CE - PRINCE *initial assessment*

Circular Economy and **Green Public Procurement** across Central Europe

Preparing **public administrations** and **businesses** for the circular economy.

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WHO WAS THE EVALUATION FOR?

The assessment covered seven countries: **Italy**, **Austria**, **Germany**, **Slovenia**, **Hungary**, **Croatia**, and **Poland**. It focuses on four sectors with relevant environmental impact and procurement relevance

agri-food

manufacturing

7 Countries

construction

local maintenance for tourism

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RESEARCH METHODOLOGY

Literature review and mirrored survey design

The Initial Assessment combined **desk research** with **two questionnaire surveys** developed from scientific and grey literature. Country differences are indicative rather than statistically significant

The surveys were designed to measure CGPP implementation, circular economy performance, barriers, drivers, organizational learning, and adaptation.



Public administration

investigated how green and circular criteria are included in tenders

Enterprise

explored how circular practices are implemented across the product or service life cycle

SURVEY

283 enterprises

212 PAs analyzed

(from 398 and 232 responses collected)

INTERVIEWS

68 total

(35 PAs, 33 enterprises)

This mirrored architecture made it possible to assess alignment and mismatch between **demand** and **supply**.

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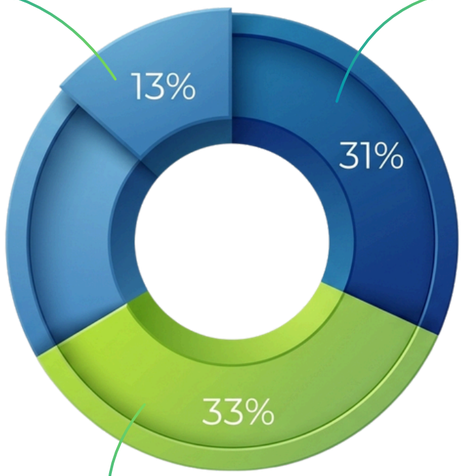
ENTERPRISE BUSINESS TREND

Stability and moderate growth

The firms included in the survey show a generally stable or positive business trend

report a decline

a significant **increase**



report a slight **increase**

Revenue

Employment

- **50%** report a slight **increase** in **employee** numbers
- **28%** a significant **increase**.

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CIRCULARITY

Six lifecycle stages

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The report evaluated enterprise circularity through six lifecycle dimensions

3) PRODUCTION

focuses on resource efficiency, waste and water management.

2) DESIGN

covers durability, repairability, recyclability, and circular packaging.

1) PROCUREMENT

includes recycled materials, by-products, local sourcing, and circular supplier accreditation



4) LOGISTICS

includes reverse logistics and lower-impact transport options

5) PRODUCT USE

measures information and support for repair, reuse, and end-of-life behavior.

6) WASTE MANAGEMENT

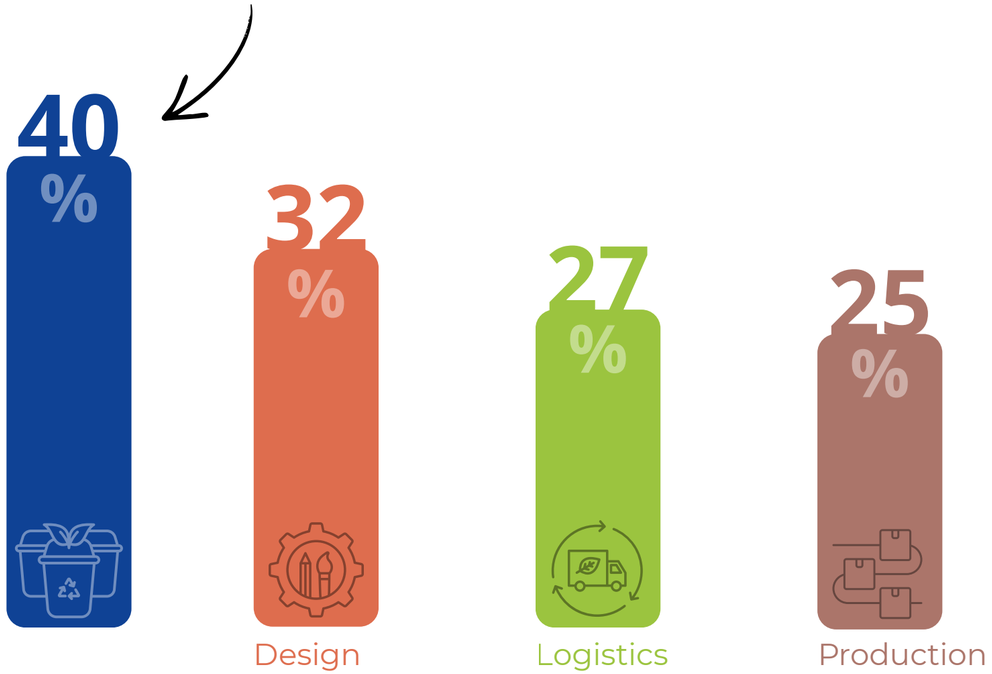
includes recycling, take-back initiatives, and energy or material recovery.

