approach.

Up to 3 applicable principles to each criterion can be marked up.

Each partner worked on its own file and included its selected GPP criteria in parallel columns to the European criteria in the pre-set tabs of each economic sector. Partners were instructed to:

- Match national criteria with equivalent EU criteria wherever possible.
- Insert additional national criteria
 - either in new rows (if no EU equivalent exists), or
 - in the same row (if aligned with an EU criterion).
- Maintain consistent terminology and coding to ensure smooth consolidation.
- For each specific criterion, select up to 3 most appropriate circular principles from the given list

The nineteen circularity principles were central to the analysis and allow the CE-PRINCE partnership to measure the maturity of circular procurement across different categories.

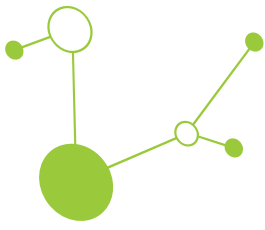
Such analysis provides a systematic overview of how strongly procurement rules support circularity in each country.

It should be noted that the analysis does not aim to produce a quantitative ranking of countries, but a qualitative comparative assessment of how circular economy principles are embedded within existing GPP criteria. The frequency of principles should therefore be interpreted as indicative of structural emphasis rather than as a precise measurement. This approach is consistent with the preparatory nature of Deliverable 2.2.1 and its role as a basis for developing upgraded criteria under Deliverable 2.2.2.



Table 2: Selected GPP criteria at EU and national level for analyzing the circular aspects

CE-PRINCE key sectors	EU	Italy	Slovenia	Austria	Croatia	Germany	Hungary	Poland
AGRIFOOD	Food catering services and vending machines	Canteens	Food and catering services	Food and Catering services	Sustainable food and beverage procurement for events and hospitality (Reusable packaging, organic sourcing)	Food and catering	Public catering / food procurement / catering & vending	Food
		meal service and vending machines						
CONSTRUCTION	Office building design, construction and management	construction	Design and construction of business and administrative buildings	Structural Engineering	Waste reduction and recycling in construction procurement	Construction materials and renovation	Construction products; new buildings & road design + construction; renovation works	Office buildings
	Road design, construction and maintenance	Road infrastructures	Design and implementation of road reconstruction	Civil Engineering	GPP for road design, construction, and maintenance (noise reduction, sustainable materials)			Road design, construction, and maintenance
MANUFACTURING	Textile products and services	Textiles	Textile products	Textiles	2. Office paper	Textiles (e.g. towels), shoes and clothing (e.g. uniforms, Workwear)	Textile products and textile services (textil)	Textiles and textile services
		paper	Office paper and hygienic paper products	Paper		office materials (e.g. paper, writing utensils, printer ink, folders)	Copying & graphic paper	
TOURISM-RELATED GOODS AND SERVICES	Public space maintenance	Cultural events	Road transport vehicles and transport services	Public space maintenance	GPP for catering and food supply in Tourism (Food waste reduction, non-plastic packaging)	landscaping and gardening	Road transport / clean & low-emission vehicles / mobility	Road transport
		public green space	Gardening services, agricultural and other products and equipment and machinery for gardening	Events	GPP for hotels and accomodation services (Energy efficiency, water saving, ecolabels)	vehicles (cars, busses, forklifts etc.) as well as spare parts (e.g. tires)	Public space maintenance / landscaping / gardening	Public space maintenance



3. Results and discussions

3.1 Overview of the European and national GPP context

3.1.1 European Union (EU GPP)

EU Green Public Procurement criteria provide the **reference framework** for this analysis and represent the most comprehensive and systematically developed set of circular procurement criteria among the analysed cases. EU GPP criteria consistently apply life-cycle thinking and integrate circular economy principles across different types of procurement criteria (technical specifications, award criteria and contract performance clauses).

Compared to national systems, EU GPP criteria demonstrate a **broader coverage of circular principles**, including recycled content, durability, repairability, energy efficiency, waste prevention and, in selected cases, life cycle assessment (LCA). While EU criteria still place strong emphasis on efficiency and end-of-life aspects, they more frequently combine multiple circular principles within a single sector than most national frameworks.

