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Revision of EU Green Public Procurement Criteria for Indoor Cleaning Services

Technical Report

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Abstract

This report is the final technical report on the revision of the EU GPP criteria for Indoor Cleaning Services. This revision was carried out in tandem with the development of EU Ecolabel criteria for Indoor Cleaning Services. Documentation related to the development of the EU Ecolabel criteria for Indoor Cleaning Services are available on the JRC website: <http://susproc.jrc.ec.europa.eu/cleaning%20services/stakeholders.html>.

Improved requirements and other ideas for improvements were presented and discussed with stakeholders at two Ad-Hoc Working Group (AHWG) meetings, and in several rounds of written consultations. Collected stakeholder feedback, either in the meetings, after them or in separated written consultation rounds, is reflected in this report.

1. Introduction

Public authorities' expenditures in the purchase of goods, services and works (excluding utilities and defence) constitute approximately 14% of the overall Gross Domestic Product (GDP) in Europe, accounting for roughly EUR 1.8 trillion annually¹.

Thus, public procurement has the potential to provide significant leverage in seeking to influence the market and to achieve environmental improvements in the public sector. This effect can be particularly significant for goods, services and works (referred to collectively as products) that account for a high share of public purchasing combined with the substantial improvement potential for environmental performance. The European Commission has identified Indoor Cleaning Services as one such product group.

Green Public Procurement (GPP) is defined in the Commission's Communication "COM (2008) 400 - Public procurement for a better environment" 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."

Therefore, by choosing to purchase products with lower environmental impacts, public authorities can make an important contribution to reducing the direct environmental impact resulting from their activities. Moreover, by promoting and using GPP, public authorities can provide industry with real incentives for developing green technologies and products. In some sectors, public purchasers command a large share of the market (e.g. public transport and construction, health services and education) and so their decisions have considerable impact. In fact, in the above mentioned Commission's communication the capability that public procurement has to shape production and consumption trends, increase demand for "greener" products and services and provide incentives for companies to develop environmental friendly technologies is clearly emphasised.

GPP is a voluntary instrument, meaning that Member States and public authorities can determine the extent to which they implement it.

The development of EU GPP criteria aims to help public authorities ensure that the goods, services and works they require are procured and executed in a way that reduces their associated environmental impacts. The criteria are thus formulated in such a way that they can be, if deemed appropriate by the individual authority, integrated into its tender documents with minimal editing.

GPP criteria are to be understood as being part of the procurement process and must conform to its standard format and rules as laid out by Public Procurement Directive 2014/24/EU (public works, supply and service contracts). Hence, EU GPP criteria must comply with the guiding principles of: Free movement of goods and services and freedom of establishment; Non-discrimination and equal treatment; Transparency; Proportionality and Mutual recognition. GPP criteria must be verifiable and it should be formulated either as Selection criteria, Technical specifications, Award criteria or Contract performance clauses, which can be understood as follows:

Selection Criteria (SC): Selection criteria refer to the tenderer, i.e., the company tendering for the contract, and not to the product being procured. It may relate to suitability to pursue the professional activity, economic and financial standing and technical and professional ability and may- for services and works contracts - ask specifically about their ability to apply environmental management measures when carrying out the contract.

¹ Buying green! A handbook on green public procurement, 3rd edition, 2016.

Technical Specifications (TS): Technical specifications constitute minimum compliance requirements that must be met by all tenders. It must be linked to the contract's subject matter (the 'subject matter' of a contract is about what good, service or work is intended to be procured. It can consist in a description of the product, but can also take the form of a functional or performance based definition.) and must not concern general corporate practices but only characteristics specific to the product being procured. Link to the subject matter can concern any stage of the product's life-cycle, including its supply-chain, even if not obvious in the final product, i.e., not part of the material substance of the product. Offers not complying with the technical specifications must be rejected. Technical specifications are not scored for award purposes; they are strictly pass/fail requirements.

Award Criteria (AC): At the award stage, the contracting authority evaluates the quality of the tenders and compares costs. Contracts are awarded on the basis of most economically advantageous tender (MEAT). MEAT includes a cost element and a wide range of other factors that may influence the value of a tender from the point of view of the contracting authority including environmental aspects (refer to the Buying Green guide for further details¹). Everything that is evaluated and scored for award purposes is an award criterion. These may refer to characteristics of goods or to the way in which services or works will be performed (in this case they cannot be verified at the award stage since they refer to future events. Therefore, in this case, the criteria are to be understood as commitments to carry out services or works in a specific way and should be monitored/verified during the execution of the contract via a contract performance clause). As technical specifications, also award criteria must be linked to the contract's subject matter and must not concern general corporate practices but only characteristics specific to the product being procured. Link to the subject matter can concern any stage of the product's life-cycle, including its supply-chain, even if not obvious in the final product, i.e., not part of the material substance of the product. Award criteria can be used to stimulate additional environmental performance without being mandatory and, therefore, without foreclosing the market for products not reaching the proposed level of performance.

Contract Performance Clauses (CPC): Contract performance clauses are used to specify how a contract must be carried out. As technical specifications and award criteria, also contract performance clauses must be linked to the contract's subject matter and must not concern general corporate practices but only those specific to the product being procured. Link to the subject matter can concern any stage of the product's life-cycle, including its supply-chain, even if not obvious in the final product, i.e., not part of the material substance of the product. The economic operator may not be requested to prove compliance with the contract performance clauses during the procurement procedure. Contract performance clauses are not scored for award purposes. Compliance with contract performance clauses should be monitored during the execution of the contract, therefore after it has been awarded. It may be linked to penalties or bonuses under the contract in order to ensure compliance.

For each criterion there is a choice between two levels of environmental ambition, which the contracting authority can choose from according to its particular goals and/or constraints:

The Core criteria are designed to allow easy application of GPP, focussing on the key areas of environmental performance of a product and aimed at keeping administrative costs for companies to a minimum.

The Comprehensive criteria take into account more aspects or higher levels of environmental performance, for use by authorities that want to go further in supporting environmental and innovation goals.

As said before, the development of EU GPP criteria aims to help public authorities ensure that the goods, services and works they require are procured and executed in a way that reduces their associated environmental impacts and is focused on the products' most significant improvement areas, resulting from the cross-check between the key environmental hot-spots and market analysis. This development also requires an understanding of commonly used

procurement practices and processes and the taking on board of learnings from the actors involved in successfully fulfilling contracts.

For this reason, the European Commission has developed a process aimed at bringing together both technical and procurement experts to collate a broad body of evidence and to develop, in a consensus oriented manner, a proposal for precise and verifiable criteria that can be used to procure products with a reduced environmental impact.

This report presents the findings resulting from that process up to the final stakeholder consultation.

A detailed environmental and market analysis, as well as an assessment of potential improvement areas, was conducted within the framework of this project and was presented in the Preliminary Report on EU Green Public Procurement Criteria for Cleaning Services. This report can be publicly accessed at the JRC website for Indoor Cleaning Services (<http://susproc.jrc.ec.europa.eu/cleaning%20services/index.html>). The main findings presented in the Preliminary Report are summarised in the next chapter.

2. Structure of EU GPP for Indoor Cleaning Services

Currently separate EU GPP criteria exist for cleaning services and for cleaning products and detergents. The criteria presented in this document cover both the procurement of products and services, but should a contracting authority wish to only procure one or the other, they should focus on specific criteria, as follows:

Table 1. Structure of EU GPP criteria and colour-coded areas covered (red: cleaning products, green: cleaning accessories, blue: cleaning services, yellow: consumable goods)

Criterion #	Criterion	Area
SC1	Competences of the tenderer	Cleaning services
TS1.1, AC1.1	Use of ecolabelled cleaning products	Cleaning products
TS1.2, AC1.2	Use of concentrated undiluted cleaning products	Cleaning products
TS2.1, AC2.1	Use of microfiber products	Cleaning accessories
TS2.2, AC2.2	Use of ecolabelled cleaning accessories	Cleaning accessories
TS3, AC3	Environmental management measures and practices	Cleaning services
TS4.1, TS4.2, TS4.3	Consumable goods	Consumable goods
AC4	Energy efficiency of vacuum cleaners	Cleaning services
CPC1.1	Cleaning products and accessories used	Cleaning products Cleaning accessories
CPC1.2	Cleaning product dosing	Cleaning products
CPC2	Staff training	Cleaning services
CPC3	Environmental management measures and practices	Cleaning services
CPC4	Consumable goods	Consumable goods
CPC5	Purchase of new vacuum cleaners	Cleaning services

2.1. Link between the EU Ecolabel and EU GPP criteria for Indoor Cleaning Services

The structure of the EU Ecolabel scheme and the EU GPP criteria mean that the criteria for each, while similar in some ways, differ on issues such as what is covered and verification processes. The EU Ecolabel for Indoor Cleaning Services covers an entire cleaning company or a company department or section, as long as they only provide EU Ecolabel services and have separate accounting. All the contracts of the company/department must be for EU Ecolabel services. For the EU GPP, only a single contract is covered, as defined by the contracting authority putting forth the tender.

Due to the similarity of the criteria, in some cases it is possible to use the EU Ecolabel licence as a means of proof – for example for the Selection Criteria. For other criteria, having complied with the EU Ecolabel for Indoor Cleaning Services means that the tenderer should already have all of the paperwork necessary for the verification of the EU GPP criteria. Indeed, due to the structure of the EU Ecolabel (made up of mandatory and optional criteria), it is not possible to directly use the licence as proof. For example, in the case of ecolabelled cleaning products, the EU Ecolabel licence cannot be directed used as:

- The EU Ecolabel mandatory criteria require 50% of all cleaning products used in all contracts to be ecolabelled (it could be 20% in a big contract and 100% in a small contract, as long as the average is 50%),
- There is an optional criterion giving points for higher use in **all** contracts,
- The EU GPP criteria have a Technical Specification, Award Criteria and a Contract Performance Clause for the use of ecolabelled products in the **specific contract** for the tender,

-
- To prove compliance (especially with the Contract Performance Clause), the tenderer would already have the paperwork from the EU Ecolabel, and they would just need to separate the data for that contract from the rest of their contracts.

2.2. Summary of the preliminary work

2.2.1. Name and scope

This product group deals with the provision of cleaning services with reduced environmental impact.

Name: Following stakeholder consultation and in line with the EU Ecolabel for the same range of services, the product group name is proposed to be changed from "Cleaning Services" to "Indoor Cleaning Services". Indeed, such a change allows a better understanding of the scope of the criteria and implicitly indicates that only routine cleaning tasks are covered, as they represent the large portion of all indoor cleaning tasks performed by professional cleaning service providers.

Although the criteria document now also covers the procurement of cleaning products, this is not proposed to be reflected in the product group name for the sake of conciseness.

Scope: For this product group, the proposed scope reflects the latest developments in the EU Ecolabel for the same product group, the specific needs of public procurement, market data, a review of legislation, standards and stakeholder feedback. The scope reads as follows:

This GPP criteria set addresses the procurement process for environmentally conscious routine indoor professional cleaning services performed in areas that include offices, sanitary facilities, such as toilets and sinks, and other publically accessible areas. For the purposes of this GPP criteria set, the product group "Indoor Cleaning Services" comprises the cleaning of glass surface that can be reached without the use of specialised equipment or machines.

The product group 'indoor cleaning services' does not include disinfection and sanitisation activities as well as cleaning activities that include the use of biocidal products falling under the scope of Regulation (EU) No 528/2012 of the European Parliament and of the Council concerning the making available on the market and use of biocidal products;, or cleaning activities on production sites.

In the framework of this criteria, 'routine' refers to professional cleaning services provided at least once a month, with the exception of glass surface cleaning which is to be considered routine even if it is performed less frequently (e.g., at least once every 3 months).

The scope focuses on areas that are routinely cleaned without the use of specialised cleaners, as a large number of public tenders are issued for routine cleaning activities in offices, schools and other indoor areas that are under the responsibility of public authorities. This focus was further corroborated through market data from 2010 (EFPI, 2012) that highlighted that office cleaning represents the biggest market share (50%) of professional cleaning services, followed by cleaning services performed in locations that often require specialised cleaning such as industrial sites (10%) and hospitals (7%).

A review of the main tasks performed as part of indoor cleaning showed that surface cleaning, floor cleaning and the cleaning of sanitary facilities are the most frequent operations performed to keep an indoor space clean. These tasks can be performed using non-specialised cleaning products and accessories. Activities that are non-routine (exceptional) and require specialised cleaning products or machinery were found to be more of a niche market and are not expected to be part of tenders for indoor cleaning services. These activities include industrial cleaning (e.g. environmental remediation, manufacturing process cleaning), disinfection and sanitisation, special cleaning services (e.g. carpet shampooing, upholstery cleaning, mould remediation services), and sanitation services (e.g. sewer sanitation, cleaning after accidents/disasters,

removal of graffiti). Moreover, other services or products that might be provided by the cleaning service company (e.g. landscaping) but that do not contribute directly to the routine maintenance of cleanliness of an indoor space are considered out of scope as these are not directly relate to the subject matter.