ENTERPRISE
circularity performance

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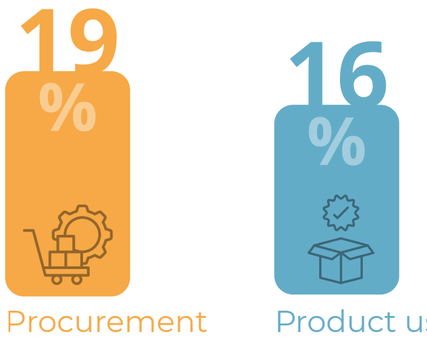
Waste managment

40% Of firms reported **successful** implementation, suggesting that recycling and recovery practices are relatively mature, likely due to regulatory pressure and established routines.



Procurement / product use

The **weakest** areas are procurement and use/end-of-life information: only 19% reported high circular implementation in procurement, and only 16% in use and consumption information, showing that *upstream sourcing* and *downstream customer engagement* remain the least developed dimensions.



ENTERPRISE
practices

Enterprises perform **significantly better** in practices that are easier to operationalize *internally*.
High implementation shares

44%
58%
TOP
ADOPTION RANGE

- Purchase **purchasing by-products** **13%**
- **Accrediting suppliers** on circular criteria **19%**
- Collaboration for **circular design** **27%**
- **Communication** campaigns for **circular use only** **19%**

The pattern suggests that firms are more advanced in operational efficiency than in ecosystem-level circular innovation.

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CE- PRINCE *Country profiles*

Italy, Austria, Germany, Slovenia, Hungary, Croatia, Poland



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LIGURIA

Italy



1

ADVANCED NATIONAL FRAMEWORK

uneven firm maturity

Italy emerges as **one of the strongest** countries in terms of institutional framework

PAN GPP: launched in 2008 and updated in 2023, mandates Minimum Environmental Criteria in all public procurement procedures

PUBLIC CONTRACTS CODE In 2016 CAM legally binding and integrates Life Cycle Costing.

ENTERPRISES

- circular material use **20.6%**
- recycling **53.3%**

National study

- **linear businesses** **35%**
- **circular businesses** **15.6%**

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Country differences are indicative rather than statistically significant.

AUSTRIA



2

STRONG WASTE PERFORMANCE

implementation gap remains

Austria combines a relatively **mature** procurement framework with solid circular economy indicators.

PAN GPP: naBe Action Plan, revised in 2021, sets binding sustainable procurement criteria for federal entities across 16 product groups, and Austria also has monitoring systems to evaluate GPP practice

ENTERPRISES

- circular material use — **12.4%**
- recycling — **62.6%**

National study

- **linear businesses** — **27.5%**
- **circular businesses** — **87%**

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Country differences are indicative rather than statistically significant.

GERMANY



3

HIGH ENTERPRISE CAPABILITY

fragmented governance

Germany links procurement to climate-neutral public administration through the **Federal Climate Change Act.**

Promotes tools such as eco-labels and **Life Cycle Costing** through the Sustainable Development Programme and the Interministerial **Committee for Sustainable Public Procurement** established in 2022.