EU GPP therefore functions as the **baseline and benchmark** for assessing national circular procurement maturity and as the primary source for identifying transferable and upgradeable circular elements.

3.1.2 Italy

Italy has an **established national GPP system**, with mandatory Minimum Environmental Criteria (CAM) covering a wide range of product and service groups. These criteria are legally binding for public procurement procedures, which provides a strong institutional basis for implementation.

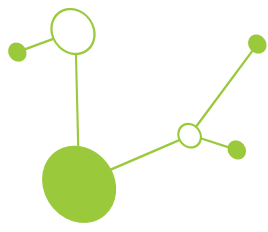
From a circularity perspective, Italian criteria show **solid alignment with EU GPP**, particularly in construction, road infrastructure and manufacturing. Circular principles such as recycled content, waste management, durability and energy efficiency are systematically integrated, mostly through technical specifications and contract clauses.

Advanced circular principles—such as refurbishing, remanufacturing, sharing models or reverse logistics—are rarely included. In particular, when it comes to product refurbishing – especially within the textile value chain – there are notable challenges related to ensuring compliance with specific hygiene and sanitary regulations.

The Italian framework can therefore be seen as a **well-developed and structured system for integrating environmental and circular aspects into procurement**. The analysis suggests that current criteria place particular emphasis on environmental performance, compliance and technical requirements, while some more advanced circular principles—such as refurbishing, remanufacturing, sharing models or reverse logistics—appear less frequently. This may indicate opportunities for future integration of broader circular economy approaches within Italian GPP criteria.

3.1.3 Slovenia

Slovenia has developed national GPP criteria for selected product and service groups, **largely following the structure and logic of EU GPP**. The Slovenian framework shows the integration of several circular principles, particularly in relation to energy efficiency, waste reduction and environmental labelling.



Circular principles are most visible in construction-related criteria, while agrifood and tourism-related services show a more limited presence of circularity. Criteria related to life-cycle extension (repair, refurbishment) and systemic circular approaches are even less frequent.

Overall, Slovenia's national criteria are **comparable to EU GPP in form**, but they rarely go beyond EU requirements in substance. Circularity is present across several sectors, although the analysis indicates that the depth and consistency of integration varies depending on the product or service group. This suggests that there is potential to further strengthen and expand circular principles in future revisions of Slovenian GPP criteria.

3.1.4 Austria

Austria has developed a **structured approach to integrating circular economy principles into public procurement**. The analysed national GPP criteria show close alignment with EU GPP and, in some areas, include additional circular elements.

Circular principles such as durability, repairability, recycled content and life-cycle considerations are consistently embedded, particularly in construction and manufacturing. Austria also appears to make broader use of award criteria to incorporate circular elements, which may create additional incentives for innovative solutions alongside compliance with environmental requirements.

Although advanced principles such as remanufacturing and sharing models are still less common, the analysis suggests that Austria has a **comparatively broad integration of circular principles across several sectors**. These experiences may therefore provide useful reference points for future transnational criteria development within CE-PRINCE.

3.1.5 Germany

Germany has a **comprehensive and structured GPP framework**, with the analysed criteria showing broad integration of environmental and circular principles. National criteria are closely aligned with EU GPP and, in some cases, include additional circular elements, particularly within technical specifications and contract clauses.

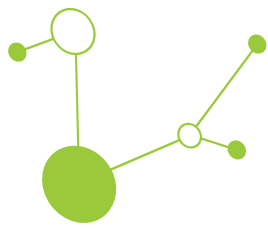
Germany shows a **relatively strong presence of circular principles related to product longevity, resource efficiency and waste prevention**. The use of life-cycle approaches is more explicit than in most other national frameworks.

However, similar to other countries, systemic circular models (e.g. sharing, performance-based procurement) remain limited. Germany therefore appears to have a relatively broad integration of operational circular principles, particularly in construction and manufacturing, while still offering opportunities to further strengthen more systemic circular approaches.

3.1.6 Croatia

Croatia's national GPP criteria show the integration of selected circular principles, although the analysed criteria place a stronger emphasis on basic environmental aspects than on broader circular economy approaches. Criteria focus primarily on environmental aspects such as energy efficiency, waste management and compliance with standards.

