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Sustainable Public Procurement Practices for Medicinal Supplies

An analysis of the sustainable public procurement of medicines

Research Report: September 2025



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Abbreviations

AMR	Antimicrobial resistance	MEAT	Most Economically Advantageous Tender
BPQR	Best Price-Quality Ratio	NHPT	Norwegian Hospital Procurement Trust
CJEU	Court of Justice of the European Union	NPF	Nordic Pharmaceutical Forum
CO₂	Carbon Dioxide	OECD	Organisation for Economic Co-operation and Development
EC	European Commission	PPL	Public Procurement Law
EFPIA	European Federation of Pharmaceutical Industries and Associations	PPM	Public Procurement of Medicines
ESG	Environmental, Social, Governance	SDG	Sustainable Development Goals
EU	European Union	SP	Sustainable Procurement
GDP	Gross Domestic Product	SPP	Sustainable Public Procurement
GPP	Green Public Procurement	TFEU	Treaty on the Functioning of the European Union
HTA	Health Technology Assessment	UK	United Kingdom
LCA	Life Cycle Assessment	UN	United Nations
LCC	Life cycle costing	WHA	World Health Assembly
LCT	Life cycle thinking	WHO	World Health Organisation

Executive Summary

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Most of the €2 trillion spent by public authorities on goods and services is associated with healthcare, of which pharmaceutical spending is a major budget item. Seventy-five percent of health expenditure and two-thirds of pharmaceutical expenditure are covered by public payers. Medicines are key necessary goods procured via public procurement - universally recognised as a strategic policy instrument to achieve broader societal goals related to economic, environmental, and social sustainability in the 2030 Agenda for Sustainable Development.

Following almost two decades of cost-containment policies in public healthcare systems, financial sustainability is a crucial issue for healthcare institutions operating with limited resources. As such, when it comes to medicines, procurement is generally used as a tool to achieve cost savings rather than contributing to longer-term sustainability. Despite this almost single-minded focus, Public Procurement Directive 2014/24/EU makes clear that environmental and social considerations should be incorporated into public procurement procedures, as **sustainable public procurement is strategically important for smart, sustainable, inclusive growth**. However, entrenched public procurement practices hinder the sustainable public procurement of medicines and, in some cases, actively weaken it.

Sustainable public procurement (SPP) incorporates economic, environmental, and social sustainability factors. But ambiguity in the legal validity of sustainable procurement in EU norms appears to have created non-standardised approaches to medicines procurement within and between Member States. What's more, evidence suggests that sustainable medicines procurement has hardly developed. This is due in part to the interchangeable use of the concept of

SPP with that of Green Public Procurement (GPP) across the EU. While the number of countries implementing GPP into public procurement award criteria is growing, a disconnect remains between common procurement practices in European health systems and other areas of public activity. Additionally, as this report shows, except for a few outliers, application of GPP criteria in pharmaceutical procurement is lagging throughout the Union.

Early implementers and global leaders of sustainable medicines procurement incorporate environmental award criteria in public tenders where the Most Economically Advantageous Tender (MEAT) is used. While it could be argued that tackling environmental sustainability by default protects against social issues, such practices fail to give equal emphasis to all three dimensions of the sustainable procurement paradigm. Even in these good practice cases, price criteria continue to have the highest award weighting. Indeed, 62% of EU countries award contracts based on price only.

Traditionally, discussions about the public procurement of medicines focused solely on price control, as governments restricted budgets in the aftermath of the 2008 financial crisis. This norm changed suddenly following the declaration of the COVID-19 pandemic. As medicine shortages increased, the focus shifted to procurement practices, the security of supply and the availability of medicines. Simultaneously, as awareness grew about the environmental impact of health systems—and pharmaceuticals in particular—European law and policy began evolving to strategically tackle systemic sustainability issues.

With an evaluation of the Public Procurement Directives underway and a new Procurement Regulation anticipated, the analysis below shows that a higher level of

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emphasis needs to be placed on the sustainable procurement of pharmaceuticals.

The following report examines the application of sustainable practices in the public procurement of medicines through the lens of the three sustainability factors. Examples of real-world implementation, tools and guidelines are documented throughout. The examples provided show that there is no single, publicly available, case of a sustainable procurement practice applied in the public procurement of medicines. Economic selection criteria continue to dominate. If sustainability is applied, it falls into the trap of applying two of the three sustainability factors.

Politically, the European Union is at a crossroads. Austerity practices have become the norm in healthcare services as dissatisfaction with democratic systems grows.

Trust in policymakers and public institutions is falling. Light-touch sustainability practices should be tackled as a measure

to enhance public trust and organisational reputation. At the very least, accountability and transparency show the public that decisions are made ethically and sustainably.

Selective application of the sustainability paradigm risks ignoring the approximately 1.8 million workers—including pharmaceutical production workers—exposed to hazardous medicinal products. Medicine waste that causes ecotoxicological risks to biodiversity and the environment is an existential risk for all Europeans.

59% of healthcare’s emissions are associated with supply and services procurement. Thus, as a strategic tool, sustainable public procurement (SPP) has the potential to transform the healthcare sector by shaping production and consumption patterns and promoting environmental, social, and economic criteria in procurement processes.



Sustainable Public Procurement of European Medicines

01

1.1. Introduction

About €2 trillion is spent by public authorities procuring goods and services across the EU [1]. Most spending is by public healthcare authorities and services, who on average spend 8% of GDP on public procurement [1], [2]. 75% of health expenditure and two-thirds of pharmaceutical expenditure are covered by public payers [3]. Medicines are key, necessary goods procured by health service providers and generally purchased following rules defined by the EU's Public Procurement Directives¹.

Until the COVID-19 pandemic, with a few exceptions, public procurement in healthcare was not a widely discussed topic. This changed dramatically as problems in procuring goods to meet critical patient needs arose. As the initial crisis phase subsided, the discussion tipped from the problems procurers encountered to the widespread misunderstanding and misapplication of public procurement rules [4].

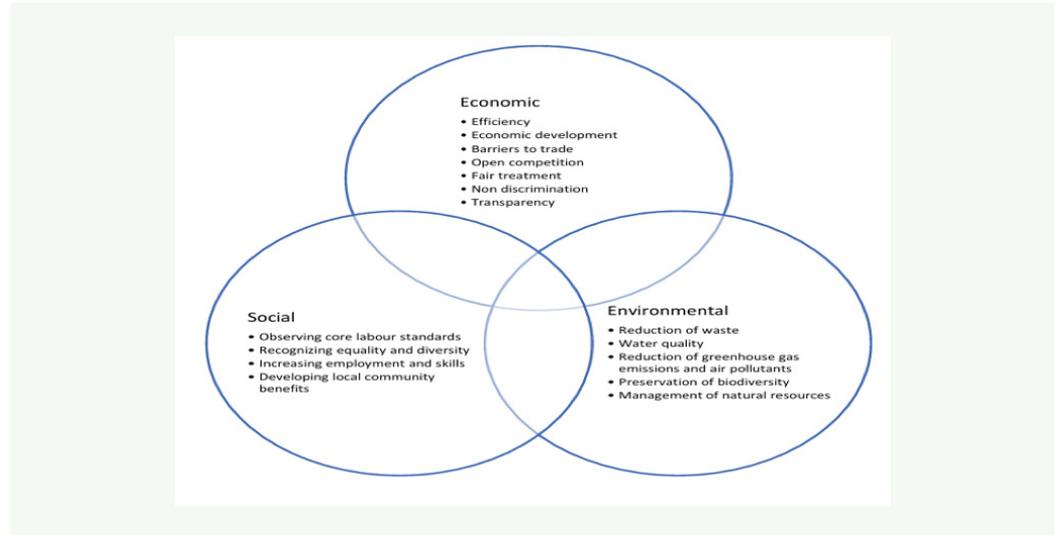
According to the Directives, all public procurers should apply MEAT (Most Economically Advantageous Tender) criteria when selecting a winning bid. However, **a standardised approach to medicines procurement is lacking within and between member states**—application of the criteria varies significantly [1]. Heterogeneous applications of the Public Procurement Directives have important implications for the economic, environmental, and social sustainability of medicines—factors falling within the OECD's three pillars of Sustainable Public Procurement [5]. The value of these domains is gradually increasing in public policy agendas. While some backsliding is evident in certain areas, public procurement continues to be widely seen as strategically important for smart, sustainable, and inclusive growth [1].

Public institutions and private players widely recognise and call for the proper application of MEAT criteria when it comes to medicines procurement. Calls largely concern shifting from price-only considerations and linking medicines procurement to sustainability objectives (see EFPIA; EC, 2022; Critical Medicines Alliance, 2025 for example). Aside from this, there is an urgent need for public procurers and public procurement bodies to weigh up the longer-term impacts of their tendering decisions on public health outcomes. These outcomes are not limited to patients actively receiving care but apply to future patients who will eventually enter the health system. Considering this, it is likely that forthcoming European legislation will put a new onus on procurers to update their procurement practices.

The focus of this research centred on the use of MEAT criteria in medicines tendering and procurement for sustainability purposes. As such, this report presents the results from a rapid scoping review of grey and scientific literature providing an overview of the research and grey literature concerning the application of MEAT criteria for the sustainable procurement of medicines. Search strings combined keywords linked to the subject were run in online academic and scientific databases. This was completed by a hand search of grey literature and the use of an AI tool to identify further studies. Good and inspiring practices for the sustainable public procurement of medicines (SPPM) were identified by combing the collected literature for resources. Examples of good practices and resources are interspersed throughout. Real-world evidence of the implementation of sustainable medicines procurement in Europe is lacking. Overall, our research suggests that the sustainable procurement of medicines in Europe is in the early stages.

¹ Public contracts priced above €143,000 must follow defined rules laid out in Directives 2014/24/EU and 2014/23/EU

Considering this, public procurers of medicines are in a unique position; they have the power to implement meaningful, lasting, positive change for entire countries and populations.



Source: The Three Pillars of Sustainable Development, (pg. 183). United Nations (2020) UN Procurement Practitioners Handbook

1.2. What is Sustainability?

The main starting point for sustainability, according to Portney (2015), is that the Earth does not have infinite resources, and excessive, unrestrained consumption poses a significant threat to life on Earth [6]. Hence, sustainability consists of three e's: environment, economy, and equity. Sustainable procurement practices differ slightly, focusing on environmental, social, and economic sustainability [7].

A clear definition of **environmentally sustainable** pharmaceutical treatments is lacking in the literature [8], although a recent paper by IQVIA states that ESG factors in this area include carbon emissions, climate change, suppliers' energy and resource use, waste generation, and the consequences this has for living beings [9].

In general, factors relating to the **economic sustainability of medicines** include pricing, market access, quality of supply chains, R&D, and the development of drugs to treat rare diseases. For instance, in the biosimilar market common concepts of sustainability relate to an appropriate and reliable access to therapies that balance incentives for all key stakeholders/multi-stakeholder; benefits uphold market attractiveness and competition that is sustainable for healthcare budgets [10].

On the other hand, **social sustainability** incorporates suppliers' relationships and reputations where they do business. In supply chains it includes '*human rights, labour standards, diversity, inclusion, and more routine issues such as adherence to workplace health and safety*' (Gawronski et al. 2024, p.14). As such, social criteria in tendering procedures go beyond patient considerations.