ENTERPRISES

- circular material use — **12.5%**
- recycling — **69.2%**

National study

- **linear businesses** — **36.3%**
- **circular businesses** — **24,7%**

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Country differences are indicative rather than statistically significant.

SLOVENIA



4

GOOD RECYCLING

lower efficiency, gradual transition

PAN GPP: Slovenia's 2023 GPP Decree mandates EU-aligned environmental criteria for **20 procurement categories** and includes newer areas such as energy-efficient data centers and cloud services.

ENTERPRISES

- circular material use — **8.3%**
- recycling — **62.6%**

National study

- **energy recovery** — **34%**
- **water recycling** — **39%**
- **remanufacturing practices** — **37%**

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Country differences are indicative rather than statistically significant.

HUNGARY



5

STRATEGIC AMBITION

weak performance baseline

Hungary's Green Public Procurement Strategy for 2022–2027 aims to include green aspects in at least **30% of public procurements by 2027**, with stronger targets in selected sectors.

However, the framework still lacks mandatory reporting and evaluation mechanisms, limiting visibility on actual impact.

ENTERPRISES

- circular material use — **4.9%**
- recycling — **32.8%**

National study

- **resource- oriented** — **31%**
- **goal- oriented** — **39%**

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Country differences are indicative rather than statistically significant.



STRUCTURED FRAMEWORK

persistent business barriers

Croatia has a National Action Plan for Green Public Procurement, first adopted in 2015 and updated in 2021, which integrates **EU-aligned green criteria into central procurement** procedures for categories such as office supplies, computers, vehicles, and electricity.

Even so, the report notes that broader extension across the whole public sector and **better reporting** would improve effectiveness.

ENTERPRISES

- circular material use **6.8%**
- recycling **34.2%**

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Country differences are indicative rather than statistically significant.

POLAND



7

VOLUNTARY APPROACH

large unrealized potential

PAN GPP: Poland's State Purchasing Policy for 2022–2025 encourages public administrations to allocate **20% of procurement budgets to innovative solutions**, including green materials and services, but GPP remains largely voluntary. This creates inconsistency across sectors and regions and weakens implementation capacity

ENTERPRISES

- circular material use **6.7%**
- recycling **40.9%**

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Country differences are indicative rather than statistically significant.

CE- PRINCE

Barriers enterprise



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ENTERPRISE BARRIERS

Pressure across regulatory, administrative, financial and innovation domains

The report groups barriers to enterprise participation in CGPP into **four families**:

REGULATORY 

FINANCIAL 

ADMINISTRATIVE 

INNOVATION 

The most problematic **obstacles** are

- excessive emphasis on price in tenders at 72 %
- additional administrative requirements at 69%
- low financial returns at 68.%

Less critical but still relevant are long contract durations at 5% and limited reputational benefits at 53%.

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BARRIER BY SECTOR AND SIZE

SMEs and manufacturing feel the strongest pressure

Barrier intensity varies somewhat across **company profiles**, even if differences are not statistically significant.

MANUFACTURING:
firms report the highest relevance of barriers



68%

AGRIFOOD:
agri-food records the lowest



54%

SMALLEST FIRMS:
especially those under 25 employees, perceive the strongest barriers



66%

FIRMS 26-50 EMPLOYEES:
show the lowest perceived barriers



54%

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BARRIERS CIRCULARITY PERFORMANCE

Higher barriers tend to mean lower circular performance

FRICTION PATTERN

Stronger administrative, regulatory, and financial obstacles directly correlate with **weaker circular** outcomes, acting as a brake on business evolution.

MULTIPLIER OPPORTUNITY

Removing operational and procurement friction unlocks **higher circular performance**, driving broader systemic transformation across enterprises.

The report identifies an **inverse relationship** between the perception of barriers and enterprise circularity performance. Countries facing heavier obstacles see reduced procurement participation and a systemic slowdown in broader business transformation.

Although not statistically significant, this pattern remains strategically vital: optimizing procurement infrastructure creates a powerful **multiplier effect** across the entire corporate ecosystem.