Circular economy principles are present in Croatian criteria, particularly in relation to energy efficiency, waste management and compliance with standards. The analysis suggests that upstream design considerations, life-cycle extension and broader circular business approaches appear less frequently within the selected criteria. Award criteria are also used more selectively, which may reduce opportunities to incentivise more innovative circular solutions.



This indicates that **there may be considerable scope to further strengthen circular integration in Croatian GPP criteria through future capacity building and criteria development activities under CE-PRINCE.**

3.1.7 Hungary

Hungary's national GPP framework reflects **the integration of selected circular principles**, with the analysed criteria focusing primarily on clearly verifiable environmental requirements. The scope of circularity varies across sectors, while broader and more integrated circular approaches appear less frequently.

Circular principles such as recycling and waste management are present, but more advanced principles—maintenance, repair, refurbishing, or circular sourcing—are largely absent. Circularity is uneven across sectors and rarely embedded systematically.

Compared to the broader range of circular principles reflected in EU GPP, the Hungarian criteria analysed in this deliverable appear to focus more on a limited number of environmental requirements. This may indicate good potential for future strengthening of circular integration through upgraded CE-PRINCE criteria and pilot activities.

3.1.8 Poland

Poland does not have specific national GPP criteria for the analysed product and service groups. Instead, Polish public authorities are encouraged to apply **EU GPP criteria directly**.

As a result, Poland cannot be included in the comparative analysis of national circular criteria, since no distinct national framework exists. However, this approach means that the integration of circular principles in Polish public procurement is largely shaped by EU GPP criteria, with limited national adaptation for the analysed product and service groups.

This situation highlights both **the importance of EU GPP as a reference framework and the potential value of future national adaptation** to reflect country-specific priorities and circular economy objectives.

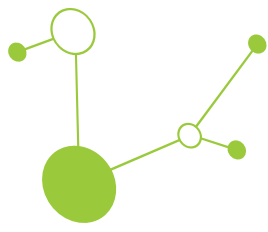
3.1.9 Cross-country synthesis

The cross-country analysis suggests that **EU GPP generally provides the broadest and most balanced coverage of circular principles**, while national practices vary in the extent to which different principles are reflected across sectors. Some countries show stronger integration of environmental, design and life-cycle considerations, while others focus more narrowly on a smaller set of environmental requirements.

These differences underline the value of CE-PRINCE in supporting mutual learning, identifying opportunities for improvement and developing more harmonised circular procurement criteria across Central Europe.

3.2 Circular principles across economic sectors

The analysis of circularity principles focuses on four economic sectors: agrifood, construction, manufacturing, and tourism-related goods and services. The analysis examines **which principles recur most often, which are systematically absent, and how balanced the overall circular approach is.**



3.2.1 Most recurring circular principles

Across all sectors and participating countries, four circular economy principles clearly dominate in terms of frequency:

- **Actions to regenerate ecosystems** (212 national occurrences; 32 EU reference)
- **Design for circularity** (124 national; 66 EU reference)
- **EU Ecolabel and certification schemes** (121 national; 19 EU reference)
- **Process optimization** (91 national; 27 EU reference)

Together, these four principles account for the majority of circular references within national GPP frameworks. This concentration reveals a distinct policy pattern.

First, circular procurement is strongly framed through environmental protection and ecological safeguards. The dominance of ecosystem regeneration confirms that circularity is primarily interpreted through biodiversity protection, soil and water preservation, and environmental risk mitigation.

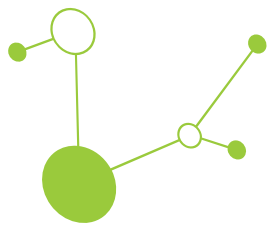
Second, there is a clear emphasis on design and efficiency improvements, particularly in construction and manufacturing sectors. Design for circularity and process optimization indicate that procurement systems are beginning to integrate life-cycle thinking at the technical specification level.

Third, the high reliance on certification schemes demonstrates that national systems prefer compliance-based verification tools rather than performance-based circular metrics. Certification serves as a practical proxy for sustainability but does not necessarily guarantee systemic circular transformation.

Overall, the data show that current circular integration is:

- environmentally mature,
- technically structured in certain sectors,
- but still largely compliance-driven.