Finally, **governance aspects** should not be overlooked. These features are linked to regulations, external initiatives, commitments to guidelines, compliance in quality, transparency, combatting corruption, and adaptation to digital, patient-orientated business models [11]. Furthermore, it includes the '*internal system of practices, controls, and procedures adopted by suppliers to govern themselves, make effective decisions, comply with the law, and meet the needs of external stakeholders*' (Gawronski et al., 2024, p.14)

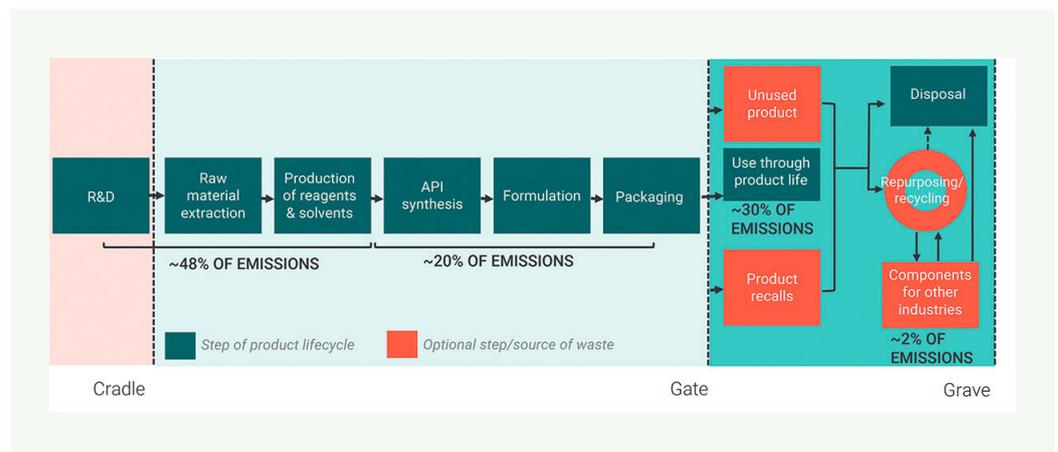
1.3. Sustainability of Medicines

No specific SDGs or indicators concern medicines, but several are pharmaceutical sensitive. As awareness grows about controversial operations throughout supply chains, sustainability in pharmaceutical supply chains, moving beyond cost, is gaining increased attention [11]. Indeed, a paradox can be seen in the regulation and approval of medicines and their production and use. For instance, before a medicine is sold, its safety and

effectiveness must be confirmed by an independent regulator. In contrast, no specific standards exist on safe concentrations of antibiotic effluent discharged into the natural environment in any part of the world [12].

The use of Harmful Medicinal Products (HMPs) grew by 14% in the past five years and is expected to increase by a further 12% by 2028 [8]. Demographic and epidemiological changes will cause medicine use to increase dramatically in the coming decades. For instance, Germany's ageing populations and the rising incidence of comorbidities will increase pharmaceutical usage by at least 67% in 2045 [13]. Medicines are a vital element of healthcare and access to medicines is a fundamental right, but these products also have the potential to harm human, animal, and environmental health [2], [14].

Approximately 1.8 million workers, including those involved in pharmaceutical production, are exposed to hazardous medicinal products (EU-OSHA, 2023). 59% of healthcare's emissions are associated with supply and services procurement (WHO, 2015, cited in Wangen and Pettersen, 2022). A large contribution to the sector's environmental footprint is caused by pharmaceuticals [8], [15]. Medicine use in the sector causes excessive waste generation, totalling 18 million tonnes annually—25 to 125 times the weight of the drugs produced [16].



Source: Generalised pharmaceutical supply chain diagram with ranges for shares of total carbon footprint. Moving towards a more environmentally sustainable pharmaceutical industry: recommendations for industry and the transition to green HTA 10.1080/14737167.2023.2214730

Activities such as raw material extraction, energy use, antibiotic effluent discharge, and incineration are contributing to environmental degradation and antimicrobial resistance (AMR), impacting drinking water and causing ecotoxicological risk to organisms in the environment [2], [8], [12], [16]. Lastly, from research to development to the storage, transport, use, and disposal of medicines, pharmaceuticals are significant product group that have substantial potential for improving their sustainability impact [2], [16], [17], [18].

Public procurement can reward good practices when purchasing medicinal products transforming pharmaceutical supply chains and supporting healthcare institutions to make sustainable choices [19]. Indeed, this recognition is influencing medicine supply chain practices in the UK, where, for instance, Health Technology Assessments (HTA) now capture environmental information alongside clinical and cost effectiveness in their processes [11].

Social and Policy Context

02

2.1. International Efforts

The potential of public procurement to contribute to sustainable development emerged at the 1992 Rio de Janeiro UN Earth Summit [5]. Following this, the Marrakesh Working Group on Sustainable Procurement promoted the use of sustainable public procurement (SPP) in developed and developing countries [20]. In their eyes sustainable procurement is *‘the process when organisations meet their needs for goods, works and services in a way that assesses the benefits not only to the organisation, but also to society and the economy while minimising environmental damage’* (ICLEI, 2021 cited in Ustyomenko et al, 2021).

A decade later, the OECD Council adopted its [Recommendation on Improving the Environmental Performance of Public Procurement](#) urging countries to incorporate “environmental criteria into public procurement of products and services” (OECD, 2019, p. 23). Following this, the United Nations established an informal Interagency Task Team on Sustainable Procurement in the Health Sector to promote environmentally responsible procurement of health commodities and the use of environmental criteria in pharmaceutical procurement [12], [21].

Sustainability goals relating to environmental and social impacts have been embraced by the United Nation’s Sustainable Development Agenda. Notably, the 2030 Agenda includes Sustainable Development Goals (SDGs) ensuring sustainable production and consumption patterns. SDG 12.7 specifically calls on all countries to promote and implement sustainable public procurement policies and action plans. Hence, even though public procurement frameworks were originally designed to achieve the best value for money at the lowest price, SPP has started to emerge in recent years [5].

2.2. Sustainability and EU Public Procurement Legislation and Policy

At the EU level sustainable procurement initiatives were influenced by international developments. Initial efforts began in the 1990s, and as the Union matured, European treaties and frameworks placed more emphasis on community, social and environmental protection, and inclusion factors. For instance, key tasks of the European Union within the Treaty on the Functioning of the European Union (TFEU) include harmonious, balanced, and sustainable growth; high social protection; high protection and improvement of the quality of the environment; improvements in the standards and quality of life; economic and social cohesion; and Member State (MS) solidarity [22].

Linked to this, fundamental principles of EU Public Procurement legislation² include equal treatment, non-discrimination, mutual recognition, proportionality, and transparency. It lays out EU rules for public works, services, and supplies contracts [1]. Public procurement is a shared competency under the TFEU, but medicines procurement is an MS competence [23], [24], [25]. What’s more, the Directive applies a light-touch regime where requirements are related to the health sector [1]. Nevertheless, the EU public procurement Directive 2014/24/EU of the European Parliament and of the Council provides public procurers of medicines with a legal framework and valuable tools for their procurement processes and, as the Critical Medicine Alliance says, *‘gives Member*

²An evaluation of the Public Procurement Directives (2014/23/EU, 2014/24/EU and 2014/25/EU) is currently underway. The evaluation will examine their performance and impact across the EU, assessing whether they remain fit for purpose, achieve their intended objectives cost-effectively and adequately address current challenges.

States a large margin of manoeuvre in setting up the criteria for their tenders' (2025, p.23). What's more, with an evaluation of the Public Procurement Directives underway, a new Procurement Regulation, due in the third quarter of 2025, may introduce obligatory measures related to the national public procurement of certain pharmaceuticals [26]³.

The rise of SPP in the EU is specifically related to the voluntary Green Public Procurement (GPP) instrument. Introduced in 2008, GPP in Commission Communications, is defined 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 [27]."

However, as the OECD observes, GPP focuses only on the environmental pillar of sustainability even if it has evolved from simply minimising harm 'to actively using public tenders to achieve targeted environmental goals' [5]. Achieving these objectives can arguably be seen as also meeting social sustainability challenges⁴. This is in line with SDG target 12.4 and SDG 13, which advocate for the proper management of all waste and chemicals through their life cycle to combat climate change and support healthy lives [28]. Currently, public authorities using the [EU's Green Public Procurement Guidance](#) can integrate and use green criteria and labels in their procurements [29]. This includes technical specifications, selection criteria, exclusion grounds, contract award criteria, and contract provisions [29]. However, no specific resources for pharmaceuticals are available, and even GPP criteria for [Electrical and Electronic Equipment used in the Health Care Sector](#) is outdated⁵.

This may explain why the EU Green Deal explicitly proposes devising minimum mandatory green criteria or targets for public procurements in sectoral initiatives [30]. Such criteria will set a common definition of what a green purchase is and will create the basis for assessing the impact of green public procurements. As the Commission will propose further legislation and guidance on green public purchasing, public institutions may soon be obliged to consider environmental externalities over a medicine's life cycle when purchasing pharmaceutical products.

2.2.1. Sustainable Public Procurement and MEAT criteria

Within academic literature sustainable procurement is understood to be 'the pursuit of sustainable development objectives through the purchasing and supply process that involves balancing economic, environmental, and social factors' [31]. Elsewhere, Directive 2014/24/EU on public procurement makes clear that environmental and social considerations should be incorporated into public procurement procedures. It states that "contracting authorities can contribute to the protection of the environment and the promotion of sustainable development while ensuring that they can obtain the best value for money for their contracts" [32]. What's more, the accompanying interpretative documents note that public procurement is key for smart, sustainable, and inclusive growth, which can be achieved by awarding contracts to the Most Economically Advantageous Tender (MEAT) [33].

The MEAT criteria explicitly allow procurers to go beyond price-only considerations in procuring decisions. Commentators remark that a major selling point of the legislation is the incorporation of the sustainability paradigm, which allows national authorities the flexibility to align procurement processes with social and environmental objectives [7], [23]. Despite this, the MEAT approach still accounts for a minority of PPM (Public Procurement of Medicine) procedures, as most contracts are awarded on a price-only basis [34].

This may be because Directives are a form of legislation that leave MS with the freedom to accommodate their own arrangements. As such, implementation of the Procurement Directive 2014/24/EU is heterogeneous across the Union [23]. Depending on arrangements made at the national level, the procurement context may also vary within countries [23]. What's more, following over a decade of cost-containment policies in public health-

³ The evaluation of Public Procurement Directives (2014/23/EU, 2014/24/EU and 2014/25/EU) aims to examine their performance and impact across the EU, assessing whether they remain fit for purpose, achieve their intended cost-effective objectives and if they adequately address current challenges.

⁴ The availability of raw materials for medicines production depends on a healthy, functioning, environment.

⁵ A 2022 JRC assessment recommends that this criteria is updated as a lack of up-to-date criteria could negatively affect the uptake of the EU GPP Policy. See: Assessment of the European Union Green Public Procurement criteria for four product groups - Publications Office of the EU available at <https://op.europa.eu/en/publication-detail/-/publication/1d5a8c25-74ec-11ec-9136-01aa75ed71a1/language-en>

care systems, financial sustainability remains a crucial issue for organisations operating with limited resources. As such, when it comes to medicines, procurement is generally used as a tool to achieve savings rather than contribute to longer-term sustainability [35]. However, studies show that improving procurement efficiency in health care by 10% provides up to an extra 0.5% of GDP to cover healthcare needs [36], [37]. Pharmaceutical expenditures range from 6.4% of health spending (Denmark) to 26.9% in Greece to 34.4% (Bulgaria) (OECD, 2022 cited in [4], p. 179). When Nemeč's finding is applied to pharmaceutical expenditures, additional available funds for medicines could be as high as 0.17% of GDP.

Moreover, Ustymenko advises that at the MS level *'implementation of sustainable public procurement is possible only if there is legal base that must meet the requirements set out in EU legal norms on sustainable procurement'* (2021, p. 3). At the same time, EU norms on sustainable procurement are not mandatory, and there is ambiguity in the legal validity of sustainable procurement in EU norms [20]. Additionally, there is a lack of goods that meet established environmental requirements [20]. Despite these challenges, MS such as Norway, Denmark, and Germany are supporting sustainable public procurement at the legislative level through the development of programmes and integrating relevant norms into legal acts that regulate other areas [20].

Consensus is growing within multilateral institutions that green public procurement using environmental criteria can be used as a mitigation option at the stage of pharmaceutical production [12]. Within the EU, the Commission has committed to discussing the possibility of using procurement policy to encourage greener pharmaceuticals. Furthermore, the [2021 opinion](#) on public procurement in the healthcare system by an Expert Panel on effective ways of investing in health recommends that the scientifically underpinned use of contextual, environmental, and social criteria should be enhanced in healthcare procurement [1].

2.2.2. Pharmaceutical Policy and Legislation

Europe's Pharmaceutical Strategy calls for public procurers to design smart and innovative procurement procedures and improve related aspects, including price conditionality, green production, and security of supply [38]. These calls reflect a Commission notice, which underlines that a smart setting of the MEAT criterion encompassing both quality and price could significantly improve innovative procurement practices [39]. Adding to this, the [forthcoming reformed Pharmaceutical legislation](#), currently under review by the European Council, places a high level of emphasis on sustainable supply and greener pharmaceuticals. Here procedures are laid down for environmental risk assessments of antimicrobials. A requirement is included to evaluate the risk of AMR in the environment due to the entire manufacturing supply chain inside and outside the European Union. Considering this, procurement practices need to take *'into account, where relevant, the existing international standards that have established predicted no effect concentration (PNECs) specific for antibiotics'* (Bhullar, 2024, p. 297).