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Barriers drivers



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ENTERPRISE *DRIVERS*

Economic clarity matters more than innovation rhetoric

The main drivers for enterprise engagement in CGPP are **collaboration** and **communication**, procedural clarity, and financial incentives, all of which are rated more strongly than sustainability and innovation drivers.

ECONOMIC BENEFITS:
The most relevant specific drivers



81%

CLARITY OF DOCUMENTS:
agri-food records the lowest



72%

EARLY INTERACTION:
with procuring organizations



71%

INNOVATION/TECHNOLOGICAL REQUIREMENTS
in tenders are both rated around



59%-60%

PA ENTERPRISES

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DRIVERS *BY SECTOR AND SIZE*

Larger firms and tech-oriented sectors respond more strongly

The relevance of drivers is **not identical** across all firms.

MANUFACTURING AND IT/SOFTWARE
suggesting that these sectors see clearer strategic benefits or alignment with procurement opportunities.



81%



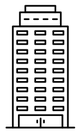
74%

COMPANIES (OVER 500 EMPLOYEES)
report the highest driver relevance



80%

MEDIUM-SIZED COMPANIES
some bands report lower values



58%

This pattern indicates that procurement drivers are present, but not equally **accessible**: some companies can translate them into action more easily because they have more strategic capacity, internal resources, or procurement experience.

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PUBLIC BUYERS *AS INNOVATION PARTNERS*

Enterprises still perceive the public sector as less innovative

A crucial section of the report explores how enterprises perceive the innovativeness of public procurers. The overall picture is **only slightly positive** and remains close to the midpoint of the evaluation scale.

TECHNICAL & MARKET KNOWLEDGE

Public buyers are considered moderately competent, but the assessment is not entirely positive.

RISK & PROACTIVITY

They are not perceived as risk-taking or proactive in enabling innovative supply chains.

SECTOR COMPARISON

Compared to the private sector, the public sector is viewed as less open to innovation and less willing to accept risks.

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PUBLIC PROCUREMENT *AND CIRCULARITY*

Firms in procurement perform better on circular economy

One of the clearest findings in the supply-side analysis is the positive link between

PROCUREMENT PARTICIPATION



CIRCULAR ECONOMY

Companies involved in public procurement report an average circularity score of **3.78%**

compared with **3.61%** for non-participating firms

Regression analysis confirms that participation has a positive and statistically significant effect of **0.191 points** on **circularity** performance, with a **p-value of 0.00054**.

This suggests that procurement does not simply reward already circular firms; it may actively encourage better circular practices by creating *structured demand for sustainability and compliance*.

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NATIONAL GPP CONTEXTS

Strong frameworks exist, but implementation remains uneven

OVERALL *MESSAGE*

The existence of a formal regulatory and political framework does not automatically translate into operational consistency on the ground.

ITALY **AUSTRIA**

stand out for **relatively structured** and binding systems

GERMANY

is **strong** but fragmented due to decentralization

SLOVENIA

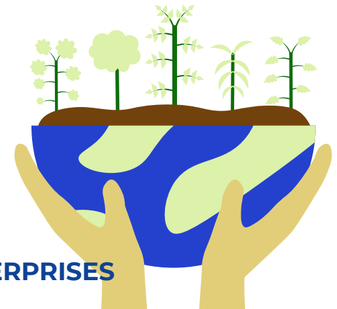
shows a clear decree-based approach but still **struggles operationally**

CROATIA

has a structured plan but needs **broader extension** and stronger reporting

HUNGARY **POLAND**

show ambition but **weaker enforcement** and monitoring



PA ENTERPRISES

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WHAT DRIVES *PUBLIC ADMINISTRATIONS*

Cost savings, incentives and political pressure matter most

WHY

For public administrations, the strongest drivers for defining green criteria in tenders are **financial incentives** and **cost savings**, both rated as highly relevant by