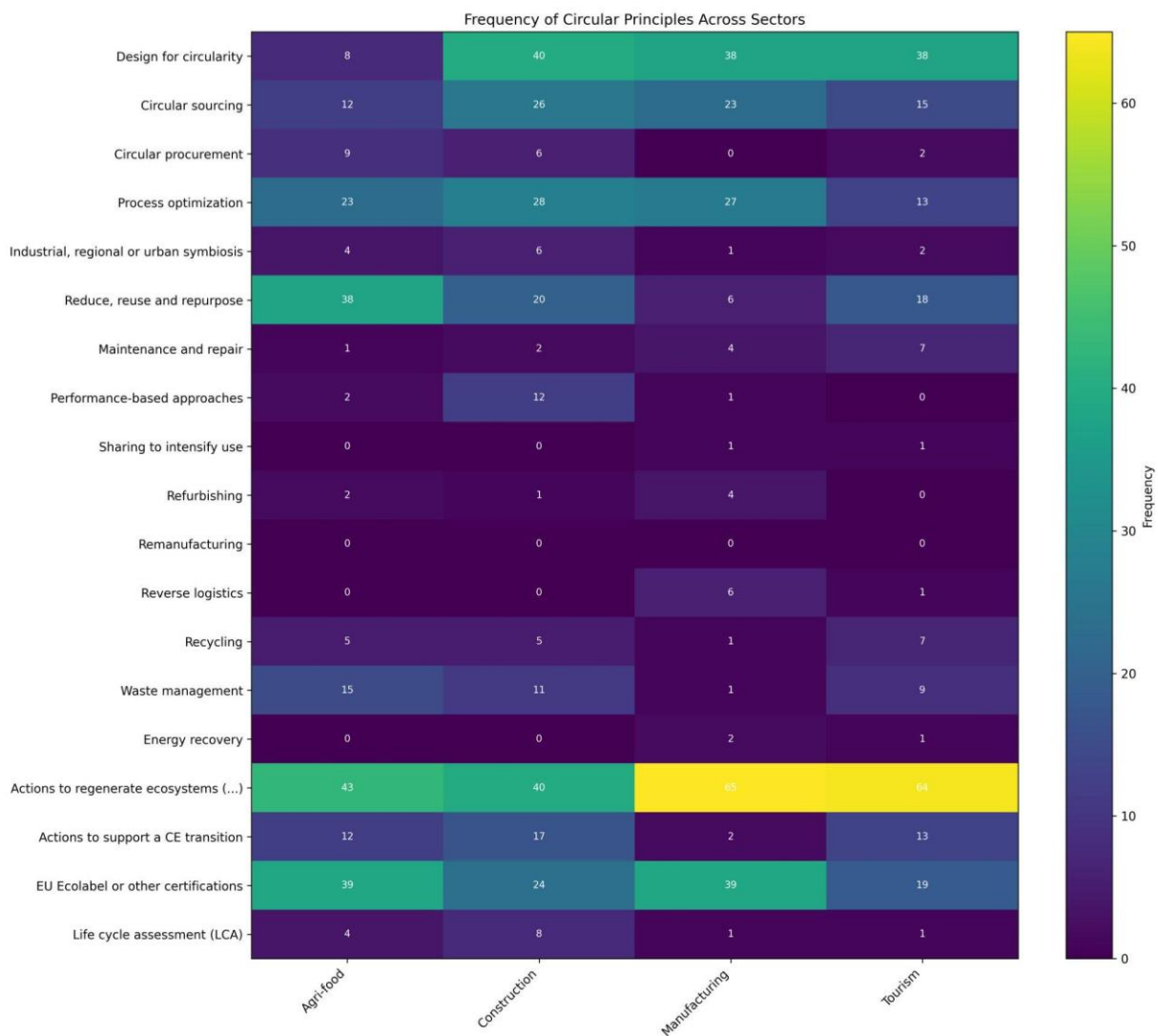
Structural value-retention mechanisms (remanufacturing, sharing models, reverse logistics) remain marginal in comparison.



3.3 Sectoral Analysis

This section analyses the occurrence of circular principles in each economic sector across all countries, and compares it with the occurrence at European level.