The Expert Panel in healthcare opinion on public procurement states that *"from a health policy perspective, the primary goal of pharmaceutical procurement is to enable patients to have access to the medicine they need"* [1]. However, timely and affordable access to medicines depends on tenderers using reliable procurement criteria [39]. Public policy discourse largely focuses on the economic and environmental sustainability of medicines, but procurement practice tends to generally favour short-term economic considerations [34]. Thence, in 2016 a European Parliament Resolution (2016/2057(INI)) called on the European Commission to define how the MEAT criterion can be best applied to medicine tenders in hospitals to enable a sustainable and responsible supply [40]. What's more, a European Parliament Resolution on the Strategic Approach to Pharmaceuticals in the Environment pointed out the important role of procurement policy to promote greener pharmaceuticals [41]. Here, the Parliament called on the Commission to develop clear guidance on this issue. Following such calls, the Commission held a consultation conference to discuss and collect overarching feedback on the content for EU guidance on public procurement of medicines [42]⁶.

⁶The outcome of this consultation has yet to be released.

Finally, and more recently, the proposed Critical Medicines Act will address aspects concerning the economic, social, and environmental sustainability of medicines [26]. The Act's core objectives are to improve the availability, supply, and production of critical medicines. To this end, the Act proposes using public procurement to incentivise the resilience of supply chains and improve access to medicines of common interest. In this regard, consistent procurement requirements are to be implemented by contracting authorities, and the application of MEAT criteria and multi-winner approaches will become mandatory. This is consistent with calls by the Critical Medicines Alliance, who recommend the systematic application of specific MEAT criteria in the EU [25]. A key rationale for the Alliance's recommendation is industry's adherence to high environmental standards in production processes is not sufficiently rewarded in how critical medicines are bought. Thus, according to the Alliance purchasing criteria, *'should include the best price-quality ratio, comprising at least three criteria: environmental, security of supply and resilience'* (p. 26).



Sustainability & Public Procurement of Medicines

03

Public procurement of medicines (PPM) can be applied strategically to meet overarching policy objectives. In practice, PPM concerns all aspects surrounding the process of purchasing medicines by a contracting authority [1]. It is commonly used in hospital settings and public health programmes (e.g., immunisation programs) and plays a lesser role in the community and primary care sector [34].

Public procurement (PP) rules apply to contracts exceeding thresholds of between €143,000 and €215,000 [43]. PP procedures can take one of three forms: open, restricted, or a competitive procedure with negotiation. PPM frequently applies (mainly open) tender procedures, framework agreements, and negotiations, depending on the type of medicines. Generally, these are used with the aim of containing cost [34], [44], [45].

Pharmaceutical tendering is defined by the WHO (2021) as “*any formal and competitive procurement procedure through which offers are requested, received, and evaluated for the procurement of goods, works or services and as a consequence of which an award is made to the tenderer whose tender/offer is the most favourable*” [46]. Adding to this, tenders are awarded to suppliers who made the most advantageous offer, according to MEAT criteria [46].

Estimates suggest that tendering accounts for 50% of the European market, 40% of European drug purchases, and almost 100% of drug purchases made by hospitals [9]. As financial resources tighten, healthcare institutions are increasingly using tendering to contain costs. Indeed, an increasing number of published tenders have been observed by respondents in IQVIA studies [9].

Tendering is traditionally associated with enhancing competition. It is increasingly being used to encompass other dimensions of value beyond price through the application of MEAT [47]. Factors such as security of supply, the ability to maintain multiple manufacturers in the market, and ESG criteria are increasingly considered in tendering evaluation criteria [9]. Before proceeding, it should be noted that research literature on pharmaceutical tendering is exploratory in nature. Little empirical research has been conducted to date due to data collection difficulties [45].

3.1. Practices and Procedures

Pharmaceutical tendering normally bulk acquires medicines over a fixed period. Tenders are mostly used at the hospital level for generic medicines but are being extended to include the purchase of biosimilars and vaccines [9], [45]. Tender practices in the outpatient setting have also been reported, where off-patent medicines are mostly targeted [3], [48].

Organisational forms of procurement generally fall within one of three categories: facility-based, group procurement, or centralised procurement [34]. Additionally, cross-border joint procurement mechanisms are emerging—for example, the Norwegian Procurement Forum and the Baltic Procurement Initiative. Different institutional frameworks are used, individual and pooled procurements can be conducted, and centralised procurement or voluntary pooling can take place at the regional or national level [3], [34]. In Belgium, for example, medicines are procured by both individual hospitals and hospital groups [49]. There is a trend towards more centralised PPM in the hospital sector; voluntary group procurement is mostly used for hospital medicines [34]. Most countries use more than one procurement form, depending on the sector and medicine type [34].

Competitive pharmaceutical tendering has become a pivotal strategy to contain healthcare costs and enhance competition. Its main objective is to select the most cost-efficient supplier [45], [50]. Tendering processes are complex, regulated by national and European legislation, and guided by publications from other international organisations (e.g., OECD, UNDP, WHO) [51]. As such, tender design and application vary within and between countries.

Tendering phases include bid submission, evaluation and award, and finally the selection of winners according to specified award criteria [1]. The typical process involves governments asking manufacturers to submit quotes after a baseline price has been fixed [52]. Generally tender calls specify a reserve price and strict criteria [4], [45]. According to a study by the Commission on Best Practices in PPM, hospital procurers follow the pharmaceutical life cycle approach in tendering processes. At the same time, hospital pharmacists' perspective is that pharmaceutical tendering largely aims to contribute to '*quality assurance, security of supply, and cost containment*' [34].

As Directive 2014/24/EU states, MS should have the right to prohibit or constrain cost or price for procurement [53]. Considering this, two different methods are taken to award tenders under EU Procurement legislation: the lowest price and the MEAT [53]. MEAT allows procurers to either separate or combine three criteria (i.e., price, cost, and the best price-quality ratio (BPQR)⁷ during the tendering process. Tenders based on MEAT criteria are evaluated according to the weighting of each criterion, and a total score is then calculated to determine the winning bid [9]. If the procurer chooses to apply the best price-quality ratio, the procurer has discretion to determine the criteria by which tenders are assessed [47]. This can include non-price, qualitative criteria to support wider social, labour, and environmental goals. As such, quality, price, technical merit, aesthetic and functional characteristics, environmental characteristics, running costs, cost-effectiveness, after-sales service and technical assistance, delivery date, and delivery period of completion are criteria that can be applied for tender evaluation.

The inclusion of award criteria beyond price (e.g., the availability of value-added services) can encourage increased competition and provide multi-stakeholder benefits. Moreover, sustainable tendering depends on the number of winners, award criteria, and the length of awarded contracts. In theory, the bidder with the most advantageous tender should win the contract; the contracting authority will acquire the product at the lowest price for the desired quality or at the highest value of money if quality differs across bids [1]. In practice, a winner-take-all principle is applied [45], [46]. In fact, single-winner tenders are the norm, and typically the lowest-priced bid is awarded throughout Europe [44], [54], [55].

PPM, states the Commission, reflects the heterogeneity of MS health systems [34]. In their view, PPM is a well-established practice across the EU. In contrast, industry associations criticise PPM for a lack of standardisation and, in some cases, non-compliance with the spirit and letter of the Procurement Directive [34]. Indeed, Németh points out that the design and application of tenders varies across and within countries [44]. Meanwhile, Esplugues (2024) observes that the Spanish Independent Authority for Fiscal Responsibility identified that approximately two-thirds of public procurements (including drugs) in hospitals in 2018 were conducted through small contracts or direct purchasing and did not comply with mandated national and European regulations [50]. This may be, as identified by EFPIA, due to inaccurate volume estimates leading to orders that are unsuitable to hospital needs, which result in the organisation of separate short-term tenders [43].

⁷ Best Price-Quality Ratio (BPQR) is an award criterion in public procurement under EU Directive 2014/24/EU, used to determine the most economically advantageous tender. It evaluates offers based on a combination of price and qualitative factors such as technical merit, sustainability, social value, or delivery terms rather than price alone. Contracting authorities assign weights to each criterion to ensure a transparent and value-driven selection process.

3.2. Application of MEAT Criteria

A study by the European Commission found that MEAT is used only in a minority of PPM procedures. Between 2008 and 2021, only 44% of contracts were awarded according to MEAT criteria [34]. The use of MEAT criteria across product type also varies. For instance, this same study found that MEAT criteria are more likely to be applied to vaccine procurement than other medicine products [34]. Since this publication, industry

reports reveal that MEAT criteria is the main tendering practice in the Nordic region. Meanwhile, the application of MEAT criteria is becoming increasingly important in the founding EU MSs, Spain and the United Kingdom (UK). However, MEAT use is minimal or completely absent in most MSs; price-only tenders continue to be the norm [55].

Reasons for the low uptake of MEAT may be related to transparency requirements, the number of market suppliers, organisational reluctance to implement MEAT in tendering processes, and silo budgeting in healthcare systems [9], [34]⁸. For the latter challenge, research by MedTech Europe and others shows that even if decision-makers are supportive of applying MEAT criteria, *'hospital procurement officials cannot be asked to spend more...if the [financial] benefits show up on someone else's balance sheet'* [56].

Aside from these barriers, suboptimal tendering and defective procurement practices undermine the economic sustainability of medicines [50], [57]. As the following discussion will show, an excessive focus on one dimension of economic sustainability, combined with a narrow interpretation and application of procurement criteria, has a knock-on effect on the long-term resilience in pharmaceutical markets.

As previously mentioned, the ability to select specific suppliers based on specific environmental, social, and economic standards is a key action for sustainable public procurement. However, as the following discussion will show, it appears that embedded public procurement practices hinder the application of sustainable procurement to medicines and, in some cases, weaken it.

3.3. Market Sustainability

Pharmaceutical spending is a major budget item and a significant bill for healthcare providers. For instance, in Finland, total medicine sales were €3,518M in 2020; €820M was spent by hospitals [58]. In Spain, the combined worth of 16 adalimumab tenders between 2018 and 2024 was €528M [50]. Considering these figures, it is no surprise that safeguarding economic sustainability focuses on buying medicines at affordable prices to protect pharmaceutical budgets. Studies show that competitive tendering is one of the most cost-effective instruments for this purpose.

Research on specific medicine products shows that competitive analogue tenders result in 44% of savings on hospital pharmaceutical prices, with savings ranging between 0.4% and 93% depending on therapeutic areas and the area of indication [45]. In a separate study, competitive tendering for adalimumab in Spain resulted in a 66% price reduction compared to the initial price [50]. Such astronomical savings may explain why contracting authorities continue to award contracts using price as the sole criterion [34].

3.3.1. Price-Only Awards & Market Competition

Data show that **price is the most important and dominant criterion in tender selection** [9], [56]. A price element is always included in the award criteria for competitive tendering procedures and 62% of countries awarded contracts based on price only [34], [59], [25]. Even where MEAT is employed, price has the highest weighting [9], [55], [60]. Country-level studies observed that price was the only criterion for tender awards in one-third of cases for biosimilar medicines. Meanwhile, limited information was provided about the qualitative criteria used in selection processes [48].

The need for health systems to achieve cost savings is widely appreciated. And while price-only considerations contribute to affordability and drive prices down in the short term, they risk the long-term availability of, and patients access to, medicines [61]. Industry calls, commission studies, and academic research all point out that market sustainability is undermined by low prices. **Low prices weaken market competition**, create poor business environments, and lead to a possible 'race to the bottom' in prices [51], [59], [61]. Direct impacts are low tender participation rates, supplier withdrawals, supplier consolidation, stock-out situations (as price incentivises small stock

⁸ In Denmark, procurement documents must include the relative weighting the procurer gives to each of the criteria chosen to determine the most economically advantageous tender. The evaluation method must also be described (Wadmann & Kjellberg, 2018, p. 18).

holdings), medicine shortages, and medicine manufacturing moving outside of the EU [3], [3], [26], [34], [43]. What's more, constant price pressure may impact medicine innovation. Low profits from low prices mean some companies, such as SMEs, will not have the financial resources to invest in research and development. In fact, the low profitability of the Nordic markets for generic medicines is seen to be a particular threat for innovating generic antibiotics [62].

Real-world evidence of the consequences of this practice has been documented throughout Europe. For instance, in Portugal, a public tender for vaccines failed to attract any competitor as the base price was set too low [34]. Similarly in Spain, price-based vaccine tenders resulted in problems attracting bids, leading the government to increase the price to prevent suppliers from leaving the market [63]. This demonstrates that emphasis on prices has negative spillover effects on not just drug availability but also public health outcomes. What's more, from a business case perspective, in the long run low prices contribute to higher costs; reduction of supply inevitably leads to an increase

in demand with knock-on effects on prices [63]. For example, Portugal had to procure vaccines at higher prices outside the public procurement framework [34].