64% **of respondents**



ENVIRONMENTAL POLICIES

61



POLITICAL PRESSURE

59



CITIZENS PRESSURE

57



NGOs

52



EMPLOYEES

55

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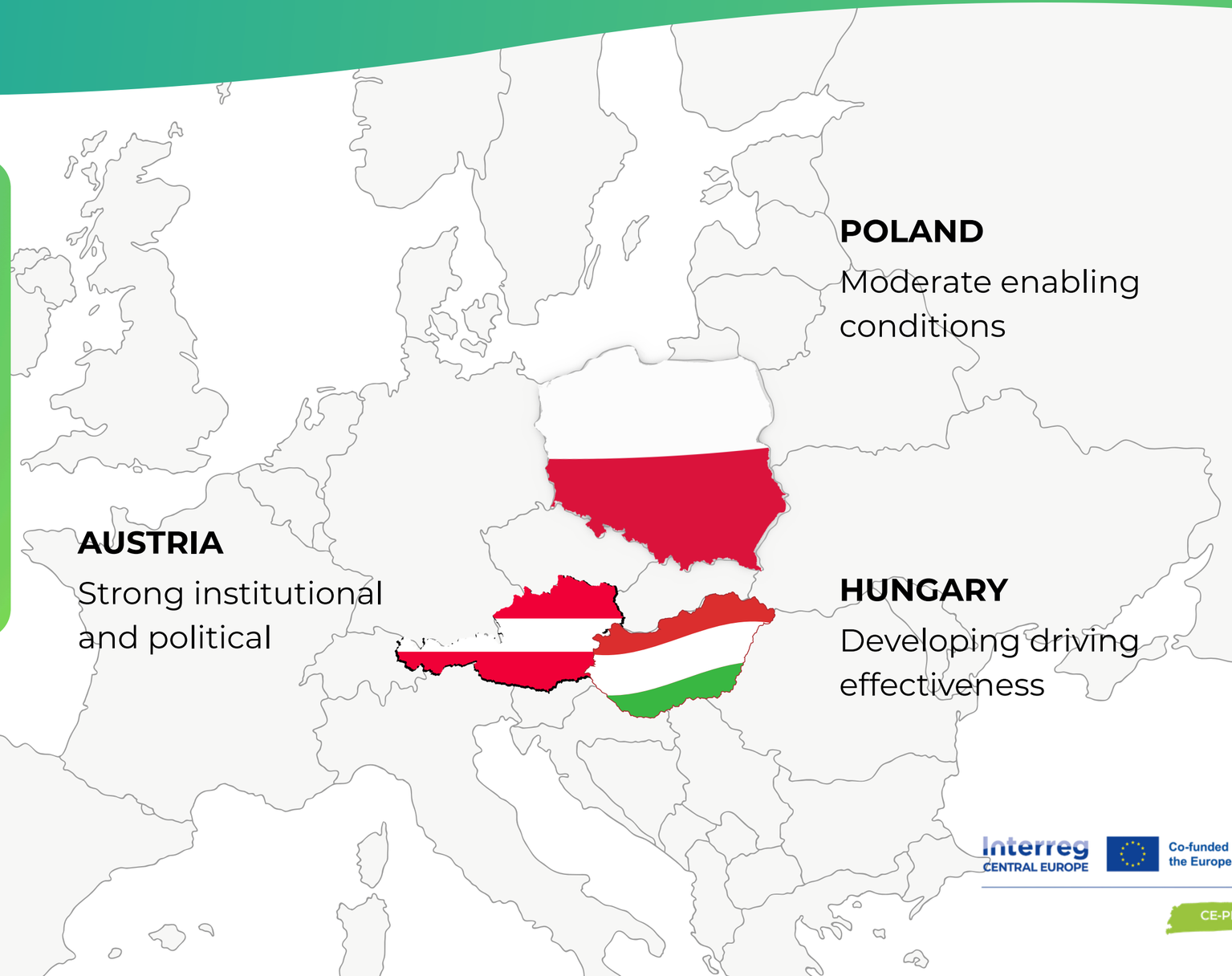
DRIVERS *BY COUNTRY ON THE PA SIDE*

Austria stronger, Hungary and Poland weaker

KEY TAKEAWAY

Stronger **GPP driver relevance** directly impacts *green criteria integration*. Practical procurement behavior is shaped by theoretical support mechanism.