Figure 1: Heatmap showing the frequency of circular economy principles identified in national GPP criteria across four economic sectors (Agri-food, Construction, Manufacturing, and Tourism-related goods and services). Darker colors indicate higher frequency of occurrence.

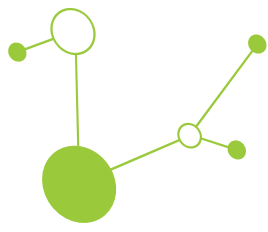


3.3.1 Construction – Structurally the Most Advanced Sector

Construction demonstrates strong integration of:

- **Design for circularity (40; EU reference: 31)**
- **Process optimization (28; EU reference: 14)**
- **Regeneration (40; EU reference: 7)**

This sector shows the clearest alignment between EU-level design orientation (66 EU references) and national implementation. Life-cycle thinking and resource efficiency are comparatively well embedded.



However, systemic circular mechanisms such as remanufacturing, reverse logistics and sharing models remain absent, indicating that structural transformation is still incomplete.

3.3.2 Manufacturing – High Environmental Depth, Limited Business Model Innovation

Manufacturing is characterised by:

- **The highest regeneration frequency (65; EU reference: 7)**
- **Strong design integration (38; EU reference: 14)**
- **High reliance on certification (39; EU reference: 3)**

Despite this environmental intensity, circular procurement mechanisms (0), remanufacturing (0), and performance-based approaches (1) are minimal. This suggests a material-efficiency orientation rather than a systemic circular economy model.

3.3.3 Tourism-Related Goods and Services – Operational Circularity

Tourism integrates:

- **Regeneration (64; EU reference: 9)**
- **Design (38; EU reference: 15)**
- **Reduce/reuse (18; EU reference: 1)**
- **Maintenance and repair (7; EU reference: 2)**

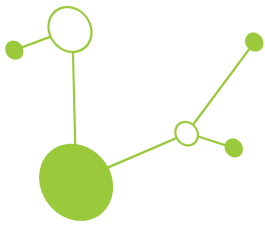
Circularity in this sector appears operational—focused on waste reduction, sourcing and environmental standards—rather than systemic. Structural life-cycle retention tools are largely absent.

3.3.4 Agri-food – Sustainability-Oriented but Less Design-Driven

Agri-food displays:

- **Strong regeneration integration (43; EU reference: 9)**
- **High reduce/reuse (38; EU reference: 10)**
- **Strong certification reliance (39; EU reference: 10)**

However, design-based circularity remains comparatively weak (8), indicating that circular integration in this sector is primarily sustainability-driven rather than structurally redesign-oriented.



3.4 Comparison Between EU and National Practices

The comparison between EU reference criteria and national GPP frameworks reveals both strong alignment and shared structural limitations.

3.4.1 Areas of Strong Alignment

Where EU criteria place clear emphasis, national systems largely follow. This is particularly visible in:

- **Design for circularity** (EU: 66; strong national uptake in Construction, Manufacturing and Tourism),
- **Process optimization** (EU: 27; widely reflected nationally),
- **Actions to regenerate ecosystems** (EU: 32; 212 national occurrences).

These patterns indicate that EU-level design and environmental priorities significantly shape national implementation. In sectors such as Construction and Manufacturing, the alignment is particularly evident.

3.4.2 Areas Where National Practice Expands EU Baseline

In some principles, national uptake exceeds EU reference frequency:

- **EU Ecolabel / certifications** (EU: 19; 121 national),
- **Reduce, reuse and repurpose** (EU: 23; 82 national),
- **Circular sourcing** (EU: 10; 74 national).

This suggests that Member States actively operationalise environmental compliance tools and material-efficiency measures, often intensifying them beyond EU baseline references.

3.4.3 Shared Structural Gaps

However, the most striking finding is that structural circular economy mechanisms are weak at both levels:

- **Remanufacturing** (0 EU; 0 national),
- **Sharing models** (0 EU; 2 national),
- **Reverse logistics** (2 EU; 9 national).

This indicates that the underrepresentation of value-retention mechanisms is not a national implementation failure but a systemic governance gap. National frameworks mirror EU environmental and design priorities, but neither levels yet fully embed systemic circular business transformation mechanisms.