The issue of window cleaning and its potential inclusion in the scope of was considered throughout the project. There was a consensus among stakeholders that window cleaning should be out of the scope when it requires special training and equipment and falls under the jurisdiction of additional EU regulations (e.g. the European Council Directive 2001/45/EC concerning minimum safety and health requirements for the use of equipment for work at height or the Temporary Work at Height Directive or TWAHD). Nevertheless, stakeholder feedback also suggested that the cleaning of smaller glass areas (e.g. glass office doors) should be considered part of the tasks routinely carried out in indoor cleaning of buildings, even if not on a monthly basis. In order to avoid misunderstandings and to highlight that the main target is indoor glass, the wording makes strict reference to "glass cleaning" rather than "window cleaning". Further definitions of the different terms used in the scope can be found in the section "Terms and definitions".

2.2.2. Market analysis

A market analysis of cleaning services was undertaken to assess market trends, initiatives and innovations to support the development of the EU Ecolabel and the revision of the EU GPP criteria. Key findings include:

- The total estimated turnover of the cleaning service industry for 2010 was €81 billion for the EU27 (Eurostat, 2010). The services within scope (offices, schools and leisure organisations, windows and reception areas) represent approximately €38 billion (47% of total turnover).
- The five largest markets for professional cleaning services are Germany, France, Italy, UK and Spain.
- Office cleaning dominates, representing 50% of the turnover. However, the value of office cleaning has decreased by 8% since 1997, with an equivalent increase in specialised and related cleaning services.
- The cleaning industry structure in Europe is characterised by a large proportion of very small companies. 202 000 cleaning companies are present in Europe, of which 75% employ fewer than 10 people (Eurostat, 2010; EFCI, 2012). Large companies that employ over 500 people only constitute 1,5% of the total (EFCI, 2012).
- The estimated volume of professional cleaning products used in the EU28, Norway and Switzerland is estimated at 590 000 tonnes of product per year, with an estimated value of €886 million.
- No specific data was available on the sales of sustainable cleaning products or services. However, the rising number of signatories to charters (e.g. AISE Sustainable Cleaning Charter) or voluntary schemes (e.g. EU Ecolabel, Nordic Swan) indicates that there are a market and interest for sustainable products and services.
- No accurate data exists on cleaning equipment and accessories use. However, anecdotal evidence from stakeholders suggests the volume of cleaning equipment and accessory sales is considerably smaller than that of cleaning products as the former have a longer lifespan.
- It is estimated that the total value of cleaning supplies production in the EU28, Norway and Switzerland is €572 million, with over 75% of the value related to floor cleaning.
- Key features and drivers in the cleaning service sector include the expansion of outsourcing, cost-led contracting and over-representation of part-time (and very short

part-time) employment. The sector is also particularly sensitive to wage regulations due to high labour intensity.

- Competition on price has forced cleaning service providers to invest in new technologies that help them increase efficiency and lead to cost reduction.
- Sustainable practices in the cleaning service industry are driven by resource and cost saving opportunities, government policies, voluntary standards and market demand.

2.2.3. Key environmental hotspots

Environmental impacts associated with the different tasks related to indoor cleaning services were investigated in the technical and environmental analysis chapter of the Preliminary Report. Environmental hotspots for cleaning service components (i.e. cleaning products, supplies and accessories), cleaning operations/power equipment and operational management were identified as relevant to public tenders and are summarised in Table 2. Please note that some hotspots highlighted for the EU Ecolabel, which covers a company, department or subsidiary as a whole, are not as relevant on a single-contract basis and are not directly related to the subject matter (e.g. transport).

Table 2. Main environmental hotspots of cleaning services

Cleaning service components	Environmental hotspots
Cleaning products, supplies and accessories	Cleaning product formulation Raw material use, manufacturing and end-of-life of disposable cleaning supplies
Cleaning operations/power equipment	Energy and water consumption in the use phase of cleaning products and power equipment
Operational management	Wastewater discharge related to the use of cleaning products Waste treatment (solid and liquid waste sorting and collection)

Improvement areas for EU GPP criteria

Improvement potential areas associated with different types of cleaning services were investigated in the Preliminary Report. After cross-checking which ones have the potential to be addressed in the framework of the EU GPP programme, relevant improvement potential areas were identified and are summarised in Table 3. Multiple improvements highlighted can mainly be addressed indirectly through the criterion on Staff Training (e.g. temperature of water used during cleaning operations).

Table 3. Potential environmental improvement areas for cleaning services

Cleaning service areas	Environmental improvements areas
Cleaning products, supplies and accessories	<ul style="list-style-type: none"> • Cleaning products with lower environmental impact • Cleaning product concentration at purchase • Cleaning product dosing • Cleaning supplies and accessories with lower environmental impact • Use of microfiber products

Cleaning operations/power equipment	<ul style="list-style-type: none"> • Cold/room temperature water use in cleaning services • Energy efficiency of cleaning power equipment
Operational management	<ul style="list-style-type: none"> • Wastewater discharge • Solid waste collection, sorting and recycling

2.3. Main changes between the 2nd and 3rd Technical Reports

Criteria and report structure: in order to regroup criteria and criteria rationales that concern similar aspects (e.g. cleaning products, consumable goods).

Selection criteria: the requirements set out in the Selection Criteria have been updated to cover more than Staff Training. This helps ensure that tenderers have experience with providing cleaning services using ecolabelled products as well as providing staff training covering environmental aspects.

Criteria thresholds: for many criteria, the thresholds proposed have been increased. For example, in the case of ecolabelled products, the comprehensive criteria are now proposed to require that all products used are ecolabelled. In the case of textile accessories, some requirements (use of ecolabelled products) that previously could only be found as Award Criteria have been transferred to the Technical Specifications.

New contract performance clauses: the requirements set out in the contract performance clauses are now aligned with the different criteria found in the Technical Specifications and Award Criteria and allow the contracting authority to follow the contract. More specifically, the CPC on solid waste sorting and disposal is now included in the staff training requirements and those on environmental management measures and procedures.

2.4. Main changes between the 3rd and final Technical Reports

Criteria and report structure: have been revised in order to improve the clarity of criteria and supporting rationales.

Selection criteria: the requirements set out in the Selection Criteria have been updated, and, where applicable, harmonised with the EU Ecolabel for indoor cleaning services.

Technical specifications: Optional criteria A and B have been introduced to allow additional flexibility. In the case of cleaning accessories the requirement on technical data sheet has been added to ensure the appropriate use of the product. The minimum frequency for reporting operational procedures which will be applied during the execution of the contract has been reduced to minimise administrative burdens (i.e., from once every 2 months to once every 4 months).

New contract performance clauses: the requirements set out in the contract performance clauses are now aligned with the different criteria found in the Technical Specifications and Award Criteria and allow the contracting authority to follow the contract.

3. Draft EU GPP Criteria proposal for Indoor Cleaning Services

This section presents proposals for the EU GPP criteria for contracts on the provision of cleaning services with reduced environmental impact.

EU green public procurement criteria are designed to make it easier for public authorities to purchase goods, services and works with reduced environmental impacts. The use of the criteria is voluntary. The criteria are formulated in such a way that they can be, if deemed appropriate by the individual authority, (partially or fully) integrated into its tender documents with minimal editing. Before publishing a tender, public authorities are advised to check the available offer of the good, services and works they plan to purchase on the market where they are operating. The EU GPP criteria developed for indoor cleaning services product group and accompanying technical report provide the full rationale for the selection of these criteria and references for further information.

Table 4 compares the structures of the current EU GPP criteria and the proposed revised EU GPP criteria for indoor cleaning services.

Table 4. Comparison the structure of the current and proposed EU GPP criteria for Indoor Cleaning Services

	Current EU GPP Criteria				Revised EU GPP Criteria			
	#	Criterion	Core	Comprehensive	#	Criterion	Core	Comprehensive
Selection criteria	1	Environmental management system	--	X	SC1	Competences of the tenderer	X	X
Technical specifications / Award criteria	1	Ecolabel products	X	X	TS1.1 AC1.1	Use of ecolabelled cleaning products	X	X
					TS1.2 AC1.2	Use of concentrated undiluted cleaning products	X	X
					TS2.1 AC2.1	Use of microfiber products	X	X
					TS2.2 AC2.2	Use of ecolabelled cleaning accessories	X	X
					TS3 AC3	Environmental management measures and practices	X	X
					TS4.1 TS4.2 TS4.3	Consumable goods	X	X
					AC4	Energy efficiency of vacuum cleaners	X	
Contract performance clauses	1	Products used: report list and quantity of cleaning products used a), b)	X	X	CPC1.1	Cleaning products and accessories used	X	X

	2	Training in cleaning agents, methods, equipment's, machine and waste management. Others on health, safety and environment	X	X	CPC1.2	Cleaning product dosing	X	X
	3	Work instructions on environmental protection, health and safety standards displayed		X	CPC2	Staff training	X	X
	4	Facility manager or supervisor (organise and supervise cleaning)		X	CPC3	Environmental management measures and practices	X	X
	5	Use of microfiber cloths		X	CPC4	Consumable goods	X	X
					CPC5	Purchase of new vacuum cleaners	X	X

- a) For products not mentioned in the initial bid, the contractor shall provide proof of compliance with technical specifications.
b) Justification of the cleaning frequency and products used.

3.1. Selection Criteria (SC)

3.1.1. Competences of the tenderer

Core criteria	Comprehensive criteria
SELECTION CRITERIA	
<p>SC1 Competences of the tenderer (same for core and comprehensive criteria)</p> <p>The tenderer must have relevant competences and experience in providing environmentally conscious indoor cleaning services that, at a minimum, included the following:</p> <ul style="list-style-type: none"> • use of cleaning products that have been awarded the EU Ecolabel for hard surface cleaning or other relevant EN ISO 14024 type I ecolabels that are nationally or regionally officially recognised in the Member States for at least 50 % of the cleaning tasks in a contract, • staff training by internal or external trainers, that covers environmental aspects such as correct cleaning product dilution and dosage use, discarding of wastewater and waste sorting. <p>Verification:</p> <p>Evidence in the form of information and references in relevant contracts, carried out in the previous 5 years, which included the above elements. This must be supported by records of staff training activities, where the subjects covered are listed.</p> <p>Companies that have been awarded the EU Ecolabel for indoor cleaning services, or another relevant EN ISO 14024 type I ecolabel that are nationally or regionally officially recognised in the Member States, will be deemed to comply with the requirements.</p>	

Rationale for the proposed criterion

Requesting proof of the competences of the tenderer is an efficient way of ensuring that the cleaning company has prior experience of performing cleaning operations that take environmental aspects into consideration. While environmentally conscious cleaning services can be characterised by a multitude of points, as can be seen through the numerous criteria proposed in this report, two issues can be seen as crucial – the use of cleaning products with lower environmental impacts and adequate staff training. Both of these points are also further discussed in dedicated criteria as part of the contract performance clauses.

Concerning the use of cleaning products with lower environmental impacts, the requirement ensures that the company is familiar with the different EU Ecolabel or other ISO Type I label products that are officially recognised nationally or regionally in the Member States. (e.g. Nordic Swan, Blue Angel), and their performances. As further described in Section 0 (TS1), professional grade ecolabelled cleaning products are readily available in many regions of the EU28, but currently not all cleaning companies use them.

Regarding the requirements related to staff training, the wording in the selection criteria is not as developed as in the technical specification criterion. The aim of the selection criteria is to ensure that the company is able to provide adequate training (internal or external, as appropriate) and that at least part of the cleaning company staff are aware of environmental aspects linked to the cleaning tasks they perform and have provided cleaning services based on that training. Further information on staff training and what the contracting authority should request as part of a contract performance clause can be found in Section 0 (CPC2).

Rationale for the proposed verification

There is no standardized verification system for tenderers to prove their competences, as requested in the criterion. Therefore the proposed verification relies on information and references of previous contracts where the requirements were met as well as staff training records and the contents of the training.

As the requirements set out in the selection criteria are covered by the EU Ecolabel for indoor cleaning services, a company can also provide their EU Ecolabel licence as proof that they comply with SC1.

3.2. Technical Specifications (TS) and Award Criteria (AC)

3.2.1. Cleaning products

Core criteria	Comprehensive criteria
TECHNICAL SPECIFICATIONS	
<p>TS1.1 Use of ecolabelled cleaning products</p> <p><i>Option A (easier to verify during contract execution)</i></p> <p>The following types of cleaning products [<i>list of cleaning products to be defined by the contracting authority – for instance all-purpose cleaners, sanitary cleaners</i>] to be used to perform tasks related to the contract must be compliant with criterion 1 and criterion 4 of the EU Ecolabel for hard surface cleaning products² on, respectively, toxicity to aquatic organisms and excluded or restricted substances.</p> <p><i>Option B (more complex to verify during contract execution)</i></p> <p>At least A%^{a)} of all cleaning products, by volume at purchase, to be used to perform tasks related to the contract must be compliant with criterion 1 on toxicity to aquatic organisms and criterion 4 on excluded and restricted substances of the EU Ecolabel for hard surface cleaning products².</p> <p>Verification:</p> <p>The tenderer must supply a list of the cleaning products that will be used to perform the contract and provide documentation proving their compliance with the requirements. Products that have been awarded the EU Ecolabel for hard surface cleaning products¹ will be deemed to comply with the requirements</p>	<p>TS1.1 Use of ecolabelled cleaning products</p> <p>All cleaning products to be used to perform tasks related to the contract must be compliant with criterion 1 and criterion 4 of the EU Ecolabel for hard surface cleaning products² on, respectively, toxicity to aquatic organisms and excluded or restricted substances.</p> <p>Verification:</p> <p>The tenderer must supply a list of the cleaning products that will be used to perform the contract and provide documentation proving their compliance with the requirements. Products that have been awarded the EU Ecolabel for hard surface cleaning products¹, will be deemed to comply with the requirements.</p>
	<p>TS1.2 Use of concentrated undiluted cleaning products</p> <p><i>Option A (easier to verify during contract</i></p>

² OJ L 180, 12.7.2017, p. 45-62; COMMISSION DECISION (EU) 2017/1217 of 23 June 2017 establishing the EU Ecolabel criteria for hard surface cleaning products. The criteria can be found here: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017D1217&from=EN>.