Adding to this, low prices affect manufacturers financial viability. This can lead to monopolistic situations, with spillover effects on market diversity, competitiveness, and employment rates associated with factory closures [24], [47], [64]. Additionally, awarding contracts based on the lowest price may reflect a lower-quality product, meaning short-term savings could generate greater overall long-term patient care costs [1]. Finally, a price-only approach fails to consider

other important product elements, including the effectiveness of the drug, storage, training and disposal costs, post-sale service, and supply volume risks [9].

The European Commission (EC) suggests that the lowest price approach is advantageous due to its simplicity, requiring minimal resources to assess [1], [34]. Additionally, according to MedTech Europe, it has instinctive appeal and is also less likely to be subject to criticism and litigation [56]. Adding to this, it may be the only criterion to differentiate suppliers in markets with limited competition [34]. What's more, weak enforcement of laws requiring consideration of additional criteria can lead authorities to rely primarily on price, as in Italy [10].

3.3.2. Single Winner Contracts & Security of Supply

The economic perspective of public procurement means public resources are spent as efficiently and as fairly as possible, while allowing healthy competition [65]. However, there is an overall trend in market concentration in all industries and sectors [4]. **Single-bid procedures are an endemic issue in pharmaceutical procurement** in several EU countries, which has contributed to significant declines in competition levels in the EU's public procurement market in the past decade [5]. Such issues are further exacerbated by the fact that there is a lack of awareness that competition is a prerequisite for value for money (European Court of Auditors cited in OECD, 2024). As a result, the competitive process public procurement relies on is either absent or losing intensity, without which the true benefits of procurement can't be realised [1], [29].

The prevalence of single-winner contracts is evident from a Spanish study where 13 out of 16 evaluated tenders for a biosimilar were designed to be awarded to a single winner. According to the author, this finding aligns with the documented situation in Europe

Source: Is price the only criteria in tenders (pg.12). IQVIA (2022) White Paper: From Regulated Prices to Prices Set in Tenders Tendering landscape in Europe iqvia.com/-/media/iqvia/pdfs/library/white-papers/tendering-landscape-in-europe-whitepaper-19-10-orb3270.pdf



for biosimilars [50]. Furthermore, awarding single-winner contracts is the default for some medicines, according to a study by the EC [34]. Single-winner award contracts may be particularly problematic for vaccine and biosimilar procurement given the complexity of production, longer manufacturing lead times, and development and market entry processes [63], [66].

Awarding tenders to one supplier creates a high risk of generating drug shortages given the possibility that the winning supplier may fail to deliver [34]. Supply is compromised as competition and supplier diversity are reduced, leading to monopolistic behaviours impacting product availability [50], [64], [67]. Indeed, supply problems have been encountered in Norway when tenders have been awarded to only one pharmaceutical company [68]. Equally, in France a winner-takes-all approach led to product withdrawals from the market [55]. Likewise, in New Zealand, tenders with only one winner led to delivery problems and supply difficulties; supplies had to be procured at a higher price due to lack of fulfilment by the tender winner [69].

Medicine shortages are well documented to have significant effects on healthcare professionals and detrimental effects on patient care. Negative patient outcomes and increased workloads, in addition to the economic consequences associated with a need to procure higher-priced alternatives, are well documented in grey and scientific literature (see [70] for example). Likewise, concerns have risen that there is no guarantee the medicine produced from a single awarded manufacturer is the optimal choice for patients. Thus equitable patient access according to medical need is not assured [44]. As demonstrated earlier, and in line with economic theory, medicine prices increase after a shortage arises, jeopardising any savings made, especially for lower-priced generics produced by a solo manufacturer [50], [64].

Such practices are possibly linked to an assumption that one pharmaceutical company can supply the whole market [44]. On the other hand, single-winner contracts appear to be linked to price, as they typically achieve substantial discounts [71]. However, winner-takes-all awards, along with the application of price-only criteria, are strongly discouraged by grey and scientific literature. From an industry perspective, single-winner contracts cause manufacturers to lose market access for several years, impacting their ability to meet fixed costs and, in some cases, drive them out of the market indefinitely [59]. Single-winner contracts disincentivise investment [50]. Such is the case in the Czech Republic and Slovakia, where tenders receive an average of 1-2 bids [1].

3.3.3. Practices supporting market sustainability

Securing access to and availability of medicines is a key responsibility of European health systems. Considering the right to health, avoiding shortages is paramount for sustainable healthcare delivery and patient care. The power of tenders and public procurers to negatively shape markets has been acknowledged by industry associations, researchers (see [47]), the European Commission (EC), and international organisations such as the GAVI Alliance. Poor tendering practices that award contracts based on price considerations and to single winners can lead to low procurement ability [64].

Considering this, Denmark's National Medicines Procurement body has adopted an innovative approach to shape positive marketing conditions—see [Box 1: Case Study—Strategic procurement across the product life cycle: the Amgros model](#).

Case Study—Strategic procurement across the product life cycle: the Amgros model

Amgros, Denmark's central procurement body for hospital medicines, **has pioneered a structured life-cycle perspective on market conditions for procurement that adapts its purchasing strategy to a medicine's stage in the market.**

How it works

Amgros applies a seven-phase model to guide its procurement strategy across the entire market lifespan of a medicine. It begins with Phase 0: Horizon scanning, where the focus is on identifying early signals such as clinical development, regulatory authorisations, and expected market entry of the medicinal product. **This allows Amgros to prepare in advance** and ensure alignment between clinical assessments and procurement planning.

In Phase 1: Introduction of a new product or a new delivery form, a brand-new patented pharmaceutical is introduced to the market. At this stage, there is no competition, and Amgros typically engages in direct negotiation with the supplier. The goal is to secure an affordable price compared to the list price. This may involve the conclusion of Managed Entry Agreements (MEAs)⁹ to manage uncertainty and ensure early access.

Phase 2: Monopoly or de facto monopoly describes a situation where the product continues to dominate the market, either because of therapeutic superiority or lack of alternatives. Procurement still relies on negotiation, with increasing attention to emerging clinical data and competitor signals.

In Phase 3: Full or partial analogue Competition, other pharmaceuticals with similar therapeutic effects, but based on different active ingredients are approved for the same indication. This opens the door to more competitive procedures, such as open or restricted tenders, allowing Amgros to leverage value-based competition between suppliers.

In Phase 5: Potential Supply Risk, some suppliers begin exiting the market due to shrinking margins, raising concerns about product availability. Here, procurement methods are adjusted by giving greater weight to security of supply in the award criteria.

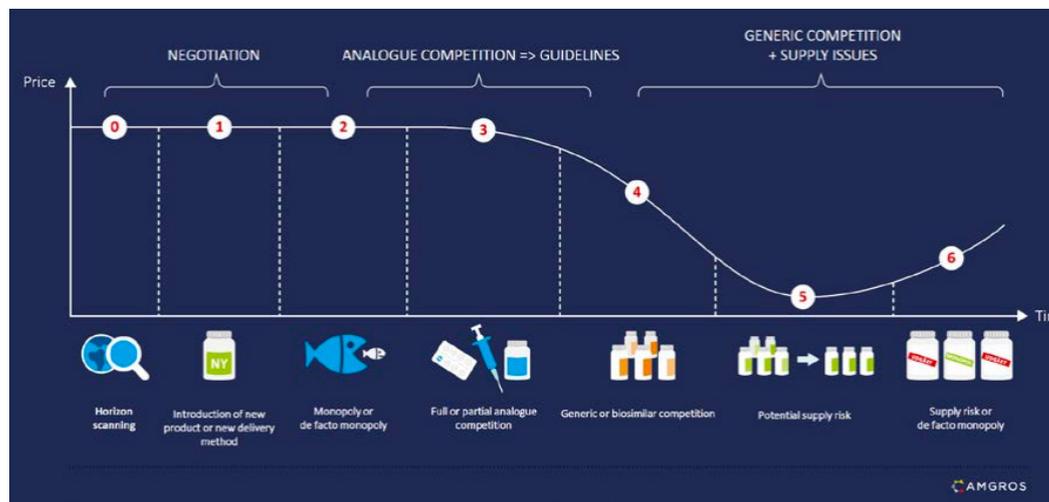
Finally, in Phase 6: Supply risk or de facto monopoly, the product may be supplied by only one or very few manufacturers. At this point, Amgros reverts to negotiation, possibly combining it with mitigation measures such as strategic stockpiling or framework agreements aimed at preserving market participation and avoiding shortages.

What it means for procurers

The life cycle approach offers a pragmatic, flexible framework that reflects the true complexity of medicine markets. It avoids one-size-fits-all methods and instead supports procurement decisions that need to be timely, targeted, and aligned with broader health system goals. Amgros' model shows how procurement can be a powerful policy lever, helping health systems manage cost, improve access, and maintain care quality, even in a rapidly changing market between suppliers.

⁹ Contractual arrangements that allow conditional or early access to high-cost medicines while managing uncertainty, often by linking payment to clinical outcomes, volumes, or performance conditions.

Source: Life-cycle perspective on market conditions and procurement mechanism. Amgros (copyright holder)



PUBLIC PROCURERS OF MEDICINES CAN UPHOLD THE PRINCIPLES OF THE EU PROCUREMENT DIRECTIVE AND CONTRIBUTE TO MARKET SUSTAINABILITY BY AWARDING MULTIPLE WINNERS AND MOVING BEYOND PRICE-ONLY CONSIDERATIONS.

Flexible procurement systems that allow for multiple winners, split tenders,¹⁰ and shorter contract durations can negate medicine shortages and business risk, encouraging suppliers to remain in the market [61], [64]. Moreover, multi-winner contracts can support the consensus of what appear to be conflicting policy objectives between competition and supply security [34]. Examples of such contracts are available in several countries (see box 9: Country Fiche Germany below), Italy, the UK, and Spain—see [43], [59], [63].

¹⁰ Split tenders have been used for influenza tenders in the Netherlands and the Norway region. Here, tenders have been awarded to multiple providers based on a 60/40 split. Other examples of such practices can be found in the UK. See Vaccines Europe, 2020 & EFPIA, 2022 for further information.

Case Studies—Multi-awardee framework contracts

The multi-awardee framework agreements are explicitly supported under Article 33 of [Directive 2014/24/EU](#), which allows contracting authorities to conclude framework agreements with more than one economic operator.

Italy – Multi-award framework contracts for procurement of off-patent biologic medicines

Italy provides a rare example of a legal obligation for multi-awardee procurement in the area of off-patent biological medicines. Since 2017, public buyers are legally required to split awards among multiple suppliers when at least three therapeutically equivalent biologics are available. This rule stems from Budget Law 2017 ([Law no. 232/2016, Art. 1, para. 407](#)), which amended [Decree Law 95/2012](#). The provision mandates the use of multi-supplier framework agreements to ensure equitable market access, predictable volumes, and supply resilience.

Importantly, this requirement applies not only when biosimilars are already on the market at the time of the procurement procedure but also if a branded biologic loses patent exclusivity during the term of the contract. In such cases, the contracting authority must be prepared to adapt the framework and include newly available biosimilar suppliers.

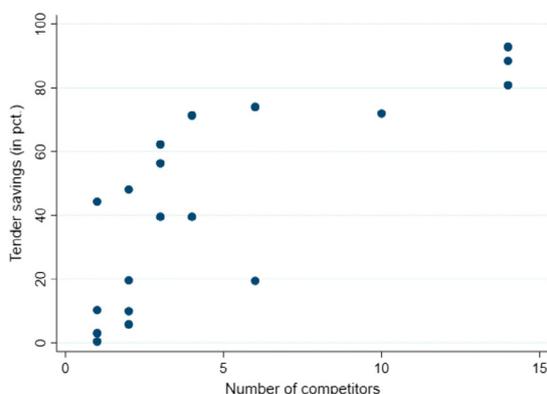
England – NHS Framework with transparent volume allocation

In 2018, NHS England launched a multi-award procurement for adalimumab [following patent expiry of the originator product](#)¹¹. The framework assigned ranked suppliers different volume shares, with the top bidder receiving the largest portion. This tiered model maintained strong price competition while ensuring that multiple suppliers stayed active in the market. Importantly, the volumes were made transparent in advance, improving predictability for bidders and supporting stable supply planning. The approach balanced affordability with long-term market resilience, becoming a benchmark in European biologics procurement.