POLAND

Moderate enabling conditions

AUSTRIA

Strong institutional and political

HUNGARY

Developing driving effectiveness

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SUPPLIERS THROUGH THE EYES OF PUBLIC ADMINISTRATIONS

Moderate knowledge and commitment, stronger where GPP is already mature

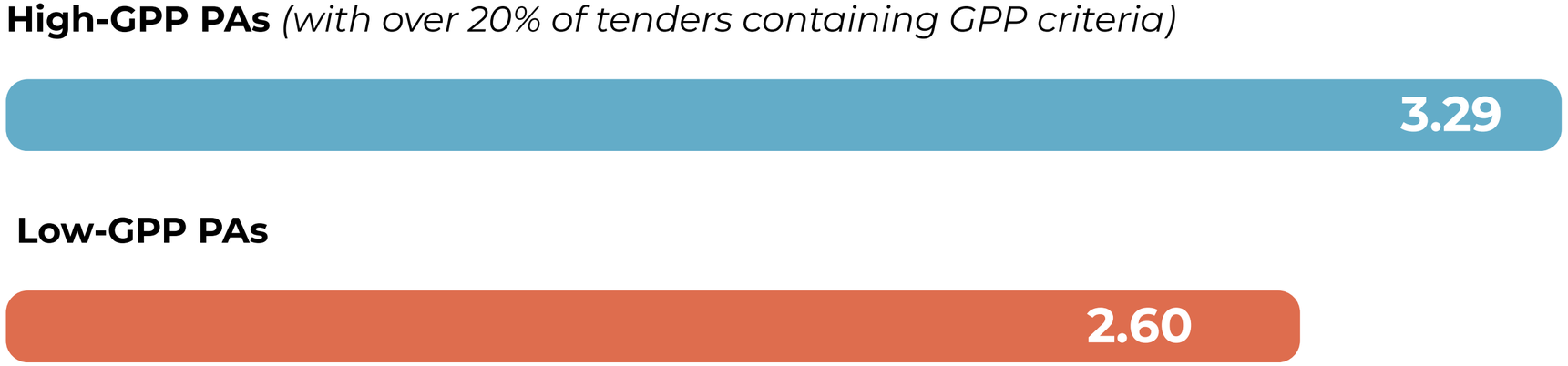
KEY TAKEAWAY

Mature procurement ecosystems **reinforce supplier readiness**, while weaker ecosystems perpetuate low engagement and low capability.

Public administrations report **only moderate** perceptions of suppliers' knowledge, relational behavior, and commitment to **GPP**, with average scores around the midpoint of the scale.

However, the picture changes significantly when comparing implementation levels:

AVERAGE SUPPLIER COMMITMENT SCORE (OUT OF 5)



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ORGANIZATIONAL LEARNING BARRIERS

GPP depends on internal adaptation, not only on regulation

Core Mechanisms: Effective Green Public Procurement (GPP) requires robust internal learning, continuous information acquisition, active knowledge diffusion, and strong feedback mechanisms.

Knowledge Strategy: Public administrations must actively acquire external knowledge, seamlessly share it across departments, and adapt their procurement strategies accordingly.

Organizational Adaptability: True adaptability involves proactive resource reallocation, strategic adjustment, and fostering stronger interdepartmental collaboration.



THE CRITICAL GAP

Procurement innovation often fails not for lack of policy, but because institutions do not learn fast enough to operationalize complex sustainability requirements.

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PUBLIC ADMINISTRATION BARRIERS

Procedures, risk aversion and capability gaps slow progress

Barrier perception is fairly uniform, rather than singling out one issue.

- Budget constraints 76%,
- lack of financial resources 75%,
- higher cost of green procurement 74%,
- lack of training 73%,
- limited human resources 72%,
- domain-specific expertise 71%,
- lack of clear guidelines 70%,
- perception of green procurement 70%,
- legal loopholes 66%,
- limited green product availability 64%,
- lack of GPP regulations 64%,
- internal department conflicts 58%

ORGANIZATIONAL & MARKET

Limited availability of green products: 64%
Internal conflicts between departments: 58%

CAPABILITY GAPS

A severe lack of training, insufficient expertise, and limited human resources hinder daily GPP operations.