	<p><i>execution)</i></p> <p>The following cleaning products [<i>list of cleaning products to be defined by the contracting authority – for instance all-purpose cleaners, sanitary cleaners</i>] to be used to perform tasks related to the contract must have a minimum dilution rate of 1:80.</p> <p><i>Option B (more complex to verify during contract execution)</i></p> <p>At least B%^{a)} of all cleaning products, by volume at purchase, to be used to perform tasks related to the contract must have a minimum dilution rate of 1:80.</p> <p>Verification:</p> <p>The tenderer must supply a list of the cleaning products that will be used to perform the contract and provide documentation proving their compliance with the requirements.</p> <p>For each product, documentation on the dilution rate used must be provided (safety data sheets, user instructions or other relevant means). If a product can be used at multiple dilution rates, the most commonly used dilution rate, as justified by internal staff instructions, must be provided. For ready-to-use products the dilution rate must be marked as 1.</p>
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AWARD CRITERIA

<p>AC1.1 Use of ecolabelled cleaning products</p> <p><i>Only applicable in relation to TS 1.1 – Option B</i></p> <p>Points will be awarded proportionally to tenders in which more than A%^{a)} of all cleaning products, by volume at purchase, to be used to perform tasks related to the contract must be compliant with criterion 1 and criterion 4 of the EU Ecolabel for hard surface cleaning products² on, respectively, toxicity to aquatic organisms and excluded or restricted substances.</p> <p>Verification:</p> <p>The tenderer must supply a list of the cleaning products that will be used to perform the contract and provide documentation proving</p>	
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<p>their compliance with the requirements. Products that have been awarded the EU Ecolabel for hard surface cleaning products², will be deemed to comply with the requirements.</p>	
<p>AC1.2 Use of concentrated undiluted cleaning products</p> <p>Points will be awarded to tenders proportionally to the percentage of all cleaning products, by volume at purchase, to be used to perform tasks related to the contract with a minimum dilution rate of 1:80.</p> <p>Verification:</p> <p>The tenderer must supply a list of the cleaning products that will be used to perform the contract and provide documentation proving their compliance with the requirements.</p> <p>For each product, documentation on the dilution rate used must be provided (safety data sheets, user instructions or other relevant means). If a product can be used at multiple dilution rates, the most commonly used dilution rate, as justified by internal staff instructions, must be provided. For ready-to-use products the dilution rate must be marked as 1.</p>	
<p>Explanatory notes</p>	
<p><u>Recommended values for (A%) — Use of ecolabelled cleaning products</u></p> <p>50-70 % of all cleaning products, by volume at purchase, to be used to perform the contract meet the criteria on toxicity to aquatic organisms and on excluded or restricted substances of the EU Ecolabel for hard surface cleaning products</p> <p><u>Recommended values for (B%) — Use of concentrated undiluted products</u></p> <p>30-50 % of all cleaning products, by volume at purchase, to be used to perform the contract have a minimum dilution rate of 1:80.</p> <p>Note: Exceptions can be made if the authorities have special requirements for cleaning and the necessary cleaning products intrinsically cannot fulfil the criteria. Exemption from the requirements may be granted where it can be demonstrated that there are no products available on the market.</p>	
<p>^{a)} A and B represent the threshold to be defined by the procurer (TS and AC). Recommendations for its value are given in explanatory notes.</p>	

Rationale for the proposed criteria

The use of cleaning products has been identified as an environmental hotspot for cleaning services. For example, Kapur et al. (2012) highlights that the use of cleaning products has dominant impacts on human toxicity and ecotoxicity, while ADEME (2010) concludes that the manufacturing of cleaning products is an environmental hotspot for sanitary cleaning. The aim of these requirements is to reduce undesirable effects on the environment by limiting the use of cleaning products containing ingredients that are harmful to the environment and promoting the use of more concentrated products, which lower the environmental impacts associated with transport.

Use of ecolabelled cleaning products

The use of ecolabelled cleaning products by the cleaning service sector provides a reliable way of identifying more environmentally-friendly cleaning products, as ISO Type I ecolabels put strict limitations on the chemical composition and formulations of products. In addition, this decreases the administrative burden on companies as these products are readily identifiable and companies already track which products are used and in which amounts.

The revised EU GPP criteria proposes both core and comprehensive requirements for cleaning products as part of the Technical Specifications. The core criteria briefly focus on the ingoing substances, requiring that no substances of very high concern be in the formulation. The comprehensive criteria sets out the same requirements as the EU Ecolabels related to detergent products.

The updated proposed criterion refers to the ecotoxicity and excluded and restricted substances requirements set out in the newly adopted EU Ecolabel for hard-surface cleaning products, which cover the major environmental impacts linked to the formulation of cleaning products (for more information, cf. (JRC IPTS, 2017)). The core and comprehensive criteria differ in the percentage of ecolabelled products that will be used as part of the execution of the contract, but the contracting authority should consider market availability and the tasks to be performed before setting minimum thresholds for ecolabelled product use.

- *Market availability*: there is no data specifically related to products that would fulfil the requirements on ecotoxicity and excluded or restricted substances as set out in the EU Ecolabel for hard surface cleaning products. The data related to products that hold an EU Ecolabel license shows that these hard surface cleaners (consumer and professional) that currently hold an EU Ecolabel license are manufactured in 14 of the EU28 (+NO) countries, but are sold throughout Europe (JRC IPTS, 2017). The data does not allow for an understanding on how these are spread between different types of cleaning products and how readily available professional products are on the market, although multiple European manufacturers specialise in professional grade cleaning products and already provide ecolabelled products to cleaning companies throughout the EU28.
- The LCC analysis (cf. Section 0) suggests that although the price of environmentally preferable cleaning products varies significantly between countries, the usage of these products should not impact the life cycle cost of cleaning service significantly.
- *Scope of ecolabelled cleaning products*: the majority of cleaning tasks related to office spaces and publically accessible areas, as covered by the scope of the present EU GPP document, can be performed using ecolabelled cleaning products (e.g. all-purpose cleaners, sanitary cleaners). In some cases, especially when an area features special surfaces (e.g. hardwood floors, large metal sections), no appropriate ecolabelled products will be available on the market due to the scope restrictions of most EN ISO 14024 type I ecolabels that are nationally or regionally officially recognised in the Member States. As such, the contracting authority should verify ahead of writing a tender the cleaning needs and whether special products are required that cannot be ecolabelled.

Use of undiluted concentrated cleaning products

This criterion aims to promote the use of products that require dilution with water before use. Evidence shows that the use of undiluted products results in reduced emissions due to lower packaging material requirements and fuel use for transportation. In addition, lower amounts of resources are used to manufacture these products, resulting in lower impacts (AISE, 2013).

Initial stakeholder consultations revealed a trend towards the use of these products because of their lower costs, although the economies of scale are only likely to be relevant for large cleaning sites. In 2010, it was estimated that 33% of hard surface cleaning products purchased and used in the EU (plus Norway and Switzerland) were diluted before use (AISE, 2013) but no data was available as to their exact dilution rates.

During the development of the criterion, stakeholder feedback was received on the following areas:

- **Scope and definition:** stakeholders requested that terms such as 'concentrated' and 'undiluted' be clarified: in the scope of the EU GPP criteria, "undiluted" refers to products that are normally used after being diluted with water and "concentrated" refers to products that, when compared to other products on the market, require smaller doses to achieve the same results as they contain high percentages of active substances. Thus a "concentrated undiluted" product is a product that requires both a smaller dose of product and diluting with water before use. This terminology aligns with that used in the EU Ecolabel for hard surface cleaning products **Error! Bookmark not defined.** and the EU Ecolabel for Indoor Cleaning Services.
- **Availability of concentrated ecolabelled products:** no public data could be found on the availability of ecolabelled concentrated undiluted products and their dilution rates, but consultation with cleaning companies confirmed that these are available and that they are making use of such products. A stakeholder raised the issue of concentrated products being more likely to require CLP labelling and therefore special storage and safety precautions. Consultation of product catalogues from producers of professional cleaning products and the associated SDS has shown that there are products available that have a dilution rate above 1:80 and do not carry any of the CLP labels related to environmental issues. Moreover, while
 - **for the core criteria**, all cleaning products must fulfil the EU Ecolabel criterion on excluded and restricted substances (and, as such, should not carry CLP labelling, even if concentrated).
 - **for the comprehensive criteria**, there is a possibility of a tenderer choosing use non-ecolabelled products that have a CLP label related to environmental issues – the contracting authority can set extra requirements to avoid such cases.
- **Dilution rate:** The initial proposal for this criterion required the use of products that have a minimum active content percentage of 30%, as can be found in the Italian Green Public Procurement requirements. However, some issues were identified with this definition as the percentage of active contents is not easily available as this is not required to be present on the product SDS or label, and manufacturers may not be willing to provide exact information on the issue due to trade secrets. Catalogue searches yielded only one company that claims to provide products fulfilling the Italian GPP requirement of 30% of active content (Arco, 2014), although this information could not be corroborated through SDSs or other non-promotional material. Furthermore, discussions with cleaning product manufacturers also highlighted that 30% of active content is very ambitious and, to their knowledge, no or very few products used in routine professional office cleaning activities achieve such a percentage. For these reasons, it is suggested that a minimum dilution rate is set to define the products in scope, rather than the percentage of active content. This is the same approach that is

taken in the EU Ecolabel for indoor cleaning services (for a discussion on dilution rate calculation, cf (JRC IPTS, 2017)).

3.2.2. Cleaning textile accessories

Core criteria	Comprehensive criteria
TECHNICAL SPECIFICATION	
<p>TS2.1 Use of microfiber products</p> <p>At least C%^{b)} of all textile cleaning accessories (e.g. cloths, mop heads) to be used to perform tasks related to the contract must be made of microfiber.</p> <p>Product maintenance should be supported by the product technical data sheet that indicates product use and washing instructions.</p> <p>Verification:</p> <p>The tenderer must supply a list of the textile cleaning accessories that will be used to perform the contract, indicating specifically the ones that are made of microfiber and whose technical data sheet contains maintenance instructions.</p>	<p>TS2.1 Use of microfiber products and ecolabelled cleaning accessories</p> <p>All textile cleaning accessories (e.g. cloths, mop heads) to be used to perform tasks related to the contract must be made of microfiber or meet the requirements set out in the EU Ecolabel for textile products³</p> <p>Product maintenance should be supported by the product technical data sheet that indicates product use and washing instructions</p> <p>Verification:</p> <p>The tenderer must supply a list of the textile cleaning accessories that will be used to perform the contract, indicating specifically the ones that are made of microfiber or that have been awarded the EU Ecolabel for textile products³ and whose technical data sheet contains maintenance instructions.</p>
	<p>TS2.2 Use of ecolabelled cleaning accessories</p> <p>At least D%^{b)} of all textile cleaning accessories (e.g. cloths, mop heads) to be used to perform tasks related to the contract must meet the technical requirements set out in the EU Ecolabel for textile products³.</p> <p>Product maintenance should be supported by the product technical data sheet that indicates product use and washing instructions.</p> <p>Verification:</p> <p>The tenderer must supply a list of the textile cleaning accessories that will be used to perform the contract and provide</p>

³ OJ L 174, 13.6.2014, p. 45-83; COMMISSION DECISION of 5 June 2014 establishing the ecological criteria for the award of the EU Ecolabel for textile products The criteria can be found here: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014D0350&from=EN>.