What it means for procurers

These cases show that multi-award frameworks, whether mandated by law or designed with clear volume-sharing mechanisms, help maintain supplier diversity and ensure predictable access to essential medicines. For public procurers, transparent structures and adaptable contracts reduce supply risks while supporting sustainable market engagement over time.

Source: Tender savings compared to the of competitors. Ehlers, L., Jensen, M., & Schack (2022) 'Competitive tenders on analogue hospital pharmaceuticals in Denmark 2017-2030'. <https://doi.org/10.1186/s40545-022-00464-6>



The MEAT criterion are believed to contribute the most to competition and is the top-ranked criterion for competition and multi-award contracts [34]. In fact, studies show that countries frequently using MEAT attract a higher number of bids and have higher competition levels [34].

¹¹See NHS England Board Paper - 08-pb-28-11-2018-best-value-adalimumab-product-in-nhs.pdf

Furthermore, there is a positive and statistically significant correlation between tender savings and the number of tender competitors [45]. Older studies reinforce this finding: **increasing the number of tenderers from two to eight obtains higher competition levels and achieves average savings of 12–14% [72]**. These findings back up suppliers' views that single-winner tenders have a negative impact on affordability [34]. Likewise, it bolsters multi-stakeholder views that multiple-winner approaches specifically support medicine sustainability [34].

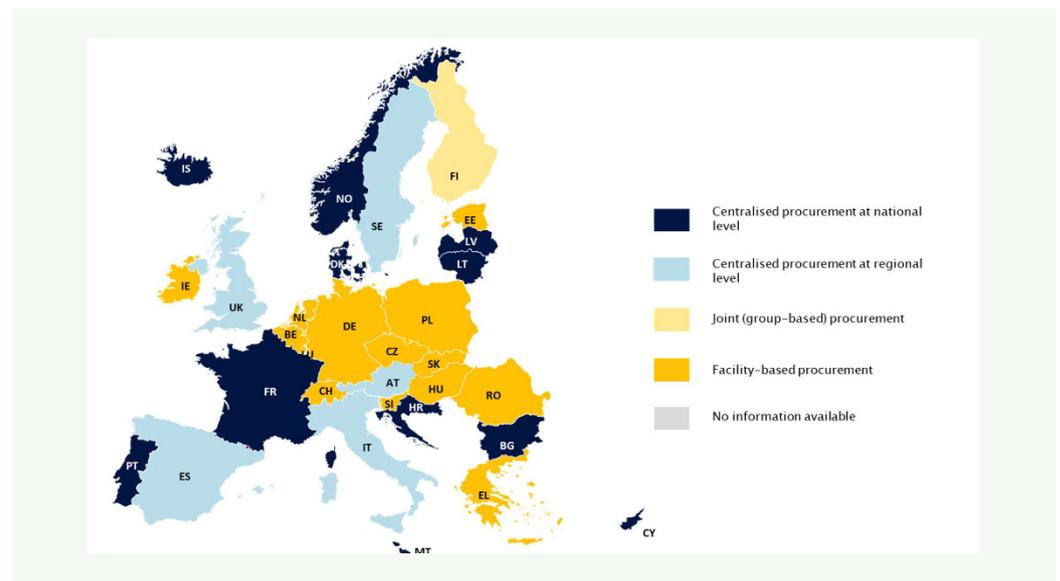
As with price-only considerations, the preference for single-winner contracts is tied to (i) perceptions that they are challenging to plan, (ii) excessive bureaucratisation of procurement processes, and (iii) a limited number of suppliers for specialist medicines [34], [36], [37], [44]. More unsettling reasons for the prevalence of single-winner contracts are linked to cases of collusion and systematic corruption in some countries [36]. OECD figures suggest that up to 25% of public procurement (on pharmaceuticals, devices, equipment, etc.) is lost to fraud, corruption, and poor procurement practices [45]. Indeed, corruption in public procurement practices gained widespread attention both during and following the COVID-19 pandemic [20].

3.3.4. Joint Procurement

Pooled procurement mechanisms date back to the late 1970s when the World Health Assembly (WHA) underlined that collective purchasing could reduce medicine prices [73]. These mechanisms can take place at the sub-national, national, inter-country, and global levels. In the EU, cross-border procurement amongst the Member States is facilitated and encouraged by Public Procurement Directive 2014/24/EU and EU Decision 1082/2013/EU on serious cross-border threats.

While facility-based procurement is dominant, occasional voluntary joint/pooled procurements between hospitals and countries occur [34]. Indeed, consolidating purchases using joint procurement mechanisms may become more widespread considering their benefits and advantages. In fact, evidence suggests an increasing number of countries are introducing national centralised procurement systems and simultaneously considering international collaborations [34], [73], [74].

Source: Main route for procurement of medicines in hospital settings. European Commission (2022) Study on best practices in the public procurement of medicines: final report



Studies show that pooled procurement mechanisms can achieve substantial cost savings (up to 50% in some cases), depending on award practices [34], [74]. At a strategic level, contract value and joint procurement have been evidenced to positively correlate with the likelihood of a contract being green [53]. The qualitative advantages of these mechanisms are numerous, ranging from making markets more attractive, increasing the availability of medicinal products, eliminating monopolies, containing prices, stimulating research and product innovation, sharing technical capacity, information, and human resources, improving procurement efficiency and quality standards, and reducing corruption levels [34], [73]. Considering this, multiple researchers point to the opportunities these mechanisms have for addressing market failures and unmet medical needs, reducing disparities, and promoting equitable access to innovative medicines. As such, the greater use of these mechanisms is encouraged [73], [75].

At the same time, pooled procurement mechanisms are resource intensive, require experienced staff, and some trade-offs may need to be made when policy objectives conflict (price vs. green pharmaceutical design) [34], [73]. What's more, the rewards linked to pooled procurement mechanisms depend on award criteria, and a balance needs to be struck between price pressure and sustainable competition. Joint procurement mechanisms have been criticised for driving down prices, reducing margins, and reducing economic incentives [60]. **Joint procurement may erode the supplier base and pose a long-term risk to medicines availability if they replicate poor tendering practices at national level that fail to protect market sustainability.**

Adding to this, industry representatives have expressed concern that cross-border procurement mechanisms may inadvertently result in inequitable access to medicines. This risk stems from systemic differences between member states *'in pricing, reimbursement and HTA frameworks, budgetary decisions and national policy priorities'* (EFPIA, 2025, p. 4). Another challenge is that multi-country coordination often involves divergent timelines, legal frameworks, and procurement capacities, causing increased procedural complexity and slower deliveries [76].

A POTENTIAL SOLUTION TO THIS CHALLENGE MAY INVOLVE CREATING A COMPREHENSIVE FRAMEWORK FOR MEDICINES PROCUREMENT.

A five-year retrospective study on such a framework, at the regional level, observed that optimisation of procurement performance led to reduced costs and enhanced supply chain resilience [77]. Here, the framework standardised pre-tender activities, established a technical office to coordinate operational execution, implemented a contracting process, and established feedback mechanisms while continuously monitoring of results from awarded tenders [77].

Case Study—Nordic Pharmaceutical Forum joint procurement collaboration

The Nordic Pharmaceutical Forum (NPF) is a collaborative procurement initiative among Denmark, Norway, Sweden, and Iceland, with Finland participating as an observer. Initiated in 2015 by procurement experts from Denmark's Amgros agency, it aims to strengthen the procurement of medicines by leveraging cross-border cooperation to address supply security, sustainability, and cost-efficiency, especially for off-patent hospital medicines at risk of shortages.

Key achievements

- NPF conducted its first joint tender in 2019, marking a milestone in Nordic collaboration on pharmaceuticals. This tender **targeted off-patent hospital antibiotics** and, from the outset, adopted the MEAT approach by incorporating non-price criteria (i.e., environmental sustainability and supply chain resilience) into the award evaluation. NPF has been able **to maintain strong supplier competition** even after expanding award criteria to include broader policy objectives. This was made possible through the introduction of a balanced scoring model, first formalised in the 2022 joint antibiotic tender, that assigned 50% weight to price, 30% to environmental performance, and 20% to supply security.
- **A third achievement was the improvement of overall supply security:** by coordinating pooled procurement, **NPF attracted new and additional suppliers to the Nordic market**, increasing reliability of deliveries and building resilience against global supply disruptions.
- NPF also demonstrated that environmental sustainability can be **implemented through procurement**. Tender documents included enforceable criteria such as API site transparency, compliance with discharge thresholds, and third-party certifications (e.g., AMRIA Antibiotic Manufacturing standard), all of which directly influenced supplier selection and contract awards.
- NPF introduced structured pre-tender supplier engagement as part of its joint procurement process to test the feasibility of proposed requirements, improve transparency, and ensure that award criteria were clearly communicated to the market, helping to preserve competition.
- Finally, a concrete spillover cross-border effect: after being unable to participate in the 2019 tender due to legal constraints, Iceland amended its Medicinal Products Act (No. 100/2020) to enable foreign-led procurement or modular bids. This legislative change allowed Iceland to fully join the 2022 tender.

What it means for procurers

These cases show that multi-award frameworks, whether mandated by law or designed with clear volume-sharing mechanisms, help maintain supplier diversity and ensure predictable access to essential medicines. For public procurers, transparent structures and adaptable contracts reduce supply risks while supporting sustainable market engagement over time.

Case Study—Sustainable Joint Procurement of Medical Supplies, Norway

In 2021, the municipalities of Stavanger, Sandnes, Sola, and Randaberg launched a joint public procurement process for medical consumables to supply a wide range of products and other medical supplies to health and social care institutions, including nursing homes, care homes, emergency rooms, housing associations, and community nursing services.

The main objective was to ensure a secure and cost-effective supply of essential medical consumables while addressing social and environmental risks in global supply chains, particularly for high-risk items like disposable gloves, which are often produced in countries where labour rights abuses are common. To achieve this, **the tender combined clear social and environmental measures with well-defined selection, technical, award, and contractual criteria**, supported by early supplier engagement and transparent evaluation.

Selection Criteria (pass/fail test):

Bidders had to demonstrate strong ethical due diligence and risk management in their supply chains, focusing on labour and human rights conditions. Relevant certifications included [ISO 14001](#), [EMAS](#), or equivalent, such as the [Norwegian “Eco-Lighthouse” certification scheme](#).

Award Criteria:

Price (40%) was evaluated alongside environmental criteria (30%) and social responsibility criteria (30%).

Environmental Criteria

The tender required the mandatory use of environmentally friendly products, with tenderers obliged to provide details of their product range (e.g., products carrying environmental labels). For products with packaging, suppliers were required to document membership in a return scheme¹² (e.g., [Grønt Punkt Norge As](#) or an equivalent scheme) or demonstrate their own arrangement for the responsible final processing of packaging, to be maintained throughout the contract period. Tenderers also had to demonstrate their ability to use zero-emission or fossil-free vehicles:

- Using zero-emission or fossil-free vehicles for the main delivery (weighted 90%).
- Zero-emission or fossil-free vehicles for urgent deliveries (weighted 10%).

Social Responsibility Criteria

The award criteria were based on the [OECD’s Due Diligence Guidance for Responsible Business Conduct](#) and consisted of two sub-criteria, bearing equal weight:

- **Ethical trade in the supplier’s own company:** suppliers must describe their Code of Conduct, follow-up systems, contract termination measures for non-compliance, and staff training on ethical trade and sustainability.
- **Traceability in the supply chain:** focusing on the traceability of all products covered by the contract. Special emphasis was placed on gloves and bandages, considered high-risk due to raw materials and the risk of human rights violations across their life cycle.

¹² A return scheme is a system for collecting and processing packaging waste (or other used materials) after products have been delivered or consumed to ensure proper recycling or environmental disposal.

Contract & Exclusion Clauses:

Contracts included clauses requiring ongoing monitoring, reporting, and corrective actions. The contract performance clauses were based on the [UN's Guiding Principles on Business and Human Rights](#) which call for the use of supply chain due diligence assessments as a central approach to identify, prevent, mitigate, and account for how suppliers address actual and potential adverse impacts in their own operations. **Suppliers involved in serious labour rights or human rights violations could be excluded or have their contracts terminated.**

Key Achievements

- The tender applied OECD-based social due diligence criteria for high-risk product categories (e.g., gloves, bandages).
- Market transparency and traceability requirements pushed suppliers to map and disclose deeper tiers of their supply chains.
- Environmental obligations (eco-labelled products, packaging return schemes, zero-emission/fossil-free logistics) embedded across specifications, award, and contract clauses.