3.4.4 Overall Assessment

EU criteria provide a structured life-cycle and design-oriented framing of circularity. National systems intensify environmental and certification-based measures. Yet across governance levels, procurement frameworks remain environmentally mature but structurally incomplete.

3.5 Identification of the largest gaps

Despite strong integration of environmental and design-oriented principles, three structural gaps remain evident across sectors and governance levels.



3.5.1 Systemic Circular Business Models

Mechanisms that enable structural circular transformation remain largely absent:

- **Remanufacturing:** 0 occurrences
- **Sharing models:** 2 national; 0 EU
- **Reverse logistics:** 9 national; 2 EU
- **Performance-based procurement:** 15 national; 0 EU

Procurement frameworks therefore rarely stimulate product-as-a-service models, structured take-back systems or performance-driven contracting. Circularity remains focused on improving products rather than transforming business models.

3.5.2 Product Life Extension

Although Design for circularity is strongly represented (124 national; 66 EU), downstream life-extension mechanisms remain weak:

- **Refurbishing:** 9 national
- **Maintenance and repair:** 14 national
- **Remanufacturing:** 0

This indicates that design principles are not systematically translated into enforceable durability and reuse requirements.

3.5.3 Imbalance Between Environmental Protection and Value Retention

The dominant principles—ecosystem regeneration (212 national), certifications (121) and process optimization (91)—primarily address environmental impact mitigation and compliance. By contrast, circular value-retention mechanisms remain marginal. Importantly, these gaps appear consistently at both EU and national levels, suggesting structural limitations rather than isolated implementation weaknesses.

Overall, existing GPP criteria provide a strong environmental foundation but remain insufficient to drive full systemic circular transformation.

3.6 Implications for Developing Upgraded Criteria

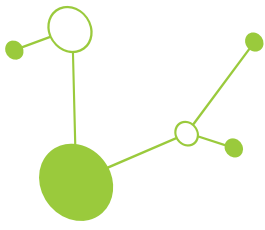
The frequency analysis confirms that current GPP frameworks – at both EU and national levels – provide a strong environmental foundation but remain structurally incomplete from a circular economy perspective.

High integration of:

- **Actions to regenerate ecosystems** (212 national; 32 EU),
- **Design for circularity** (124 national; 66 EU),
- **Certification schemes** (121 national; 19 EU),
- **Process optimization** (91 national; 27 EU),

demonstrates environmental maturity and partial integration of life-cycle thinking.

However, principles essential for **systemic circular transformation and value retention** remain marginal:



- **Remanufacturing** (0),
- **Sharing models** (2 national; 0 EU),
- **Reverse logistics** (9 national; 2 EU),
- **Limited performance-based procurement** (15 national; 0 EU).

This indicates that procurement largely optimises products and processes within linear systems rather than redesigning value chains.

3.6.1 Strategic Direction for Upgraded Criteria

To address these structural gaps, the upgraded criteria sets should:

- Strengthen and standardize certification and evaluation mechanisms (e.g. material circularity indicator, MCI) for proving compliance with tender requirements, also focusing on measurable value-retention approaches
- strengthen durability, reparability and life-extension requirements,
- integrate reverse logistics and take-back obligations,
- expand performance-based and service-oriented procurement models,
- better connect design principles with enforceable life-cycle performance metrics.

Sector-specific prioritisation will be necessary, but across all sectors the objective remains the same: shift from environmentally compliant circularity to structurally transformative circularity.

This transition should guide the development of the four upgraded criteria sets under Deliverable 2.2.2.

3.7 Reference to National Criteria Tables

[GPP criteria analysis_D.2.2.1_ITALY.xlsx](#)

[GPP criteria analysis_D.2.2.1_SLOVENIA.xlsx](#)

[GPP criteria analysis_D.2.2.1_AUSTRIA.xlsx](#)

[GPP criteria analysis_D.2.2.1_GERMANY.xlsx](#)

[GPP criteria analysis_D.2.2.1_CROATIA.xlsx](#)

[GPP criteria analysis_D.2.2.1_HUNGARY.xlsx](#)

[GPP criteria analysis_D.2.2.1_POLAND.xlsx](#)