	<p>documentation proving their compliance with the requirements.</p> <p>Products that have been awarded the EU Ecolabel for textile products³ or equivalent and whose technical data sheet contains maintenance instructions will be deemed to comply with the requirements.</p>
AWARD CRITERIA	
<p>AC2.1 Use of microfiber products</p> <p>Points will be awarded proportionally to tenders in which more than C%^{b)} of all textile cleaning accessories (e.g. cloths, mop heads) to be used to perform tasks related to the contract must be made of microfiber.</p> <p>Product maintenance should be supported by the product technical data sheet that indicates product use and washing instructions.</p> <p>Verification:</p> <p>The tenderer must supply a list of the textile cleaning accessories that will be used to perform the contract, indicating specifically the ones that are made of microfiber and whose technical data sheet contains maintenance instructions.</p>	
<p>AC.2.2 Use of ecolabelled cleaning accessories</p> <p>Points will be awarded proportionally to tenders in which a percentage of all textile cleaning accessories (e.g., cloths, mop heads) to be used to perform tasks related to the contract meet the technical requirements set out in the EU Ecolabel for textile products³.</p> <p>Product maintenance should be supported by the product technical data sheet that indicates product use and washing instructions.</p> <p>Verification:</p> <p>The tenderer must supply a list of the textile cleaning accessories that will be used to perform the contract and provide documentation proving their compliance with the requirements.</p> <p>Products that have been awarded the EU Ecolabel for textile products², and whose technical data sheet contains maintenance instructions, will be deemed to comply with</p>	<p>AC.2.2 Use of ecolabelled cleaning accessories</p> <p>Points will be awarded proportionally to tenders in which more than D%¹⁾ of all textile cleaning accessories (e.g., cloths, mop heads) to be used to perform tasks related to the contract meet the technical requirements set out in the EU Ecolabel for textile products³.</p> <p>Product maintenance should be supported by the product technical data sheet that indicates product use and washing instructions.</p> <p>Verification:</p> <p>The tenderer must supply a list of the textile cleaning accessories that will be used to perform the contract and provide documentation proving their compliance with the requirements.</p> <p>Products that have been awarded the EU Ecolabel for textile products², and whose technical data sheet contains maintenance instructions, will be deemed to comply with</p>

the requirements.	the requirements.
Explanatory notes	
<p><u>Recommended values for (C%) – Use of microfiber products</u></p> <p>50-75 % of all textile cleaning accessories (e.g., cloths, mop heads) to be used to perform tasks related to the contract must be made of microfiber.</p>	
<p><u>Recommended values for (D%) – Use of ecolabelled cleaning accessories</u></p> <p>20-50 % of all textile cleaning accessories (e.g., cloths, mop heads) to be used to perform the contract must be compliant with the requirements set out in the EU Ecolabel for textiles.</p> <p><i>Note:</i> The contracting authority will have to specify how the percentage will be judged, either in number of textile accessories or value.</p> <p>Exceptions can be made if the authorities have special requirements for cleaning.</p> <p>Exemption from the requirements may be granted where it is demonstrated that there are no products available on the market.</p>	
<p>^{b)} C and D represent the threshold to be defined by the procurer (TS and AC). Recommendations for its value are given in explanatory notes.</p>	

Rationale for the proposed criteria

Environmental impacts related to cleaning tasks can be lowered not only through the use of ecolabelled cleaning products but also through the use of microfiber and ecolabelled accessories. Microfiber mops and clothes help reduce water and cleaning product use and have also been shown to have other benefits for cleaning companies and their staff. Ecolabelled textiles are certified to be durable and cause limited environmental impacts during their production.

Use of microfiber products

The benefits of using microfiber products in cleaning activities have been demonstrated through multiple studies (e.g. (EPA, 2002) (UNEP, 2008)). For example, it was found that the use of microfiber can result in a 95% reduction in water and chemical use, a 20% reduction in labour costs per day and a 60% reduction in cost over the lifetime of a mop (UNEP, 2008). The same study also showed that the use of microfiber mops might reduce costs associated with worker injuries as microfiber mops are much lighter than conventional mops and they require less cleaning solution, reducing the need to repeatedly lift heavy buckets of water. These findings have been corroborated during consultation with cleaning service providers.

While the benefits of using microfiber products are well known, new studies show that the laundering of microfibers can contribute to marine pollution. Indeed, microplastics are released during washing of synthetic fibre and current waste treatment systems have not been designed to catch them before they are released into the marine environment (Boucher & Friot, 2017). To limit this release, new projects have been put in place to find remedies although no widely-used solution is available on the market (e.g., Life, Mermaids project). Synthetic clothing releases a significant quantity of fibres when it is machine washed, although this depends largely upon the washing conditions and the material⁴. As such, it is proposed to include a

⁴ Microfiber release from clothes after washing: Hard facts, figures and promising solutions, MERMAIDS Consortium, Plastic Soup Foundation, Consiglio Nazionale delle Ricerche (IPCB and ISMAC), Polysistec, Leitai Technological Center

criterion on the high use of microfiber cleaning accessories in the EU GPP criteria and reassess this issue in a future revision. To ensure proper handling, textile accessories used to aid in cleaning service should be accompanied by the technical instructions that indicate the designated use and the most appropriate cleaning conditions.

No information regarding market availability and market penetration of microfiber cloths was found, with stakeholders providing varying opinions. In two cases, the majority (more than 90%) of cloths used by the cleaning company were microfiber cloths. In the third case, the company's use of microfiber cloths greatly depended on the client site but in some cases only microfiber cloths were used – the variability was due to contract length (there is a higher initial investment cost for good quality microfiber products and a company might prefer not to buy those for short contracts), area to be cleaned, etc. As for all criteria, the contracting authority should assess the cleaning needs and set thresholds based on those. In most cases, a very high use of microfiber (or ecolabelled) cleaning accessories should be feasible and is already existing practice.

Use of ecolabelled cleaning accessories

The use of cleaning accessories was identified as an environmental hotspot for cleaning services by ADEME (2010), and the use of ecolabelled cleaning accessories can provide a reliable way of lowering impacts associated with cleaning services.

As for the corresponding EU Ecolabel criteria, the scope of this criterion has undergone multiple changes during the course of the project – at first, two different criteria tackled cleaning accessories (one dealt with recycled content and the other with the use of more durable and reusable products). Following stakeholder feedback and a review of existing ecolabels for cleaning accessories, it is proposed to focus on textile cleaning accessories.

Currently there is still very limited market availability of ecolabelled cleaning accessories. The ECAT catalogue shows that there are 1,162 EU Ecolabel textile products available, but it is not possible to say how many of these are textiles that can be used in the scope of cleaning services. Further review of online company catalogues shows that while EU Ecolabel mops and cloths are available, they appear to be geographically limited. Cloths and mops can also be ecolabelled under the "Supplies for microfiber based cleaning" Nordic Swan product group. As of 2015, close to 400 licences had been awarded for that product group, with the majority being located in Finland (204) and Sweden (133). As such, depending on the location of the contracting authority, it might not be possible to request the use of ecolabelled cleaning accessories, or at least not a high amount.

For a better analysis of the cleaning accessories performance, it has been proposed to require the provision of the technical data sheet of textile materials (mops and clothes). The instruction provided by textile manufacturer would indicate the proper product handling such as i.e. washing instructions, in order to ensure log lifespan and limit emissions such as microplastics.

3.2.3. Environmental management measures and practices

Core criteria	Comprehensive criteria
TECHNICAL SPECIFICATIONS	
TS3 Environmental management measures and practices	

and Ocean Clean Wash, Position Paper, May 2017. https://www.plasticsoupfoundation.org/wp-content/uploads/2017/08/Position-Paper.Microfiber-release-from-clothes-after-washing.PSF_.pdf

(same for core and comprehensive criteria)

The tenderer must have operational procedures which will be applied during the contract's performance to:

1. monitor and record the indicators that must be specified in the tender. The minimum monitoring frequency required must be at least once every 4 months for a representative day and must include the following indicators:

- amount of cleaning products used (indicating whether they are ecolabelled and their dilution rate, if relevant)
- cleaning accessories used (type and whether they are reusable or not)
- amount of water used for cleaning tasks and location of water discharge
- power equipment used (indicating energy class) and duration of use
- amount of solid waste generated as part of cleaning tasks and its sorting.

2. minimise the environmental impacts associated with the indicators monitored and recorded in 1, towards a defined target. The procedures must especially consider the following aspects, seeking to:

- reduce the use of cleaning products as much as possible
- increase the use of ecolabelled cleaning products
- reduce the use of disposable cleaning accessories
- reduce water use
- improve the energy class of the power equipment used
- reduce the amount of solid waste generated as part of cleaning tasks and increase its sorting/recycling.

3. evaluate the implementation of points 1 and 2 by tracking any change in the indicators and the implementation of the procedures.

4. in case of deviations, implement the necessary actions to correct those deviations, and if possible, prevent them in the future.

5. produce an annual report on the changes of these indicators.

Verification:

The tenderer must provide a written description of the procedure for:

1. monitoring and recording the indicators mentioned in section 1) at least once every 2 months; there must also be a description of the measures to be deployed to minimise the environmental impacts of the indicators listed in section 1) and in accordance with the criteria listed in section 2),

2. ensuring the implementation of the operational procedures,

3. correcting the deviations found in the evaluation, and if possible prevent them in the future.

Environmental management systems certified against ISO 14001 or registered according to the EU eco-management and audit scheme (EMAS)⁵, and services holding the EU Ecolabel for indoor cleaning services, are deemed to comply if they cover the reporting requirement and the objective of minimising environmental impact.

AWARD CRITERIA

AC3 Environmental management systems

(same for core and comprehensive criteria)

Points will be awarded in proportion to the quality of the environmental management system that tenderers commit to put in place to perform the contract.

The following should be taken into account in the evaluation:

- a) identification of the significant direct and indirect environmental aspects (based on their impact on the environment) and identification of adequate measures to minimise their impact.
- b) a precise action programme ensuring that the identified measures are applied adequately to the services provided. The action programme must also establish targets for the environmental performance associated with the identified environmental aspects (e.g. reduction in the amount of cleaning products used).
- c) an internal evaluation carried out annually and allowing verification of the organisation's performances with the targets laid down in the action programme. Results from the evaluation are to be used by the organisation's management board to achieve continuous improvement through updates to the environmental action programme (targets and actions).
- d) third party evaluation by a conformity assessment body, i.e., a body accredited or licensed – in accordance with EU legislation or international standards - to carry out a conformity assessment of environmental management systems.
- e) the capacity to provide material or documentary proof, verified by a third party, confirming that there is no evidence of non-compliance with legal requirements relating to the environment.
- f) A commitment to continuously improve the environmental performance of identified environmental aspects, in particular through the periodic monitoring and publicly available reporting on the organisations' environmental performance. The environmental performance should be evaluated on the basis of generic and sector-specific indicators focusing on key environmental areas. Environment indicators should ensure that the information is relevant and comparable and allow the organisation to compare the organisation's environmental performance both over different reporting periods and with the environmental performance of other organisations or sectoral benchmarks.
- g) compulsory publication of an environmental statement at least every 4 years, validated

⁵ Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS), repealing Regulation (EC) No 761/2001 and Commission Decisions 2001/681/EC and 2006/193/EC (OJ L 342, 22.12.2009, p. 1).

by a third party environmental verifier, which includes a description of the following:

- the structure and activities of the organisation;
- the environmental policy and environmental management system;
- environmental aspects and impacts;
- the environmental programme, including actions and targets;
- the environmental performance and compliance with applicable legal obligations relating to the environment.

h) an active involvement of employees, including both the participation of, and the information provided to the individual employee and his representatives. This includes employees' involvement in the process to continually improve the organisation's environmental performance by engaging in all the steps of the environmental management system.

Verification:

The tenderer must provide a description of the measures that will be put in place to fulfil the requirements mentioned above.

Environmental management systems certified against standard ISO 14001 will be deemed to fulfil points a), b), c), and d). Environmental management systems registered under EMAS will be deemed to fulfil all the points listed above.

Rationale of the criterion

In order to ensure the good environmental performance of a contract, it is proposed to include criteria requiring companies to set up a basic environmental management system in order to monitor and establish that their environmental performance improves over time.

While third party certifications linked to environmental management systems exist (e.g. EMAS, ISO 14001) and they can be used as proof of compliance with some of the requirements set out in the EU GPP criteria, it is possible to fulfil the Technical Specifications without such a certification. Indeed, although there are cost saving opportunities and the return on investment period is reasonably short (DEFRA, 2012), a third-party certification can be a large monetary burden for some SMEs.

Overall, stakeholders were generally favourable to this criterion as the basic pillars of an environmental management system provide potential for environmental improvement at the level of a whole organisation. During consultation, it was highlighted that the criterion text should define in detail the requirements for the basics of an EMS, including which environmental impacts should be monitored. This has been taken into account in the current proposal, with requirements for the tenderer to put in place a recording system that reflects, periodically, a typical day during the contract. Moreover, points can be awarded to companies that have invested in third-party certifications with the Award Criteria, which are closely linked with the requirements set out in EMAS.