What it means for procurers

- Risk analysis before tendering is critical to identify and target high-risk product categories.
- Early supplier engagement (e.g., market dialogue) improves supplier preparedness and maintains competition.
- Integrating criteria and contract clauses ensures enforceable commitments to social and environmental goals.
- Collaborative procurement among municipalities increases bargaining power and shares expertise on sustainable procurement.

3.4 Environmental Sustainability

Green public procurement (GPP), a voluntary and auxiliary policy, can enable procurers to align tendering processes with wider public health and competition objectives. From a One Health perspective, environmental damage and impact can be minimised through a good life cycle approach by incentivising companies to invest in environmental sustainability [15], [78]. Indeed, as the Court of Justice of the European Union (CJEU) recognises, purchase price is just one cost element in the PPM process; identifying the most advantageous tender need not be purely monetary [23]. With price reductions of medicines exceeding 85% in some areas, room for further economic savings is limited [50].

According to a 2019 OECD survey, 64% of countries are integrating GPP award criteria into public procurement procedures [15], [55]. Although there appears to be a disconnect between common practices in other sectors — even those indirectly related to healthcare, such as construction — and the application of environmental criteria in pharmaceutical procurement.

Reports for the EC state that environmental criteria are not yet widely used in the health sector nor in PPM tendering processes [1], [34]. Indeed, an EC report shows that while the Austrian government has published a guide for sustainable procurement, uptake of the recommendations for pharmaceutical procurement remains to be seen [34]. Likewise, a [Green Public Procurement Strategy, Action Plan](#) and [Guidance](#) exist in Ireland, which apply to hospitals; however, specific mention and inclusion of medicines procurement are absent from the documents. Similarly, research for this paper discovered that while

European guidelines for greener procurement in hospitals exist, they fail to address the topic of medicines procurement (see [79] & [Life RESYSTAL Project](#)). Meanwhile, in Spain, only 13% of 117 reviewed tender files for drugs included environmental criteria [80]. In fact, in the 2018–2021 period, the highest number of tenders with environmental criteria were for medical devices [80]. In contrast, a clear upward trend in the use and application of social and environmental sustainability since 2021 is displayed by industry reports and figures (see figure below) [55].

Source: Year on Year Trend of % average weighting of different criteria used in award batches of top biosimilars' tenders since 2021. Valid Insight (2024) 'The Shift toward sustainability in pharmaceutical procurement and why ESG investment in no longer optional. Sustainability-and-ESG-in-Pharma-Procurement.pdf



3.4.1 Environmental Award Criteria

The inclusion of production-related environmental criteria in government medicine procurement is a cornerstone of green public pharmaceutical procurement [12]. However, the general absence of green pharmaceutical procurement in key policy documents supports the argument that the current public business model fails to incentivise companies to invest in environmental sustainability [15]. Some countries have begun applying or piloting environmental criteria in tenders and the Scandinavian region are emerging as global leaders in green public procurement pharmaceutical practices.

For instance, 30% of the MEAT award criteria is allocated by Norway's Central Purchasing Body for hospitals to environmental factors (see [Box 5: Case Study - the Norwegian Hospital Procurement Trust: A leading example of green procurement of medicines below](#)). Such examples are welcomed by the Critical Medicines Alliance, as medicines produced in the EU—despite their high environmental value—are generally not sufficiently rewarded under current procurement practices [25].

Case Study - the Norwegian Hospital Procurement Trust: A leading example of green procurement of medicines

NHPT is the central actor responsible for the national procurement of medicines. It has been a leader in applying and scoring environmental criteria in procurement procedures, as the Trust established this practice before legal obligations were adopted. Environmental criteria include ISO 14001 certification, PNEC-based emissions control, low-emission transport, sustainable packaging, and manufacturing transparency. Where necessary, certain environmental standards, such as [AMRIA certification](#), are used as mandatory requirements, rather than scored elements.

In 2019, NHPT conducted a procurement pilot for hospital antibiotics in which 30% of the total evaluation score was allocated to environmental and supply chain criteria. This includes requirements for suppliers to demonstrate that both API and finished product manufacturers treated wastewater to prevent harmful antibiotic emissions (PNEC-compliant wastewater routine). Companies also had to disclose the names and locations of their upstream suppliers, enabling the NHPT to identify and reward responsible manufacturing across the supply chain. Three companies secured contracts on these non-price factors. While initial competitiveness in the market appeared to decline at first, the pilot helped NHPT test practical scoring methods and establish a structured dialogue with suppliers, a key feature of its procurement strategy and the pilot itself. **Over the following years, NHPT has consolidated and expanded their sustainable procurement methodology to other medicinal products.** Between 2020 and 2022, NHPT carried out eight pharmaceutical procurements that included environmental award criteria, targeting antibiotics, off-patent oncology medicines, infusion and rinsing fluids, and enteral nutrition products, selected for their significant environmental and logistical impact. During this period, internal evaluation methods were refined, standardised templates were introduced to streamline supplier documentation, supplier participation stabilised, and no delays or disputes were reported because of the environmental criteria.

Regular consultation with stakeholders, including the pharmaceutical industry association, helped ensure that the requirements remained feasible and transparent. **By 2022, this model was fully embedded and no longer experimental. It had become a standard part of NHPT's procurement procedures as environmental criteria were systematically included in all tenders.** This evolution is clearly reported in their [2020-2022](#) and [2022-2023](#) environmental experience reports, which document the environmental evaluation criteria and share lessons learnt from implementing this innovative approach, confirming that supplier alignment with sustainability goals improved across tender rounds. Overall, results show that environmentally responsible suppliers can remain competitive, even without offering the lowest price.

Norway shows how a central procurer can successfully lead environmental procurement by combining early action, policy influence, and practical tools. NHPT's experience offers a valuable model showing that strong expertise, early piloting, and supplier dialogue can make green procurement feasible and effective.

The use of environmental criteria is evolving in public tenders; some tenderers may require manufacturers to be more transparent about their manufacturing and supply chain practices. Evidence of environmentally friendly practices may require demonstrating that operations have a reduced environmental impact and lower chemical emissions. This may be demonstrated by disclosing the location and extraction of raw materials, the location of formulation and carbon emissions, sharing packaging and transport documentation (i.e., what the suppliers have done to prevent pollution and wastewater), waste reduction, recycling, and principles of fair trade or ethical requirements with respect to the environment [11], [34]. Procurers may also utilise certifications such as [ISO 14000](#) for green requirements in tendering awards [60]. What's more, life-cycle costing, eco-labelling criteria, and sanctions for the violation of existing environmental law can be considered as environmental factors by the contracting authority [23]. Regardless of what criteria are used for environmental purposes, they must be objective, universally applicable, strictly relevant to the contract in question, and clearly contribute an economic advantage to the contracting authority [23].

3.4.2 Green Public Procurement Practices

A 2018 OECD survey on GPP showed that practices encouraging the implementation and uptake of GPP include laws, regulations, and policies; cost/benefit assessments; use of environmental standards in technical specifications; use of environmental standards in award criteria and contract performance clauses; and professionalisation and awareness-raising activities [81]. However, as already noted, **the incorporation of environmental sustainability practices in pharmaceutical procurement, compared to other products and services, is lagging** [11], [17].

Like earlier examples, the Nordic countries are pioneering GPP efforts globally; for instance, Denmark, in collaboration with Norway and Iceland, includes environmental criteria in their national tendering procedures¹³. Moreover, in the joint Nordic tendering procedures¹³, environmental award criteria, in conjunction with quality and price, is one of the three most important tender requirements [11] – [Box 6: Country Fiche - Norway below](#).

In Sweden, green sustainability criteria for medical products include information regarding the location of pharmaceutical formulation, packaging, supply chains, and any environmental information on the medicinal products. What's more, the country's National Agency for Public Procurement helps hospital procurers to identify sustainable products by proposing specific award criteria and special contract terms for tenders. Information that can be obtained includes the manufacturer's location and the formulation of APIs [12].

Elsewhere, in Germany, the Supply Chain Due Diligence Act covers environmental and human rights protection and responsible management within and of the supply chain, with examples of practical implementation available ([see Box 9: Country Fiche Germany below](#)). While other countries have made adaptations to legislation and practice, no practical evidence of their implementation has been uncovered.

¹³ Environmental criteria oversee environmental management, packaging, transportation, and social responsibility (Capobianco et al., 2022, p. 2)

Norway

Norway's medicine procurement is governed by the Public Procurement Act (Anskaffelsesloven, LOV-2016-06-17-73) and the Public Procurement Regulations (Forskrift om offentlige anskaffelser, FOR-2016-08-12-974), which transpose EU Directive 2014/24/EU into Norwegian law.

A defining feature of Norway's procurement framework is the integration of climate and environmental considerations. Since 1 January 2024, under Section 7-9 of the Procurement Regulations, all public tenders must allocate at least 30% of the total evaluation score to environmental criteria. Alternatively, contracting authorities may impose minimum environmental requirements instead of scoring, but only if justified in writing. For instance, a valid justification might explain that the product group in question has little to no variation in environmental performance across suppliers and that market dialogue confirmed all likely bidders already meet a shared environmental baseline. In such cases, scoring would not provide meaningful differentiation, and minimum environmental requirements can be applied instead. Omitting environmental considerations altogether is permitted only when the procured good or service, from production to distribution, including its broader supply chain impacts, has demonstrably evidenced minimal climate or environmental relevance; this too must be documented. Norway's procurement regulations are structured into three parts based on contract value and procedural scope.

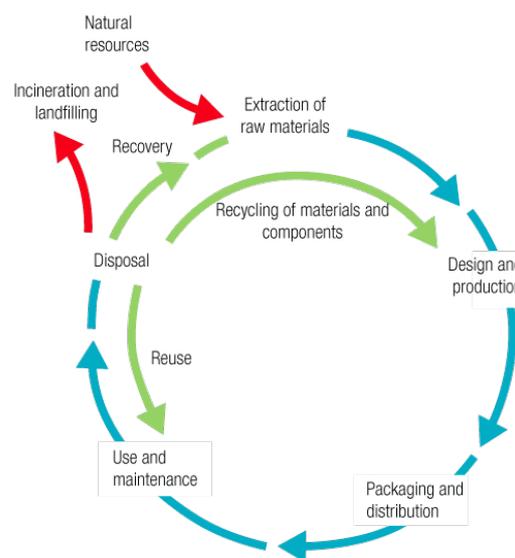
Part I applies to procurements below NOK 100,000 (approximately €8,500), leaving procedural discretion to the contracting authority. **Part II covers contracts between NOK 100,000 and NOK 1.4 million** (approximately €143,000), aligned with the threshold set by the Directive 2014/24/EU for public supply and service contracts awarded by central government authorities. **At this level, environmental considerations must either be among the top three award priorities or included as binding requirements with written justification.** While MEAT is not formally required under Part II, these environmental obligations often lead contracting authorities to adopt **MEAT-like evaluations in practice. MEAT becomes mandatory in Part III, which governs procurements exceeding NOK 1.4 million.** If scoring is used, at least 30% must be allocated to environmental criteria; if criteria are listed by priority, environmental aspects must be included as one of the top three.

Contracts can still be legally awarded based on the lowest price, but current rules push procurement toward a more sustainable approach; buyers are expected to give real consideration to environmental criteria. For high-value contracts, environmentally focused MEAT evaluations have become common practice.

3.4.3 Life Cycle Costing

Life cycle costing (LCC) is a basis for the MEAT approach, whose use is encouraged by the European Procurement Directive (see articles 67 & 68 of the 2014 Public Sector Directive).¹⁴ A life cycle approach to procurement ‘considers the place of a medicine along the pharmaceutical value chain’ [34]. As price does not reflect the financial and non-financial gains, LCC permits procurers to consider all of the costs incurred over a product’s lifecycle (e.g., extraction, production/manufacturing, packaging, distribution, use, maintenance, and disposal) to determine what procurement procedure and award criteria to use [7], [34], [82]. According to the Commission, “LCC plays an important role in implementing green public procurement (GPP), as it encourages the choice of resource-efficient goods, services and works by putting a price tag on the cost of aspects, such as fuel, energy and water consumption” (European Commission, p. 1). However, the inclusion of costs imputed to environmental externalities is not mandatory in EU public procurement legislation.