BEHAVIORAL & REGULATORY

Lack of clear guidelines: 70%
Legislative gaps: 66%
Lack of GPP regulations: 64%

ORGANIZATIONAL & PROCEDURAL

Unclear procedures, administrative inefficiencies, and internal departmental conflicts reduce implementation coherence.

DEMAND VERSUS SUPPLY

Enterprises are often ahead of public tender criteria

One of the most important findings of the report is the mismatch **between circular demand and supply**. The gap is evident across multiple areas, including water recovery and durability requirements.

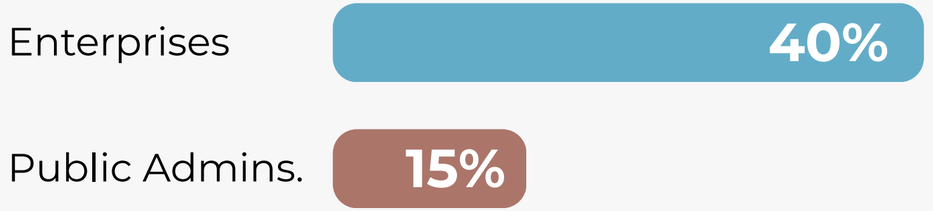
KEY TAKEAWAY

Enterprises often report **higher implementation** of circular practices than public administrations integrate into tenders.

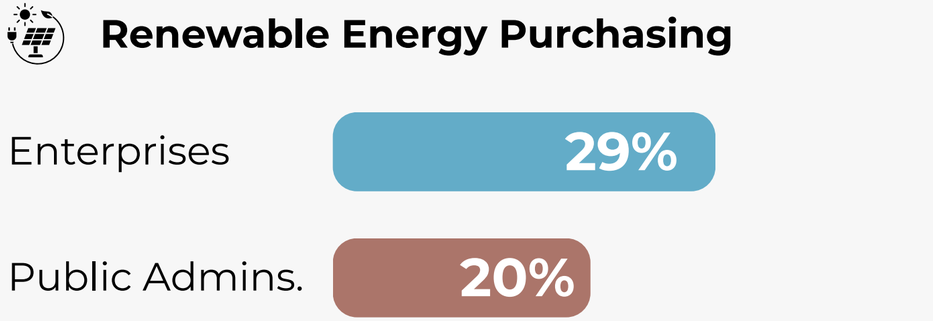
This means the market may, in some cases, be **more ready than procurement frameworks** currently recognize.

IMPLEMENTATION RATE COMPARISON

Take-Back Systems



Renewable Energy Purchasing



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WHERE DEMAND AND SUPPLY ALIGN

Local sourcing is the clearest common priority

Despite the gaps, the report identifies encouraging areas of alignment. The most evident is the priority given to local suppliers, showing where the market is already responding to sustainable demands.

54% **Enterprises**

High implementation

VS

35% **Public Admins.**

Integrate this criterion

ACTIONABLE BRIDGE

Although the intensity differs, the direction is shared.

This indicates that territorial supply chains are one of the most actionable bridges between public demand and private circular capability.

SYSTEMIC BLIND SPOTS

By contrast, practices such as water recovery and design for recyclability remain weak on both sides, showing that some issues are not just mismatches but common systemic blind spots.

BOTH

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STRATEGIC CONCLUSIONS

From fragmented readiness to coordinated circular transition

SYSTEM IMPLICATION

The circular transition will accelerate only if both market dimensions evolve in parallel. We must bridge the current mismatch through clearer criteria, active dialogue, and actionable market design.

Rewarding real circularity in actual transactions is key.

Central Europe shows active **Green Public Procurement (GPP)** policies, yet maturity is uneven and the crucial link between public demand and private supply is still incomplete.

ENTERPRISES (SUPPLY)

Making real operational headway particularly in resource efficiency and waste management. However, many still hit hard economic and bureaucratic boundaries when trying to scale circular solutions.

PUBLIC ADMINS (DEMAND)

Strong supportive policy frameworks are already in place, but local bodies frequently lag in operational execution, internal coordinator training, and innovation-oriented tender designs.

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BOTH