3.2.4. Consumable goods

Core criteria	Comprehensive criteria
TECHNICAL SPECIFICATION	
<i>(the following criteria are only applicable if the contracting authority requests the provision of consumable goods as part of the tender)</i>	
TS4.1 Hand soap	
<p>At least E%^{c)} of all hand soap, by volume at purchase, to be provided to the contracting authority by the tenderer as part of the contract must meet the technical requirements of the EU Ecolabel for rinse-off cosmetic products⁶.</p>	
Verification:	
<p>The tenderer must supply a list of hand soaps that will be provided to the contracting authority as part of the contract and provide documentation proving their compliance with the requirements. Products that have been awarded the EU Ecolabel for rinse-off cosmetic products⁴ will be deemed to comply with the requirements</p>	
TS4.2 Textile towels	
<p>At least F%^{c)} of all textile towel rolls, expressed in number of rolls, to be provided to the contracting authority by the tenderer as part of the contract must be compliant with the technical requirements of the EU Ecolabel for textile products².</p>	
Verification:	
<p>The tenderer must supply a list of hand soaps that will be provided to the contracting authority as part of the contract and provide documentation proving their compliance with the requirements. Products that have been awarded the EU Ecolabel for rinse-off cosmetic products⁴ will be deemed to comply with the requirements.</p>	
TS4.3 Tissue paper products	
<p>All tissue paper goods to be provided to the contracting authority by the tenderer as part of the contract must be compliant with the requirements of [<i>an EN ISO 14024 type I ecolabel to be determined by the contracting authority</i>]⁷</p>	
Verification:	
<p>The tenderer must supply a list of products that will be provided to the contracting authority as part of the contract and provide documentation proving their compliance with the requirements.</p>	
Explanatory notes	

⁶ OJ L 354, 11.12.2014, p. 47-61; COMMISSION DECISION of 9 December 2014 establishing the ecological criteria for the award of the EU Ecolabel for rinse-off cosmetic products. The criteria can be found here: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014D0893&from=EN>.

⁷ EU Ecolabel criteria for tissue paper products are currently under revision; the revised version is planned to be published by the end of 2018.

Recommended values for (E%) — hand soap

70 % of all hand soap, by volume at purchase, to be provided to the contracting authority by the tenderer as part of the contract must be compliant with the requirements of the EU Ecolabel for rinse-off cosmetic products 6.

Recommended values for (F%) — textile towel

50-75 % of all textile towel rolls, expressed in number of rolls, to be provided to the contracting authority by the tenderer as part of the contract must be compliant with the requirements of the EU Ecolabel for textile products².

Note: The contracting authority will have to specify how the percentage will be judged, e.g. by volume, value.

Exceptions can be made if the authorities have special requirements for cleaning.

Exemption from the requirements may be granted on the condition that there are no products available on the market.

² E and F represent the threshold to be defined by the procurer (TS and AC). Recommendations for its value are given in explanatory notes.

Rationale of the criterion

Consumable goods are not used by cleaning companies as part of their cleaning activities but, in some cases, they can be procured and supplied by these companies on behalf of their clients as part of tenders. The consumer goods covered under this criterion include the most commonly procured products (hand soap, textile towels and tissue paper products).

The requirements and thresholds set out by the contracting authorities should also reflect local market availability for the different types of products. For all tissue paper products market availability is generally good throughout the EU28, with nearly 6,000 products being present in the ECAT catalogue and many more available through ecolabels such as Nordic Swan and Blue Angel. For soaps, there are 649 products currently holding the EU Ecolabel for Soaps and Shampoos listed in ECAT (September 2016) with licensed products available in all EU28 countries but with the number of licenses varying significantly from country to country and it is impossible to know how many of those licenced products are hand soaps that could and would be used by applicants' clients. Textile hand towel rolls can be ecolabelled under the textiles product group for both the EU Ecolabel and Nordic Swan. Based on ECAT data (September 2015), there are 2501 textile products with an EU Ecolabel license, however, it is not possible to understand how many of these are textile towel rolls. However, for fabric towels there are other ecolabels that consider "fabric towels in towel dispensers" over the complete product lifecycle. Various aspects regarding, for instance, the textile roll specifications, minimum period of use before disposal/recycling, processing in laundries (detergents, water consumption) and logistics are taken into consideration in these labelling schemes (e.g. Blue Angel RAL UZ 77 "Fabric Towels Supplied in Towel Dispensers") (European Textile Services Association, 2016).

3.2.5. Energy efficiency of vacuum cleaners

Core criteria	Comprehensive criteria
AWARD CRITERIA	
<p>AC4. Energy efficiency of vacuum cleaners</p> <p><i>(same for core and comprehensive criteria)</i></p> <p>Points will be awarded proportionally to tenders in which a percentage of all vacuum cleaners to be used to perform tasks related to the contract meet, at the time of purchase, at least the following energy efficiency classes as laid down in Commission Delegated Regulation (EU) No 665/2013, at the time of purchase:</p> <ul style="list-style-type: none"> • Class A for vacuum cleaners bought before 01/09/2017 • Class A+ for vacuum cleaners bought after 01/09/2017 <p>Verification:</p> <p>The tenderer must supply a list of the vacuum cleaners that will be used to perform the contract and provide documentation proving their compliance with the requirements.</p>	

Rationale of the proposed criterion

Vacuum cleaners are the most frequently used pieces of energy-powered equipment in the cleaning service sector and energy consumption linked to vacuum cleaners has been identified as an environmental hotspot (ADEME, 2010; Consorcio Soligena, 2011). Depending on the cleaning situation, the energy consumption of floor cleaning, to which vacuum cleaners are a major contributor, can account for up to 52% of the total energy consumption for cleaning services.

The current EU GPP criterion proposal is closely related to the optional criterion on vacuum cleaners from the EU Ecolabel. During the criteria development process, several stakeholders expressed concerns regarding the technical aspects of the criterion. Indeed, it was suggested that the criterion should encourage the use of more efficient vacuum cleaners and that energy consumption alone is not an effective measurement unit of the efficiency of this type of machine. It was stated that dust pick-up performance of vacuum cleaners plays a major role in the overall energy consumption as a vacuum cleaner with poor dust pick-up performance would require additional time to clean the same area compared to one with efficient dust pick-up, leading to higher energy consumption. As it was developed, the cleaning performance (dust pick up) is a parameter that is taken into account in the Commission Delegated Regulation (EU) No 665/2013 of 3 May 2013 (Annex III) and contributes to the overall letter score indicated on the energy label.

As professional cleaning product providers tend to use commercial vacuum cleaners, market research was carried out on the energy classes available for this type of machine. It was found that energy class A vacuum cleaners are readily available from two of the largest producers although no data was available on the level of their use by cleaning companies. Examples of commercial vacuum cleaners available on the market can be found in the EU Ecolabel Technical Report (JRC IPTS, 2017). Moreover, as of September 2017, new energy classes were introduced in order to push toward more efficient vacuum cleaners on the market and this is reflected in

the criteria. In order not to push companies to buy new vacuum cleaners with the new energy class rating, class A is still acceptable for vacuum cleaners bought before September 2017.

3.3. Contract performance clauses (CPC)

3.3.1. Cleaning products and their uses

Core criteria	Comprehensive criteria
CONTRACT PERFORMANCE CLAUSE	
<p>CPC1.1 Cleaning products and accessories used</p> <p>(same for core and comprehensive criteria)</p> <p>For the duration of the contract, the contractor must document and report the following aspects at least twice a year to the contracting authority:</p> <ol style="list-style-type: none"> 1. Type, dilution rate and volume at purchase of cleaning products used to deliver the cleaning services, indicating which products meet the requirements set in TS1.1, TS1.2, AC1.1 or AC1.2, as appropriate. 2. Type and quantity of cleaning accessories used to deliver the cleaning services, indicating which products meet the requirements set in TS2.1, TS2.2, AC2.1 or AC2.2, as appropriate. <p>The contracting authority may set rules for applying penalties for non-compliance.</p>	
<p>CPC1.2 Cleaning product dosing</p> <p>(same for core and comprehensive criteria)</p> <p>The contractor must make available to the cleaning staff the appropriate dosing and diluting apparatus for the cleaning products used (e.g. automatic dispensers, measuring beakers/caps, hand pumps, sprays) and make available the corresponding instructions for correct dosing and diluting, either at the cleaning site or at the contractor’s premises, as appropriate.</p> <p>The contracting authority may set rules for applying penalties for non-compliance.</p>	

Rationale of the proposed criterion

This contract performance clause covers three key elements of cleaning services: cleaning products, accessories and dosing. The clause only concerns the maintenance and provision documentation related to these three elements in order to ensure that it is possible to monitor on-going compliance with criteria proposed in the Selection Criteria and Technical Specifications. The current version of the EU GPP criteria requires, as core and comprehensive criteria, that twice a year a list of the cleaning products used is provided indicating the name and quantity of the cleaning products used. It is proposed to extend this criterion to explicitly cover accessories such as cloths and mops and extend it to include the provision of dosing apparatus (automatic or not).

The significance of the environmental impact associated to cleaning products and accessories are discussed in Section 3.2.1 of this report.

The importance of correct cleaning product dosing is linked to the fact that overdosing can greatly increase the environmental impacts linked to cleaning services as it leads to a greater chemical load for each task. The aim of this CPC is to ensure that all staff have access to apparatus, whether automatic dispensers or much simpler systems such as dosing beakers or even caps on products and it is complemented by a requirement related to correct dosing to be covered in the CPC on Staff Training. Moreover, the impact of the use of cleaning products is further considered in the requirements on the setting up of an environmental management

system, as it is recommended to monitor the amount of chemicals used and aim to reduce it over time.

3.3.2 Staff training

Core criteria	Comprehensive criteria
CONTRACT PERFORMANCE CLAUSE	
<p>CPC2 Staff training</p> <p><i>(same for core and comprehensive criteria)</i></p> <p>For the duration of the contract, the contractor must have in place an internal staff training programme or provide staff with the means to participate in an external training programme that covers the topics listed below, where they are pertinent to the tasks performed by the staff member, as part of the contract:</p> <p><u>Cleaning products:</u></p> <ul style="list-style-type: none"> – Staff must be trained to use the correct product dosage for each cleaning task. – Staff must be trained to use the correct dilution rate for undiluted cleaning products and to use the appropriate dosage apparatus. – Staff must be trained in how to store cleaning products appropriately. – The training must include minimising the range of cleaning products used in order to minimise the risk of overusing and misusing cleaning products. <p><u>Energy saving:</u></p> <ul style="list-style-type: none"> – Staff must be trained to use unheated water for diluting products, unless otherwise specified by the product manufacturer. – Where appropriate, staff must be trained to use the appropriate cycle and temperature for both industrial and household washing machines. – Where appropriate, staff must be trained to turn off lights when they have completed their tasks. <p><u>Water saving:</u></p> <ul style="list-style-type: none"> – Staff must be trained to use microfiber products, where appropriate, to minimise the use of water and cleaning products. <p><u>Waste:</u></p> <ul style="list-style-type: none"> – Staff must be trained to use durable and reusable cleaning accessories and minimise the use of single use cleaning supplies (e.g. gloves), where this does not compromise staff safety and hygiene requirements. – Staff must be trained to correctly discard waste water. – Staff must receive specific training for waste sorting of any waste generated during cleaning activities. Training must include solid waste management both at the company’s premises and at the cleaning sites. <p><u>Health and safety:</u></p> <ul style="list-style-type: none"> – Staff must be informed about health, safety and environmental issues related to cleaning tasks and encouraged to adopt best practices. This must include information on: <ul style="list-style-type: none"> • safety data sheets and handling of chemicals; 	

- ergonomics and applicable national occupational health and safety legislation;
- removal, cleaning and storage of reusable gloves (if applicable); and
- road safety and eco-driving (applicable to applicants having their own staff responsible for driving within the cleaning service provision).

The contractor must ensure that all new staff (permanent and temporary staff) performing cleaning tasks as part of the contract receive adequate training within 6 weeks of starting employment. All staff performing tasks as part of the contract must be given an update on all the aspects outlined in the criterion at least once a year. Although this update does not have to be a repeat of the initial training session, it should cover all of the environmental issues listed and ensure that relevant staff are fully aware of their responsibilities.

The contractor must report the training provided to the contractor authority.

The contracting authority may set rules for applying penalties for non-compliance.

Explanatory notes

Recommended values

For permanent staff and temporary staff with contracts exceeding 1 year: 16h of initial training, 8h of training as part of annual updates.

For temporary staff with contracts that do not exceed 1 year: 8h of initial training.

The duration of the training can be adjusted to the needs and conditions of the tenders.

Rationale of the criterion

Cleaning company staff plays an important role in the delivery of cleaning service as their practices influence the final environmental footprint of the contract. This CPC aims to ensure that cleaning staff are trained to deliver efficient and effective cleaning services in order to benefit to the maximum from the environmentally preferable products and practices.

The current EU GPP criteria cover Staff Training as a Contract Performance Clause, with a list of topics that should be covered. In this EU GPP criteria proposal, Staff Training is covered as Selection Criteria, to ensure that the cleaning service provider has the means of providing the training, and a Contract Performance Clause, to ensure that adequate records of training received are kept throughout the contract delivery. Good staff training is fundamental to the delivery of sustainable cleaning services. According to stakeholder information and life cycle cost considerations (see Section 0 of this report), the initial investment cost for staff training is not significant in the context of the life cycle cost of cleaning services. Including staff training as a selection criterion will allow procurers to assess if tenderers can ensure that their staff have the appropriate skills to deliver more environmentally conscious cleaning services.

The benefits of the provision of good staff training is multi-faceted: it ensures that cleaning services are delivered in an environmental friendly and efficient manner; it reduces consumption of cleaning products and natural resources, such as energy and water; and it reduces burdens on human resources, leading to direct and substantial cost savings.

As different companies have different policies on training and there are different legislations throughout the EU28, the proposed criterion text has been developed to cover the basics of staff training that lead to environmental gains effectively, while still taking into consideration the differences in practices (e.g. an interviewee responded that government-funded training is available for cleaning staff while another stated that no such options were available in their country).