Source: A typical product life cycle diagram, Life Cycle Initiative. www.lifecycleinitiative.org/starting-life-cyclethinking/what-is-life-cycle-thinking



Three life cycle assessment (LCA) types are included in LCC: conventional, societal, and environmental [81]. The latter assessments consider externalities through internalisation of social and environmental costs; evaluation of externalities count costs ascribed to different stakeholders, including future generations (De Giacomo et al., 2018 cited in OECD, 2019). Costs that can be considered in a life cycle analysis include air and water pollution, climate change, biodiversity loss and greenhouse gas emissions, land use, soil erosion, waste/disposal, and recycling [23], [34]. As some of these costs overlap with health and social costs, LCC techniques can enable better decision-making

based on assessments of the long-term implications arising from a specific product [82]¹⁵. Furthermore, as these costs can be monetised, LCC enables cost savings and efficiency gains as alternatives can be effectively compared, potentially leading to a situation where the greener product can turn out to be cheaper in the long run [23], [81]. An Italian example shows how LCA-based criteria was applied in a tender for the removal and collection of medicine and needle waste [83]. Here the supplier was required to present an LCA study according to [ISO 14040/44](https://www.iso.org/standard/44444.html) showing the environmental impacts related to actual waste removal [83].

At international level, the UNEP’s Life Cycle Initiative have developed a [Global Life Cycle Impact Assessment \(GLAM\) Framework](https://www.unep.org/life-cycle-initiative), which addresses impacts on [ecosystem quality](#), [human health](#), and socio-economic assets ([natural resources](#), [ecosystem services](#)) through a standardised method: [See Box 7: Guidance - Environmental sustainability in UN procurement below](#) for further information. Specific EU [guidelines](#) and a framework are available for environmental assessments providing detailed guidance and methodological support for conducting high-quality LCA studies [84]. The EC has also developed specific LCC tools for certain products, but not pharmaceuticals¹⁶. Several MS have developed LCC calculation tools, usually spreadsheet-based and product specific [85]. The main purpose of these tools is to compare LCC between various products which can be used during needs analysis, as an instrument to estimated costs, or during the evaluation phases to select an offer.

Internationally recognised standards - [ISO standard 14040:2006](https://www.iso.org/standard/44444.html)¹⁷ and [ISO 14044:2006](https://www.iso.org/standard/44444.html)¹⁸ - outline the principles, frameworks, and guidelines to conduct an LCA, furnishing procurers and suppliers with a comprehensive methodology and value tools to assess the environmental

¹⁴ Czarnecki, 2019 & Lintukangas (2022) provides a good discussion and overviews how life-cycle costing award criteria is defined in the Public Procurement Directive and can be implemented in practice.

¹⁵ For a full discussion on specific rule that apply to methods assigning costs to environmental externalities see [82]

¹⁶ LCCs tools are available for Computers and Monitors, Imaging Equipment, Indoor and Outdoor Lighting and Vending Machines. See https://green-forum.ec.europa.eu/green-business/green-public-procurement/life-cycle-costing_en

impacts of a product at all stages of its life cycle. However, these ISO standards have been criticised for their high degree of methodological flexibility leading to inconsistencies in how LCAs are conducted across the pharmaceutical sector [86]. In response to these concerns, in November 2023, an Alliance of Pharmaceutical companies launched the [Pharmaceutical LCA Consortium](#). The Consortium's objective is to improve and streamline pharmaceutical LCA [86]. Consequently, one key output of this consortium is a Publicly Available Specification (PAS) environmental LCA standard for [pharmaceutical products](#). While these initiatives are much needed and welcomed, they risk reinforcing findings from an EC commissioned study that the inclusion of LCA-based instruments in tenders is mostly beneficial for companies who are already pro-actively reducing their environmental impacts [83]. Therefore, public procurers, in conjunction with a diversity of stakeholders, should be proactive in developing their own approaches.

LCC must be based on objectively verifiable and non-discriminatory criteria [82]. Indeed, to implement life cycle costing properly, lifespan, discount rate, data availability, and reliability should be considered [65]. However, uncertainty exists when given changing patterns of disease and clinical indications, among other factors [4]. Furthermore, a lack of national guidance and EU legislation installing a specific LCC methodology disincentivises the use of LCC, meaning that significant burdens may be placed on court systems [23].

Box 7: Guidance - Environmental sustainability in UN procurement

Guidance - Environmental sustainability in UN procurement

The United Nations has taken significant steps to embed environmental sustainability into procurement processes. A central reference is the [2022 UN Procurement Practitioner's Handbook](#), which introduces a practical framework for sustainable procurement that supports implementation through clearly defined indicators. With a procurement volume of USD 18.8 billion in 2018, the UN system has a significant impact on shaping supplier practices and stimulate broader market shifts toward sustainability. Recognising this, the UN adopted in 2019 a shared framework for defining and identifying sustainable tenders across its system. The framework consists of 12 Sustainable Procurement (SP) indicators, grouped into four categories: environmental, social, economic, and general. The general indicators support implementation, for example, by requiring sustainability clauses in contracts or mechanisms to monitor supplier performance, while the other three categories (core pillars) target specific outcomes aligned with the pillars of sustainability. According to the methodology, a tender qualifies as "sustainable" if it includes at least three SP indicators, with at least one indicator from each of the three core pillars of sustainability. Some indicators serve highly practical goals. For example, requiring suppliers to report on energy efficiency or emissions helps reduce environmental impact. A social indicator might address labour rights or workplace safety, while an economic indicator could involve local supplier inclusion or total cost of ownership¹⁹.

This indicator-based framework aligns closely with the [UNEP Life Cycle Initiative](#), which promotes integrating life cycle thinking (LCT) into procurement and policy. While the SP framework focuses on criteria at the solicitation stage, the Life Cycle Initiative provides a broader perspective, encouraging buyers to consider upstream and downstream impacts across the entire supply chain. Their combined use reinforces both procedural clarity and strategic foresight in sustainable procurement. As part of the effort to strengthen sustainability in procurement and policy, the Life Cycle Initiative has developed the [Global Guidance on Environmental Life Cycle Impact Assessment Indicators and Methods \(GLAM\)](#) to provide the scientific foundation for environmental impact assessment. Through the use of accessible Excel files, GLAM delivers internationally harmonized methods, characterization factors (CFs), and weighting schemes that enable practitioners to quantify and compare environmental impacts such as climate change, water scarcity, and toxicity. These CFs can be used to convert emissions or resource use

¹⁷ Environmental Management - Life Cycle Assessment - Principles and Framework

¹⁸ Environmental Management - Life Cycle Assessment - Requirements and Guidelines

¹⁹ The Total Cost of Ownership (TCO) is an approach that accounts for all costs incurred by an organization over the full life cycle of a good, service, or work. It is commonly applied during both procurement planning and bid evaluation, as it highlights not just the purchase price, but also hidden or indirect costs such as operation, maintenance, and disposal. By calculating the overall cost over time, TCO helps procurement officers and requisitioners identify the most economically efficient and sustainable option.

into measurable environmental impacts using scientifically recognized models such as USEtox (for toxicity) and AWARE (for water scarcity). While primarily serving as reference tools, they can be integrated into life cycle assessment software or custom analysis tools to perform impact assessment calculations. By providing a transparent and science-based approach, GLAM improves the consistency and reliability of sustainability criteria in procurement.

What it means for procurers

For public procurers, the UN's SP indicator framework offers a practical tool to operationalize sustainability in tenders. By providing measurable criteria across environmental, social, economic, and general dimensions, it helps buyers move from broad policy goals to concrete procurement requirements. Meanwhile, the UNEP Life Cycle Initiative promotes a broader mindset: life cycle thinking (LCT). This perspective encourages buyers to assess how goods and services impact people and the planet across their full life span from raw material extraction.

3.4.4 GPP Implementation Challenges

Despite the benefits of green procurement, several barriers affect its uptake and implementation. These include knowledge and awareness levels, willingness, and expertise. A limited number of publications and scientific evidence exist regarding the implementation and impact of green strategies on public procurement [5], [8], [29]. Actions in the field are not actively published or shared. Such information asymmetries are significant constraints, as using green requirements, LCC award criteria, and life-cycle costing makes tendering more complex and resource intensive due to higher technical and documentation requirements and lack of data availability [29], [82]. Further, a lack of publicly available information contributes to opacity and uncertainty on the impact of PPM practices on environmental outcomes. Adding to this, numerous practical hurdles impact the uptake of LCC by public procurers [83]. First, LCC is more suitable for experts than for public procurers. Second, external expertise must be procured when in-house LCA expertise is unavailable, increasing overall costs. Next, LCA-based instruments may not be the best choice in homogeneous markets. Finally, reluctance to use LCC is associated with a higher risk of litigation, time constraints, and negative impact on workloads levels [83].

Furthermore, there is a widespread perception that GPP involves higher public procurement costs amongst OECD countries [5]. This belief is a key obstacle to the widespread uptake of GPP. In fact, information asymmetries may influence procurers to continue with existing practices, where low prices are prioritised over environmental and public health protections, despite these not being mutually exclusive goals [12]. However, concerns that environmental criteria may lead to higher prices are not borne out in reality. For instance, studies conclude that environmentally responsible strategies contribute to excellent financial performance [87]. Additionally, pilot projects applying environmental criteria in Denmark have not led to higher unit prices [34].

Other concerns are related to smaller supplier pools and that complexity in award procedures may encourage litigation, resulting in higher costs and delays [29]. However, experience from Scandinavian countries suggests that the introduction of environmental criteria for tenders did not negatively impact the number of bids submitted. What's more, price differences between bidders were not driven by environmental standards or criteria [34]. Adding to this, Norwegian research further indicates strong supplier agreement that incorporating environmental criteria into procurement can incentivise more sustainable, available, and reliable generic antibiotic supply chains [60]. Further, suppliers saw the possibility to compete on drivers other than price as positive [60]. As a result, when tenders are sufficiently large or valuable, companies are more willing to invest in the environmental technologies or innovations required to make a bid green [53].

Finally, in a recent OECD survey, 92% of surveyed countries indicated they have mandatory GPP requirements and targets in public procurement. However, compliance is not always monitored. Furthermore, while governments tend to monitor the use of GPP within their public procurement activities, impact is rarely evaluated. As the OECD argues, this misses an opportunity to better understand—and promote—the concrete impact of GPP on environmental factors [5].

3.5 Social Sustainability

To recap, social criteria in tendering goes beyond green criteria to incorporate suppliers' relationships and reputations with people, institutions, and communities. From an Environmental, Social and Governance (ESG) perspective, this factor involves human rights, labour standards, workplace health and safety, and diversity and inclusion [9]. Studies on this factor are limited but, as Benchechroun et al (2024) point out, increasing following the development of European recovery and resilience plans following the COVID-19 pandemic.

90% of human life depends on the efficacy of infrastructure, social services and environment to support their lives [28]. SPP can impact 82% of SDG targets [28]. According to UNEP, SPP benefits are multiple and can be classified into one of four categories: Environmental, Economic, Strategic/Political and Social [88]. Adopting SPP practices can enhance public trust and organisational reputation as accountability and transparency show the public that decisions are made ethically and sustainably [7], [89]. As a strategic tool, sustainable public procurement (SPP) has the potential to transform the healthcare sector by shaping production and consumption patterns, while simultaneously promoting environmental, social, and economic criteria in procurement processes.

Despite these advantages, and even though an international standard on sustainable procurement²⁰ exists, there is a significant implementation gap of SPP, and in healthcare specifically. The European Greens/EFA party suggests that the limited progress on SPP at the EU level may be due to a policy shift prioritising GPP over broader sustainability goals [90]. This observation has also been found in an European Parliamentary Research Report [91]. Similarly, a recent OECD report assessing the implementation of the OECD Recommendation on Public Procurement highlights that *'targets and prioritisation methodologies are commonly established for green-related objectives'* (OECD, 2025, p. 9) and opportunities remain to improve public procurement's impact on wider sustainability objectives [92]. Encouragingly, Socially Responsible Public Procurement (SRPP) is slowly progressing, although yet to reach its' full potential [91].

Box 8: Guidance - Mölnlycke health care – Consensus on sustainable procurement

Guidance - Mölnlycke health care – Consensus on sustainable procurement

In 2024, **Mölnlycke Health Care's Sustainability Advisory Board** published a consensus paper offering actionable guidance for integrating Environmental, Social, and Governance (ESG) considerations into procurement. The paper is the most recent consensus statement for the entire healthcare section on sustainable healthcare procurement. It responds to the growing policy push for sustainability, aligning with upcoming EU ESG disclosure rules.

The paper is a key tool offering procurement bodies a ready-to-use framework to incorporate ESG criteria in tenders while managing legal, clinical, and financial risks.

It provides a practical roadmap for engaging hospital leadership in ESG procurement decisions and offers practical, step-by-step guidance for integrating ESG criteria into day-to-day hospital procurement. It advises procurers on what sustainability may be included in the award criteria and underlines the critical value of transparency to support

²⁰ ISO 20400:2017 provides guidance to organizations, independent of their activity or size, on integrating sustainability within procurement, as described in ISO 26000. It is intended for stakeholders involved in, or impacted by, procurement decisions and processes.

learning, development and market research. Developed through a collaborative process involving healthcare professionals, procurement leaders, and hospital managers, the paper reflects real challenges faced in implementing sustainable procurement. As such, **its insights are directly applicable to public procurement in the health sector**, both for central procurement bodies and hospital-based teams, offering practical tools for integrating ESG criteria across different levels of the health system.

In our analysis, we found one example (see box XXX) and only limited literature addressing this topic from a public procurement of medicines (PPM) perspective. Most EU studies on sustainable public procurement (SPP) focus instead on the food sector²¹. Although SPP plays a critical role in advancing sustainable development, the European Commission's Best Practices in the Public Procurement of Medicines study revealed that social criteria are rarely used. If SPP is applied to medicines procurement, social criteria are generally integrated as part of green public procurement (GPP) initiatives [34]. Reading between the lines, it appears that social criteria are habitually linked with immediate patient treatment and care. That is, it normally concerns issues such as security of supply, therapeutic value, product quality, safety, and outcomes for the target population [9], [34].

Even though the Union is in the midst of approving a [Corporate Sustainability Reporting Directive](#) and a [Corporate Sustainability Due Diligence Directive](#), public organisations are not subject to binding reporting rules for ESG issues [93]. This may explain why industry is taking the lead on this subject by issuing guidance for public procurers—see [Box 8: Guidance - Mölnlycke health care – Consensus on sustainable procurement above](#). While, various Dutch ministries are voluntarily reporting on the sustainability of their operations [93], it was beyond the scope of this paper to explore the extent of this practice in other MS.

Our research suggests that wider social sustainability considerations appear to be generally limited in the public sector environment, including medicines procurement. As pharmaceutical production is often outsourced to subcontractors whose sites are based in low-cost countries (e.g., India, China), their manufacturing practices typically fall outside the direct operations of European pharmaceutical companies [12], [15], [60]. However, due to poor environmental and labour protections, producers in low-cost countries can be responsible for polluting local soil and water and engaging in poor labour practices [60], demonstrating the importance of life cycle costing in procurement activities. Historical scientific publications has demonstrated that Indian wastewater treatment plants discharged therapeutic substances at levels over 1 million times the levels released by their Swedish counterparts (Larsson et al., 2007 cited in [60]), creating severe problems for local populations.

Despite the obvious benefits, award criteria rarely consider reshoring production in other European countries (EC, 2022). Exceptions to this finding are found in Germany and Switzerland. Here, both countries have stipulated tender award criteria based on European and local production of medicinal products [10]. This is likely due to a strategic understanding that local production leads to self-sufficiency, empowers national healthcare systems, promotes economic growth, and boosts employment and competitiveness [7], [9].

²¹ We found several EU publications addressing sustainable public procurement for food. See [here](#), [here](#) and [here](#) for instance. Other studies appear more generic e.g. 'Sustainable public procurement: current status and environmental impacts' JRC, 2024 centre on one strategic area.

Germany

Germany's medicine procurement framework has undergone a significant transformation due to two federal laws that promote greater supply chain responsibility and resilience: the Supply Chain Due Diligence Act (LkSG) and the ALBVVG (Law to Combat Drug Shortages and Improve Supply).

The Supply Chain Due Diligence Act applies to all private companies and public entities with at least 1,000 employees and a business presence in Germany. It aims to strengthen environmental protection and human rights throughout global supply chains. Companies are required to assess risks within their own operations and those of their direct and indirect suppliers.

Companies must conduct supply chain risk analyses, publish a policy statement, and implement preventive or corrective measures where necessary. They are obliged to establish accessible complaints mechanisms and document their due diligence efforts in regular reports. **While the law does not prescribe specific KPIs**, it refers to international standards - such as those set by the ILO, UN, and international treaties like Minamata Convention, Stockholm Convention, and Basel Convention - as a foundation for compliance. These expectations are further clarified through official guidance from BAFA (Federal Office for Economic Affairs and Export Control), which provides practical resources for implementation. While there is flexibility in how due diligence obligations are operationalized, BAFA recommends approaches such as using reporting tools, ESG-oriented supplier evaluations, and sustainability clauses in contracts - especially in high-risk sectors such as pharmaceutical raw materials and chemical processing. **In the context of medicines procurement**, this means that buyers - particularly those subject to the Act - are expected to integrate ethical and environmental risk considerations into supplier selection and contract design. This can include incorporating sustainability criteria into tender documents, assessing suppliers' human rights and environmental performance, and establishing mechanisms to track and document compliance over time.

The Law to Combat Drug Shortages and Improve Supply (ALBVVG) addresses supply resilience for critical outpatient medicines, especially off-patent antibiotics and medicines vulnerable to supply shortages. It applies to Germany's statutory health insurance funds and their associations, which act as contracting authorities in public procurement through rebate tenders. To meet the legal requirements under the ALBVVG, procurement procedures must align with three key principles:

- At least 50% of the tender lots for specific off-patent antibiotics must be set up to prioritize or allow participation by suppliers that use EU or EEA-based API production.
- Procurement must promote supplier diversification, through multi-award tenders that avoid dependency on a single supplier or geographic source.
- Stockholding obligations are mandated for manufacturers, wholesalers, and importers of medicines that are at risk of shortage to help ensure continuous availability.

While procurement bodies are not responsible for maintaining inventories themselves, they must ensure that stockholding requirements are clearly included in contracts with suppliers. This alignment of contractual obligations with regulatory oversight is essential for meeting the ALBVVG's objectives of a more resilient and responsive pharmaceutical supply system.

Case Study: practical application of the procurement framework

In 2023, six major German statutory health insurers, led by Techniker Krankenkasse (TK), launched a joint tender for eight off-patent outpatient antibiotics considered at high risk of shortage (amoxicillin + clavulanic acid, cefpodoxime, ceftriaxone, clarithromycin, clindamycin, dexamethasone + gentamicin, doxycycline, and moxifloxacin). The tender was structured to comply with the key requirements of the ALBVVG, including the prioritization of EU-based API production, supplier diversification, and stockholding obligations. Each antibiotic was divided into three separate tender lots. One of the three lots was reserved for suppliers using EU-manufactured active ingredients, while the remaining two were open to all suppliers. This approach ensured that the overall tender design met ALBVVG's requirement to support EU production in at least half of the lots. This joint procurement illustrates how insurers have started to respond to legal requirements through coordinated, practical solutions - supporting supply resilience, encouraging regional production, and protecting access to essential medicines.

Social responsibility means responsibility should be taken for eliminating human rights abuses and ensuring diversity and inclusion in the whole value chain [94]. In this respect, another, generic, good example comes from Poland where Public Procurement Law (PPL) allows contracting authorities to specify criteria like employing marginalised groups [95]. Additionally, representatives from the Southeast Norway Health Region visit and inspect their suppliers factories to ensure that acceptable working conditions and human rights are adhered to in their supply chains²² [96]. Other examples of good practice were found in the Czech Republic, Spain and the United Kingdom (see [Box 10: Social criteria in European public procurement - Legal frameworks and practical examples below](#)).

However, no evidence was found demonstrating if these solutions and practices are applied to the public procurement of medicines. This evidence gap may be connected to the special position the health sector has in public procurement. Derogations can be applied for excluding suppliers from procurement processes involved in financial crime or labour rights abuses, where overriding reasons are related to the public interest such as protecting public health and the environment (Art 57, Public Procurement Directive) (EC, 2021). These derogations may soon change as a European Parliament Committee Opinion on the reform of the EU Public Procurement framework includes a trade union suggestion to simplify procedures for public entities to promote quality jobs and exclude companies that do not respect workers' rights [97].

Box 10: Social criteria in European public procurement - Legal frameworks and practical examples

Social criteria in European public procurement - Legal frameworks and practical examples

Public procurement across Europe is evolving to make social considerations a key factor in awarding contracts. Several national legal frameworks have moved beyond general compliance to explicitly require that contracting authorities integrate social criteria as part of their tender evaluations. The overarching objective of social criteria is to promote societal benefits such as job creation, social inclusion, and gender equality. National and local authorities embed these criteria in tender evaluation processes across a wide range of sectors.

The **Czech Republic**, the Public Procurement Act (No. 134/2016 Coll., as amended by No. 543/2020 Coll.) mandates that all contracting authorities consider social and environmental criteria for every public tender. This is implemented through mechanisms such as setting special participation conditions, requiring certifications, and including quality award criteria. Meanwhile, the **Brussels Capital Region** requires all regional public entities to include social clauses in works and service contracts above specified

thresholds (for works contract set at €750.000 and for service contracts set at €221.000), mandating employment of registered jobseekers or subcontracting parts of contracts to social enterprises, making social considerations an enforceable element of procurement.

In the **United Kingdom**, central government departments have been required since 2021 to apply a minimum 10% weighting to social value in tender evaluations for applicable contracts under [Procurement Policy Note \(PPN\) 06/20](#). Although not mandatory for all public entities, this builds on the Public Services (Social Value) Act 2012 requires public authorities in England and Wales to consider how the procurement of public services can improve social, economic, and environmental well-being. In **Spain's Basque Country**, [a 2024 regional resolution](#) requires that at least 5% of the evaluation score in public tenders be dedicated to gender-related criteria such as equal opportunities, balanced teams, and work-life balance.

3.6 Implementation challenges

The role of public buyers has become increasingly complex as sustainable procurement practices must integrate environmental, social, and economic criteria. As traditional procurement processes shift from selecting the lowest-priced bid to giving more weight to non-monetary criteria, public procurers must carefully balance financial constraints with environmental and socially responsible sourcing, while addressing existing economic challenges [7],[20].

Implementing sustainable public procurement for pharmaceutical products involves operational challenges. This includes a lack of transparency—hindering the ability to compare procurement practices and outcomes—the complexity of procurement processes, and skills and training shortages in procurement teams.

BUYERS NEED TECHNICAL AND FINANCIAL SKILLS AND EXPERTISE TO PREVENT SUPPLIERS FROM EXITING THE MARKET AND ACHIEVE “GOOD” PROCUREMENT PRACTICES [34], [65].

Compounding these challenges is the absence of guidance and decision-support tools, which are crucial to implement award criteria beyond price [7]. This gap leads to an underestimation of environmental costs and ensures procurement decisions based primarily on economic considerations remain common practice [34]. Adding to this, a lack of meaningful quality criteria and poor market research can result in tenders with unrealistic or outdated specifications [43]. Furthermore, limited knowledge and awareness of the environmental impacts of pharmaceuticals act as a barrier to the adoption of greener procurement [8].

EXPERTISE IN ENVIRONMENTAL SCIENCE AND COST-BENEFIT ANALYSIS IS ESSENTIAL FOR THE UPTAKE OF GPP AND THE INCLUSION OF ENVIRONMENTAL CRITERIA IN TENDER EVALUATIONS [5].

As procurers are called upon to balance complex policy trade-offs and make difficult ethical decisions, those who struggle to operationalise sustainability criteria may rely heavily on team capacity—or, at worst, on individual judgment [4], [34]. This can increase the risk of legal appeals when contracts are awarded based on non-price criteria. Consequently, some buyers may default to conventional practices to avoid litigation [34].

Strategic challenges include inadequate regulations, limited support from top management, and economic uncertainties such as budget constraints [7], [56], [65]. Structural issues also persist, such as the immaturity of supplier markets concerning sustainability criteria, the limited appeal of smaller markets, and the absence of standardised, harmonised approaches to sustainable pharmaceutical procurement [2], [7], [34].

²² See video here:
<https://vimeo.com/112149202>

Discussion and Recommendations

04

- Given the critical role of public procurement in building a socially responsible economy, targets, prioritisation methods, award criteria, and tendering tools must be aligned with all three sustainability objectives
- Standardised EU guidance should be issued for the sustainable procurement of medicines encompassing the three sustainability factors.
- At a minimum, EU Green Public Procurement (GPP) criteria should be developed and applied specifically for pharmaceutical procurement. Additionally, SPP criteria should be developed for the sector.
- Bridging the gap between theory and practice will require that public procurers are adequately trained and supported to fulfil their legal and ethical responsibilities. Echoing the longstanding recommendations of other agencies, we strongly recommend invest in public procurers capacities to ensure they have the skills, authority, and resources needed to build long-term, inclusive, sustainable, and healthy communities.

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