The areas proposed to be covered in the training requirements include the steps that can be taken to lower the environmental impact of cleaning and that complement the other requirements set out in these EU GPP criteria. This includes the correct handling of cleaning products and cleaning equipment, appropriate disposal of liquid and solid waste and basic health and safety issues. Throughout the development process, stakeholders have provided feedback on the topics to be covered and these have been updated with more details.

Moreover, stakeholders asked for precisions to be included on the schedule of the training. It is proposed to set requirements that all new staff, permanent and temporary, should be trained and the training must take place within six weeks of hiring, with a recommended duration of 16 hours. Moreover, an annual training update should also be provided, with a recommended duration of 8 hours. The timeline is in line with that proposed in the EU Ecolabel for Indoor Cleaning Services.

3.3.3 Environmental management measures and procedures

Core criteria	Comprehensive criteria
CONTRACT PERFORMANCE CLAUSE	
<p>CPC3 Environmental management measures and practices</p> <p><i>(same for core and comprehensive criteria)</i></p> <p>The contractor must document and report, over the contract duration:</p> <ul style="list-style-type: none"> - the results of the monitoring of indicators and - the results of the evaluation and the correction and prevention actions, where applicable, according to the written procedures provided for to verify the TS3. <p>These reports must be made available to the contracting authority for verification purposes.</p> <p>The contracting authority may set rules for applying penalties for non-compliance.</p>	

Rationale of the proposed criterion

This CPC follows the Technical Specification and Award Criterion listed in Section 0, which require a certain number of indicators to be put in place in order to monitor the environmental performance of the contractor.

3.3.4. Consumable goods

Core criteria	Comprehensive criteria
CONTRACT PERFORMANCE CLAUSE	
<p><i>(the following criteria are only applicable if the contracting authority requests the provision of consumable goods as part of the tender)</i></p> <p>CPC4 Consumable goods</p> <p><i>(same for core and comprehensive criteria)</i></p> <p>For the duration of the contract, the contractor must document and report at least twice a year to the contracting authority the type and quantity of consumable goods provided as part of TS4.1, TS4.2 and TS4.3, as applicable.</p>	

The contracting authority may set rules for applying penalties for non-compliance.

Rationale of the proposed criterion

This CPC follows the Technical Specification listed in Section 0, which set out requirements for different types of consumable goods a contracting authority might want to be provided as part of a tender.

2.3.5. Purchase of new vacuum cleaners

Core criteria	Comprehensive criteria
CONTRACT PERFORMANCE CLAUSE	
CPC5 Purchase of new vacuum cleaners <i>(same for core and comprehensive criteria)</i> All new vacuum cleaners purchased by the contractor to perform tasks related to the contract must meet class A+ or higher on energy efficiency as defined in Commission Delegated Regulation (EU) No 665/2013, at the time of purchase. The contractor must report the purchase of new vacuum cleaners to the contracting authority. The contracting authority may set rules for applying penalties for non-compliance.	

Rationale of the proposed criterion

This CPC follows the Award Criterion listed in Section 0, which sets out requirements for vacuum cleaners already owned by the contractor and that will be used as part of the contract. The contract authority should check the latest updates to Commission Delegated Regulation (EU) No 665/2013, in order to list the highest energy class for vacuum cleaners available on the market at the time of writing a tender.

4. Life Cycle Costs considerations (LCC)

4.1. Introduction to the Life cycle cost

Life cycle cost (LCC) is a method for assessing the total costs of the product group or service under study. It takes into account all cost of purchasing, cleaning operations and disposing of any generated waste. The purpose of the LCC is to estimate the overall costs of project alternatives and to select the option that ensures the purchase or the service or both that will provide the lowest overall costs consistent with its quality and function. The LCC should be performed early in the purchase process.

LCC use in GPP procedures can help determine the lowest costs for evaluating offers and, in fact, LCA can help authorities consider not only the acquisition costs of a product or service (e.g. raw material and manufacturing costs), but also other costs that usually have to be identified and calculated by the purchaser (e.g. maintenance costs, running costs, disposal and recycling costs, etc.). These kinds of costs should be added to the selling price to have a comprehensive estimation of the LCC of a product or service.

In addition, LCC considers the environmental externalities of a product or a service during its life cycle, when it is possible to determine a monetary value. Directive 2014/24/EU on Public procurement identifies the costs to be considered in an economic analysis of the purchase to be performed. Some of these costs are:

- " costs, borne by the contracting authority or other users, such as:
 - i. costs relating to the acquisition
 - ii. costs of use, such as consumption of energy and other resources,
 - iii. maintenance costs
 - iv. end of life costs, such as collection and recycling costs
- costs imputed to environmental externalities linked to the product, service or works during its life cycle provided their monetary value can be determined and verified; such costs may include the cost of emission of GHGs and of other pollutant emissions and other climate change mitigation costs"

The directive indicates that both direct and indirect costs shall be included in LCC calculations; however, this can raise some methodological problems since direct costs can be calculated by applying LCC from the user's perspective, whereas externalities affect the entire world and can only be assessed if LCC is applied from the perspective of society as a whole (e.g. costs induced by the consumption of the product related to ecosystem conservation, to human health, to social impacts). Although the directive provides the definition of LCC and a list of cost items to be included, it does not provide a clear explanation of how to do it (no methods are mentioned). Several methods have been developed to account for internal and external costs, but all of them include methodological problems, uncertainties and heterogeneities in the monetisation factors used, which have been identified as the main barriers to its application by public authorities.

4.2. Introduction to life cycle costs (LCC)

The most common cost comparisons are usually performed based on purchase price alone. However, a cost analysis performed along the supply chain allows a more comprehensive overview of all costs needed to provide out a service, such as indoor cleaning. The use of LCC can provide a more thorough view of the costs of a service through its life cycle stages, including, for example not only the cost of supplies, accessories and machinery but also the cost

of running the service (e.g. electricity and water used during cleaning operations) and labour costs.

Public authorities can provide the industry with real incentives for developing green technologies through green procurement. In some service sectors, the impact can be particularly significant, as public purchasers command a large share of the market (e.g. energy efficient buildings, public transport, facilities management). If the whole life costs of a contract are considered, green public procurement can save money while also having fewer impacts on the environment. By purchasing wisely, one can save materials and energy, reduce waste and pollution, and encourage sustainable patterns of behaviour. Figure 1 shows an example where the cost along the life cycle stages of a conventional product are compared with an environmentally preferable product.

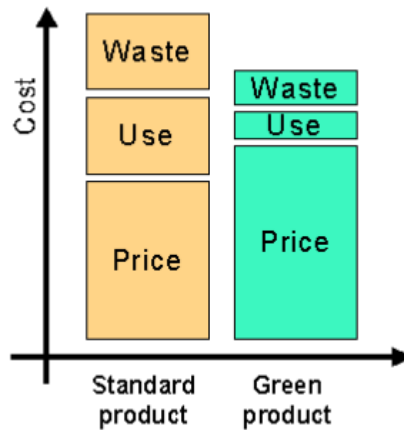


Figure 1. An example of LCC result, showing the influence that use and disposal costs could have on the life cycle cost of a product of a service (EC, 2008)

4.3. Review of LCCs studies associated with indoor cleaning services

4.3.1. Relevant studies

The following review focused on two key LCC studies identified that present comprehensive information on cleaning services performed by Öko-Institut and ICLEI (2007) and PWC et al. (2009).

The study from Öko-Institut and ICLEI (2007) investigated the cost impact of cleaning products in the context of the life cycle of cleaning services. The scope of the study is summarised in Table 5.

Table 5. Scope of study from Öko-Institut and ICLEI (2007)

Geography	Three member states of the EU: Sweden, Germany and Spain
Type of cleaning	Office, Bathroom and Window cleaning
Costs included	<ul style="list-style-type: none"> Wages cleaning staff Social insurance Other labour costs Wages other staff Cleaning products Machines Risk and profits Other costs

Life Cycle stages considered	Purchase and installation
	Costs during the use phase of the products
	Disposal costs

The results obtained are presented in the Table 6, Table 7 and Table 8. They illustrate the cleaning service costs, respectively, for an office space, sanitary facility and for windows cleaning in three Members States (Germany, Spain and Sweden). The results highlight the life cycle cost differences between conventional and ecolabelled products; this was the only variable in this analysis as the other costs were assumed to be constant.

Table 6 shows that green products are cheaper than conventional products in Sweden for office cleaning but are more expensive in Germany and Spain. Overall, the total impact of the price difference was observed to be relatively low, resulting in 1-2% changes in the overall life cycle cost of office cleaning in these three countries. No additional information was provided for the difference in prices.

Table 6. The life cycle cost impact (cost in EURO €) of using green cleaning products for cleaning a defined office space in Germany, Sweden and Spain Öko-Institut and ICLEI (2007)

	Germany			Sweden			Spain		
	Non-green version	Green version	Difference	Non-green version	Green version	Difference	Non-green version	Green version	Difference
Wages cleaning staff	231	231	0%	312	312	0%	197	197	0%
Social insurance	55	55	0%	101	101	0%	67	67	0%
Other labour costs	75	75	0%	97	97	0%	35	35	0%
Wages other staff	22	22	0%	34	34	0%	2	2	0%
Cleaning products	7	10	39%	25	18	-29%	11	18	67%
Machines	5	5	0%	28	28	0%	n/a	n/a	n/a
Other costs	9	9	0%	25	25	0%	31	31	0%
Risk and profits	12	12	0%	19	19	0%	24	24	0%
SUM	416	416	1%	640	633	-1%	366	373	2%

Table 7 shows that green products are only cheaper than conventional products in Sweden for sanitary facility cleaning, but more expensive in Germany and Spain. However, the total impact of the price difference is also relatively low, resulting in 2-3% changes in the overall life cycle cost of sanitary cleaning for the three countries.

Table 7. The life cycle cost impact (cost in EURO €) of using green cleaning products for cleaning a defined sanitary facility in Germany, Sweden and Spain Öko-Institut and ICLEI (2007)

	Germany			Sweden			Spain		
	Non-green version	Green version	Difference	Non-green version	Green version	Difference	Non-green version	Green version	Difference
Wages cleaning staff	647	647	0%	873	873	0%	552	552	0%

Social insurance	153	153	0%	283	283	0%	187	187	0%
Other labour costs	209	209	0%	271	271	0%	99	99	0%
Wages other staff	63	63	0%	96	96	0%	5	5	0%
Cleaning products	21	51	148%	70	9	-87%	30	45	53%
Machines	14	14	0%	79	79	0%	n/a	n/a	n/a
Other costs	27	27	0%	70	70	0%	87	87	0%
Risk and profits	32	32	0%	52	52	0%	67	67	0%
SUM	1165	1196	3%	1794	1734	-3%	1027	1043	2%

Table 8 shows that green products are cheaper than conventional products in Sweden and Germany for window cleaning, but more expensive in Spain. However the total impact of the price difference is also relatively low, resulting in 1-3% changes in the overall life cycle cost of windows cleaning for these three countries.

Table 8. The life cycle cost impact (cost in EURO €) of using green cleaning products for cleaning a defined number of windows in Germany, Sweden and Spain (Öko-Institut and ICLEI, 2007)

	Germany			Sweden			Spain		
	Non-green version	Green version	Difference	Non-green version	Green version	Difference	Non-green version	Green version	Difference
Wages cleaning staff	24	24	0%	33	33	0%	21	21	0%
Social insurance	6	6	0%	11	11	0%	7	7	0%
Other labour costs	8	8	0%	10	10	0%	4	4	0%
Wages other staff	2	2	0%	4	4	0%	0	0	0%
Cleaning products	0.8	0.5	-36%	3	1	-48%	1	2	94%
Machines	1	1	0%	3	3	0%	n/a	n/a	n/a
Other costs	1	1	0%	3	3	0%	3	3	0%
Risk and profits	1	1	0%	2	2	0%	3	3	0%
SUM	44	43	-1%	67	66	-2%	38	39	3%

Preliminary Findings and Conclusions:

- Staff wages represent the largest share of the life cycle costs, accounting for 82-92% of the total life cycle costs of cleaning services (see Table 6, Table 7 and Table 8). The percentage dedicated to staff wages is very similar among the different types of cleaning services (i.e. office cleaning (floor and surface cleaning), sanitary cleaning and window cleaning). A report by EFCI argues that a decrease in contract prices quickly translates into heavy pressure on employment, as labour costs in this sector amount to more than 75% of the turnover (EFCI, 2012).

- The differences in costs between the use conventional and green cleaning services were found to be insignificant when considering the overall life cycle costs. The cost of cleaning products are similar among the three different types of cleaning activities and the difference in the cost between the non-green and green cleaning products range from 1-3% (in absolute values).

The relative costs of green cleaning products vary significantly between countries: green cleaning products are always significantly cheaper than conventional products in Sweden but they are usually more expensive in Germany and Spain, as illustrated in Table 9 (data extracted from the previous tables).

Table 9. Relative differences of the costs of green cleaning products compare to conventional products (Öko-Institut and ICLEI, 2007)

	Germany	Sweden	Spain
Office cleaning	+39%	-29%	+67%
Sanitary cleaning	+148%	-87%	+53%
Window cleaning	-36%	-48%	+94%

Moreover, it should be noted that the authors of the study (Öko-Institut and ICLEI, 2007) highlighted multiple limitations for the work performed. For example, different products are used in different quantities to clean the same surface and the dosage used depends on the soiling of the surface to be cleaned. The quantities of products used (and therefore the costs associated) were calculated based on a mean dosage, as indicated by the product manufacturer.

The study from PWC et al. (2009) built upon and extended the study from Öko-Institut et al. (2007), see Table 10. It supported the LCC analysis results for cleaning services, and added that green cleaning products increased the total life cycle cleaning service cost by 1%, while the use of microfiber products decreased this cost by 9%. Thus, using green products and microfiber products resulted in a net reduction cost of 8% for green cleaning services when compared to conventional cleaning services.

Table 10. Scope of study (PWC et al., 2009)

Geography	EU 27 – focus on seven EU member states : Austria, Denmark, Finland, Germany, Netherlands, Sweden and UK
Type of cleaning	Cleaning service (based on Office cleaning in Germany Öko-Institut and ICLEI . (2007),
Costs included	Same as Öko-Institut and ICLEI . (2007),
Life Cycle stages considered	Purchase and installation Costs during the use phase of the products Disposal costs

Table 11 shows the LCC structures summarised to a practical level for the seven EU member states. Results show that staff costs dominate life cycle costs for cleaning services and the costs of cleaning products are negligible across the seven EU member states under consideration.

Table 11. Cost structures for cleaning services (PWC et al., 2009)

LCC	LCC cost structure
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relevant costs	Baseline (Germany)	Austria	Denmark	Finland	Germany	Netherlands	Sweden	UK
Labour costs	92%	92%	91%	93%	92%	93%	93%	93%
Cleaning products	2%	2%	2%	2%	2%	1%	2%	1%
Other costs	6%	6%	7%	6%	6%	5%	6%	5%

Preliminary Findings and Conclusions:

- The use of green cleaning products with no hazardous substances led to a financial impact per square meter cleaned of +1%. Therefore, despite the fact green cleaning products, which are approximately 40% more expensive than the non-green version, their contribution to life cycle costs for cleaning services is negligible.
- The use of microfiber cleaning accessories (e.g. mops and cloths) was found to lead to an overall cost reduction of about 9% of the total cost for cleaning services, due to decreased labour costs. This cost reduction is explained in the report by the fact that the use of microfiber cloths means less manual labour for the staff and a higher hourly performance rate (e.g. due to the filling or carrying of buckets with water and cleaning products, changing water). Furthermore, it means healthier working conditions for staff (fewer hazardous substances inhaled), leading to fewer working hours per square meter and fewer absences due to illness and physical problems.
- Staff training is a common practice in the studied countries and the study assumes that it does not contribute to any significant additional cost.

3.3.2. Other studies

Two other studies have been identified linked to LCC and cleaning services, one performed by the ICA group (2003) and the other by Campbell (2011). These studies are not LCC analyses but rather provide supporting data or background information concerning life cycle costs through the provision of detailed cost structure data for cleaning service companies.

The ICA group study (ICA Group, 2003) shows a business plan with a five year forecast of income and costs of an American co-operative cleaning company, no longer in existence at the time of publication. The data is comprehensive on the types of costs incurred by a cleaning company but the authors chose not to provide interpretations or conclusions on this data (Table 12).

Table 12. Scope of study (ICA Group, 2003)

Geography	Washington DC, USA
Type of cleaning	Commercial cleaning
Study	Feasibility for establishment of a cleaning co-operative

Costs included	Total Gross Sales Cost of Goods Sold Direct Labor Benefits Direct Materials Expendable Supplies Depreciation Equipment Exp. (non-depr.) Vehicle Exp. (non-depr.) Operating Expenses Administrative Salaries Administrative Benefits Rent Depreciation Office Supplies Printing & Copying Professional Serv.--accounting Insurance Postage Marketing Training Utilities Telephone/Communications Waste Disposal Payroll Service Miscellaneous
Life Cycle	Purchase and installation Costs during the use phase of the products Disposal costs

The results made available on the costs are more detailed than all the other studies, but do not compare different types of conventional and green cleaning services. It is also not clear whether this cleaning service provider was a conventional or green provider, however, it was assumed that this data is for an American conventional cleaning service provider (Table 13).

Table 13. Detailed 5 year income statement (ICA Group, 2003)

Income Statement--5 Year Summary	Year 1	Year 2	Year 3	Year 4	Year 5
Sales					
Office	262,500	551,250	868,219	1,185,119	1,493,249
Total Gross Sales	262,500	551,250	868,219	1,185,119	1,493,249
Cost of Goods Sold					
Direct Labor	153,915	323,222	507,977	691,920	870,003
Benefits	26,367	55,370	87,041	118,588	149,145
Total Direct Labor Cost	180,282	378,592	595,018	810,508	1,019,148
Direct Materials	13,125	27,563	43,411	59,256	74,662
Expendable Supplies	2,625	5,513	8,682	11,851	14,932
Depreciation	3,044	3,130	3,130	2,122	2,036
Equipment Exp. (non-depr.)	3,938	8,269	13,023	17,777	22,399
Vehicle Exp. (non-depr.)	3,938	8,269	13,023	17,777	22,399
Total COGS	206,951	431,334	676,288	919,291	1,155,577
Gross Profit	55,549	119,916	191,931	265,828	337,673
Operating Expenses					
Administrative Salaries	72,500	110,725	132,613	174,836	219,474
Administrative Benefits	12,977	21,160	25,788	34,800	44,311

Rent	10,000	10,300	10,609	10,927	11,255
Depreciation	2,400	2,767	3,133	2,500	2,867
Office Supplies	300	309	318	328	338
Printing & Copying	120	124	127	131	135
Professional Serv.--accounting	2,600	2,678	2,758	2,841	2,926
Insurance	600	618	637	656	675
Postage	300	309	318	328	338
Marketing	12,000	12,360	12,731	13,113	13,506
Training	2,264	1,944	1,626	1,160	1,035
Utilities	960	989	1,018	1,049	1,080
Telephone/Communications	1,200	1,236	1,273	1,311	1,351
Waste Disposal	100	103	106	109	113
Payroll Service	2,704	5,679	8,925	12,158	15,287
Miscellaneous	656	1,378	2,171	2,963	3,733
Total Operating Expenses	121,681	172,678	204,153	259,209	318,424
Operating Profit	-66,132	-52,762	-12,222	6,619	19,248
Total Other Income	6,344	5,758	5,786	481	604
Total Other Expenses	0	0	3,747	7,650	11,276
Profit Before Tax	-59,788	-47,004	-10,183	-551	8,576
Total Taxes	0	0	0	0	0
Net Income	-59,788	-47,004	-10,183	-551	8,576
Average FTE Workers	11.8	23.6	35.4	46	55.2

The study from Campbell (2011) provides case studies of cleaning cost savings in American universities linked to an “engineered cleaning system” over janitorial cleaning, which was unchanged for 50 years. The study supports the main message that cleaning services using up-to-date methods and products are significantly more economically advantageous than their outdated counterparts. Table 14 presents the scope of the study.

Table 14. Scope of study (Campbell, 2011)

Geography	USA
Type of cleaning	University cleaning
Costs included	N/A – cost savings only
Life Cycle	Purchase and installation, costs during the use phase of the products, and disposal costs

4.3.3. Concluding remarks from the LCC literature review

The LCC studies and other studies reviewed offer an overview of the costs incurred by cleaning service providers in Europe and elsewhere, including a comparison of conventional and green providers for cleaning services so that differences and the resulting barriers or motivations can be identified. The following conclusions can be drawn from this review:

Limited data availability and granularity - LCC data is scarce and no detailed data sources were identified at the provider level for this analysis. The LCC data identified was nationally aggregated data from three and seven EU member states. None of the studies reviewed show a detailed LCC analysis for a cleaning service provider, but provide a good insight on the cost structure for the sector. The national data provided allowed for a comparison between conventional and green versions of cleaning services. The variables considered by these studies are limited to cleaning products and some accessories (e.g. mops and cloths). Other aspects of

cleaning services are regarded as constants (e.g. wages and cleaning power equipment) and do not vary between conventional and green versions. No publically available studies that provide a more comprehensive coverage of different types of green interventions were identified. One source did give detailed cost data for a cleaning service provider, but this did not include a green-vs-conventional comparison and was based in the USA. In general, data sourcing for an LCC analysis is difficult to obtain due to the high confidentiality of financial data for individual cleaning service providers.

Staff wages is the most important cost – Labour costs represent the largest share of the considered costs for cleaning services. This has two significant implications for green products and practices: 1) any changes to non-wage costs are likely to be insignificant in the context of cleaning services and 2) green products and practices that can reduce staff cost (e.g. by reducing cleaning time) are likely to lead to the biggest cost benefits.

Cost of “green” cleaning products is small in the overall sector cost structure – The reviewed sources demonstrated that green cleaning services are economically advantageous. With staff costs being the single largest element of expense, investing in green cleaning products and practices are not likely to bring a substantial cost increase.

Absolute costs of green product vary between countries – The Öko-Institut and ICLEI (2007) show that the price green cleaning products does not have to be more expensive than conventional products, although the price varies from country to country. Stakeholders also highlighted that the price and availability of green products (including cleaning products and accessories) differs substantially from country to country. The variation between countries may be large and generalisations about their cost and availability should not be made.

The benefits of using “green” cleaning equipment or practices are multi-faceted – The PWC et al. (2009) study on microfiber products illustrates the complexity of conducting a comprehensive LCC study for cleaning services: the cost of microfiber cloths is higher than that of conventional cotton cloths, but their use greatly improves cleaning efficiency by reducing cleaning time, cleaning product use and negative health effects on the staff and may lead to an important cost reduction. Other types of green cleaning practices, such as providing better staff training, are likely to have similar multi-faceted benefits and lead to significant cost reductions.

4.4. Cost implications for the criteria set: an overview

The LCC studies reviewed do not cover all the EU GPP criteria proposed. The life cycle cost implication of the proposed EU GPP criteria are reviewed in this section. The EU GPP criteria are, in comparison to the LCC, very specific and reported at a much more detailed level of activities than the LCC studies reviewed in Section 0.

The proposed revised EU GPP criteria consider the following criteria areas covering the main hotspots along the life cycle stages of the cleaning service provision:

Cleaning products, supplies and accessories (e.g. use of cleaning products with lower environmental impact)

Cleaning operations/power equipment (e.g. vacuum cleaners)

Operational management (e.g. environmental management measures and practices)

The LCC studies reviewed, of which (PWC et al., 2009) is one of the most relevant examples, provide the following breakdown of the costs: Staff (92%), Cleaning products (2%) and Other (6%). This is calculated based in the annual cost data for cleaning services in Germany by using results of a market research in Germany and for a service that does not comply with the EU GPP criteria.

The aim of this section is to identify representative evidence to understand whether there is a cost difference between green and non-green products/practices covered by the proposed EU GPP criteria. This is to provide information on the cost associated to the set of EU GPP criteria proposed.

4.4.1. Staff training

This element includes aspects such as a reduction in the consumption of cleaning products, for example through use of correct dosage as considered by Öko-Institut and ICLEI (2007). The study from the ICA group (2003) gave training an average cost across 5 years of 1% of the total LCC cost – this data is assumed to be for a conventional USA cleaning service start-up. The scope of the staff training criterion in the EU GPP covers a lot more than the appropriate use of cleaning products and correct dosage, namely, the proper use of cleaning accessories, cleaning techniques, energy saving, water saving, and waste management.

The full life cycle cost benefits of staff training is very complex as it covers many different areas of the operation and delivery of cleaning services. Financial data on staff training investment and return on investment is scarce. PWC *et al.* (2009) suggests that the training of employees can be regarded as common practice in the cleaning services industry in the seven European countries studied. The study focuses on the use of green cleaning products and it found that there is no additional cost to train staff in the use of green products compared to the cost to train staff in the use of non-green cleaning. Stakeholder consultation yielded that costs can go up to about €125.000 a year to train all the staff of a medium-sized company. However, no indications could be given as to any resulting savings related to lower product use, etc. Overall, the cost benefits of staff training is likely to be significant, as it can fundamentally improve the quality and efficiency of the delivery of the cleaning services but, for the reasons stated above, it is very difficult to quantify these benefits.

4.4.2. Environmental management measures and practices

The implementation of a basic environmental management system is a common requirement for good environmental management, to improve resource efficiency and reduce environmental impacts. According to PWC *et al.* (2009) cleaning service providers with an existing environmental component in their purchasing policy achieved a 51% higher attainment of a core or comprehensive level of GPP, compared to other organisations. Moreover, if the company puts in place a comprehensive plan to reduce cleaning product use, energy use, etc., regularly, savings can add up over time.

Thormark (2006) life cycle analysis of building shows that the operational energy use accounts for 85–95% of the total energy consumption of a building (Thormark, 2006). The operational energy requirements of a building can be considered as the energy that is used to maintain the environment inside that building, namely through lighting, HVAC (heating, ventilation and air conditioning), and sanitary hot water systems. Operational energy requirements can be reduced by shutting down these systems when they are not required. This means that, to the extent that it is practical and feasible, cleaning operations should not require that systems such as lighting and HVAC are kept "on" for a time period superior to the one required by the regular building functional operations. In other words, to the extent possible, lighting and HVAC systems should not be "on" specifically to allow for cleaning operations. This could possibly be achieved by adapting working hours of cleaning staff with regards to HVAC systems shut-off times and natural lighting hours, provided that it does not conflict with the regular operation of the building's services.

4.4.3 Use of ecolabelled cleaning products

The Öko-Institut and ICLEI (2007) and the PWC *et al.* (2009) found that green products can be more expensive than non-green products. The Öko-Institut and ICLEI (2007) found a +39% difference for green cleaning products in Germany; however, this can vary significantly among countries as the same study found that green cleaning products in Sweden are significantly cheaper than conventional products for all cleaning scenarios (Table 6, Table 7 and Table 8, Section 0).

Considering the cost of cleaning products in the context of life cycle costs of cleaning services, the expenditure on cleaning products, in the studies reviewed, only accounts for 1-3% of the

total cost structure for cleaning services. Therefore changing from conventional to green products would not result in significant costs for the cleaning service provider.

4.4.5. Use of concentrated undiluted cleaning products

Undiluted cleaning products are cheaper than ready-to-use products on the long run and they also provide some important indirect benefits, such as reduced storage space, reduced packaging and a reduction in transport requirements – all of these provide cost saving opportunities. Table 15 shows two examples where an undiluted cleaning product used for general cleaning (diluted 1:50) is 98%-99% cheaper than a ready-to-use cleaning product. At the most concentrated dilution, for heavy cleaning (diluted 1:10), the price difference was 92%-93% cheaper for the undiluted product. According to Öko-Institut and ICLEI (2007), cleaning products can make up between 1-3% of the life cycle cost of cleaning services.

Table 15. Price comparisons for multi-use and washroom cleaners, RTU and concentrated, cost per litre

	Ready-to-use	Undiluted
	Delphis Eco multi-purpose cleaner 750ml	Delphis Eco multi-purpose cleaner concentrated 2x5L pack
Price	£4.11 per litre	£0.07 per litre, diluted to the ratio of 1 part concentrate to 50 parts water for general cleaning
	(£3.08 per 750ml)	(£34.02 for 2x5L)
Comparison	Baseline	98% cheaper than ready-to-use product
Information source	Delphis Eco	Delphis Eco

	Ready-to-use	Concentrated
	Delphis Eco washroom cleaner 750ml	Delphis Eco washroom cleaner concentrated 2x5L pack
Price	£4.47 per litre	£0.07 per litre, diluted to the ration of 1 part concentrate to 50 parts water for general cleaning
	(£3.35 per 750ml)	(£33.51 for 2x5L)
Comparison	Baseline	99% cheaper than ready-to-use product
Information source	Delphis Eco	Delphis Eco

4.4.5. Use of microfiber products

PWC et al. (2009) found that the purchase cost of microfiber cloths was approximately 15% higher than the purchase cost for conventional cloths. However, it is estimated that microfiber products reduced staff cleaning time by 10%, which led to a LCC cost reduction of 9%, representing a much bigger saving than the investment. A comparable study in the USA carried out by the University of California Davis Medical Center found that, in a hospital context, microfiber mops reduced labour costs by 20% (UCDMC, 2002).

Other indirect cost benefits include healthier working conditions for staff (fewer substances inhaled), leading to fewer working hours per square meter and less absence due to illness and physical problems.

4.4.6. Use of ecolabelled cleaning accessories

This criterion concerns the use of ecolabelled mops and cloths. As these types of ecolabelled products have a limited market availability, no good market data was found for a cost comparison.

From a life cycle cost perspective, the literature review has demonstrated that the expenditure on cleaning accessories is relatively small, adding up to less than 1-2% (according to Öko-Institut and ICLEI (2007)). Moving from conventional cleaning supplies and accessories to ecolabelled ones is not likely to be a significant financial burden for cleaning companies. However, whether these products will allow cleaning companies to achieve cost benefits is largely unknown.

4.4.7. Energy efficiency for vacuum cleaners

The study from ICA group (2003) gave equipment an average cost across 5 years of 2% of total LCC cost – this data is assumed to be for a conventional USA cleaning service start-up. Energy used during cleaning is not usually a burden for the service provider, so it is excluded from this analysis.

Some sources were found to be able to compare the purchase cost for distinct energy classes for commercial vacuums. Comparison was complicated by trying to match the product attributes and the comparison of the purchase costs may not ideal as the vacuum characteristics may vary slightly. However purchase cost may vary between € 145 and € 660 for classes A to G (Kaercher, 2015). For A-rated vacuum cleaners purchase costs evidence shows that purchase cost may be about € 300 (Kaercher, 2015) and for class B rated vacuums € 270 (Kaercher, 2015).

4.5. Concluding remarks

Table 16 presents the conclusions of the LCC analysis for cleaning services. The findings are that green products/practices might have higher up-front costs than their non-green counterparts. However, their overall impact on the life cycle cost of the delivery of cleaning service is low. Most of the newly proposed EU GPP criteria can be regarded as 'low hanging fruit' from a life cycle cost perspective as some proposed improvements are comparatively cheap and may have a cost saving potential (e.g. use of microfiber products, use of undiluted cleaning products).

Table 16. Concluding remarks based on the literature review

Newly proposed GPP criteria	Significant difference between green and non-green	Estimated significance to life cycle cost for cleaning services
Staff training	Significant life cycle cost impact, but difficult to quantify in a holistic way	About 1%
Environmental management measures and practices	Set up (design of EMS) cost is affordable, but implementation cost might be significant and cost benefit is unknown.	Set up cost is <1% of life cycle cost; implementation cost could be significant.
Use of cleaning products with lower environmental impact	Green products can be significantly more expensive	Between 1% and 3%
Use of concentrated undiluted cleaning products	Undiluted cleaning products are cheaper than ready-to-use products on the long run	Around 1%-3% reduction

Use of microfiber products	Microfiber product is more expensive but delivers significant life cycle cost saving	Reduction 9% (+1% cost, -10% staff time)
Use of cleaning accessories with lower environmental impact	Market data not enough for conclusions drawing	Less than 1%-2%
Energy efficiency for vacuum cleaners	Market data not enough for conclusions drawing	About 2%

5. Conclusions

The EU GPP criteria for cleaning services have been presented, together with a summary of background technical discussion, rationales and reference to relevant criteria in other ecolabels and green initiatives.

The overall aim of the criteria is to support as much as possible the incorporation of requirements that will support efforts to encourage a shift towards a Circular Economy approach. The development of EU GPP criteria aims to help public authorities ensure that the goods, services and works they require are procured and executed in a way that reduces their associated environmental impacts. The criteria are thus formulated in such a way that they can be, if deemed appropriate by the individual authority, integrated into its tender documents with minimal editing.

There is a strong degree of overlap with the recently published EU Ecolabel criteria for indoor cleaning services (Commission Decision (EU) 2018/680), especially with regards to award criteria for new cleaning services procurement, in the hope that both the EU GPP and EU Ecolabel criteria will help reinforce each other and increase awareness amongst both procurers and the cleaning service company.

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List of abbreviations and definitions

Cleaning: 'Cleaning' has the meaning defined by the Detergents Regulation (EU/259/2012) and is 'the process by which an undesirable deposit is dislodged from a substrate or from within a substrate and brought into a state of solution or dispersion' (Article 2(3))

Routine: 'Routine' refers to regular activities that are generally performed at least once a month. The contracting authority may also define a different schedule, as needed for the installations being cleaned.

Cleaning services: 'Cleaning services' refers to the commercial activities that generate revenue by maintaining the cleanliness of a defined space or object at a desirable level. The focus of this project is on routine indoor cleaning activities, including the cleaning of commercial (e.g. offices, shopping centres, hotels), institutional and other publically accessible buildings (e.g. libraries, schools, museums, churches, hospitals), as needed by the contracting authority.

Floor cleaning: 'Floor cleaning' refers to the routine cleaning of indoor floors in commercial and public spaces using either dry or wet methods

Sanitary cleaning: 'Sanitary cleaning' refers to the routine maintenance of the cleanliness of sanitary facilities. Key sanitary cleaning tasks include the cleaning of sinks, toilet bowls and urinals, the washing of floors, the emptying of rubbish and sanitary bins and the cleaning of vertical surfaces. Disinfection and sanitization activities are excluded.

Sanitization: The process of destroying *most* micro-organisms and removing dirt and germs through the use of chemicals and/or heat – this does not include disinfection practices and products that remove *nearly all* micro-organisms and germs and sterilisation techniques that eliminate *all* micro-organisms and germs.

Glass cleaning: 'Glass cleaning' refers to the routine cleaning of glass surfaces, including mirrors. With regard to the present project, glass cleaning is limited to the cleaning of indoor glass areas that can be accessed without the use of any specialised equipment or machines. This excludes window cleaning at altitude, for which special training and equipment is required.

Surface cleaning: 'Surface cleaning' refers to the routine cleaning of vertical surfaces, furniture (e.g. desks, chairs) and desk equipment (e.g. phones).

Routine cleaning products: 'Routine cleaning products' refers to cleaning products that are used on a routine basis in cleaning. With regard to this project, the scope of 'routine cleaning products' includes but is not limited to all the products within the scope of the EU Ecolabel for hard-surface cleaning products (previously EU Ecolabel for all-purpose cleaners and sanitary cleaners).

Undiluted cleaning products: 'Undiluted cleaning products' refers to products that must be diluted before their intended use. For these types of products, dilution instructions must be provided by the manufacturer.

Concentrated cleaning products: 'Concentrated cleaning products' refers to products where manufacturers claim these are 'concentrated' in the sense that less product is required for the same function. This term can also be used in conjunction with 'undiluted' meaning a product for which the dilution rate is significantly higher than usual.

Specialised cleaning products: 'Specialised cleaning products' refers to cleaning products that are used for specialised and/or non-routine cleaning tasks (e.g. paint remover).

Cleaning accessories: 'Cleaning accessories' refers to reusable cleaning goods such as cloths, mops and water buckets.

Cleaning supplies: 'Cleaning supplies' refers to disposable goods used for cleaning, such as wipes, paper towels (used for cleaning, not hand drying) and disposable vinyl gloves.

Consumable goods: 'Consumable goods' refers to consumable products that are used by the end users of the facility, such as toilet paper, paper towels (used for hand drying, not cleaning), textile towel rolls and hand soap.

Standard: 'Standard' refers to a "document established by consensus and approved by a recognised body that provides, for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context" (ISO/IEC Guide 2, 2004).

Public buildings: 'Public buildings' refers to buildings such as schools and other educational establishments, places of public worship, and other buildings destined for public use, benefit, and access (e.g. library).

EU Ecolabel: 'EU Ecolabel' refers to a voluntary ecolabelling award scheme developed and managed by the European Commission intended to promote products and services with a reduced environmental impact during their entire life cycle and to provide consumers with accurate, non-deceptive, science-based information on the environmental impact of products or services. There are three types of voluntary labels identified by ISO, with the EU Ecolabel falling under the Type I category.

Green Public Procurement: 'Green Public Procurement (GPP)' is defined in the Communication (COM (2008) 400) as "Public procurement for a better environment" - "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."

Type I label: 'Type I label' is defined by the ISO 14024 standard as a voluntary multi-criteria-based, third party program that awards a license that authorises the use of environmental labels on products indicating a better overall environmental performance of a product within a particular product category based on life cycle considerations.

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Annex – Stakeholder comments

Please note that the first draft of the Technical Report for the revision of the EU GPP criteria was published along with the Technical Report for the development of the EU Ecolabel criteria. For the comprehensive analysis of the criteria development along the whole project, please see the project website: <http://susproc.jrc.ec.europa.eu/cleaning%20services/index.html>

Ecolabelled services	<p>Suitable ecolabels which allow points under O12 (a) are not known in DE.</p> <p>Please discuss the aspect/criterion O12 with GPP experts. Within the tendering process, esp. regarding the award criteria, it is necessary that the award criteria are related to the contract item. According to our knowledge, e.g. the used paper in a company cannot be related to the here discussed service. The question for us is: is it possible to use an ecolabel within a tendering process that includes criteria that are not related to the contract item?</p>	<p>Comment accepted. This criterion on outsourced ecolabel services is not present in the EU GPP criteria and can only be found in the EU Ecolabel.</p>
Info on national GPP criteria	<p>"The Ecolabel for Indoor Cleaning Services is a mixture of criteria for services and criteria for service providers. In general, most criteria are for service providers. We will probably not use it in Germany.</p> <p>In general, we prefer the GPP criteria for services. The GPP criteria are part of the national "guideline of sustainable public procurement" from the "Allianz für eine nachhaltige Beschaffung".</p> <p>http://www.umweltbundesamt.de/sites/default/files/medien/pdfs/bericht_der_beschaffungsallianz_bmw.pdf</p> <p>It is more flexible as the Ecolabel, because it is like a toolkit. "</p>	<p>Comment accepted. The German GPP criteria are tailored to that country, as many aspects as possible have been taken on board the EU GPP criteria but some listed extremely specific local requirements.</p>
Link EU Ecolabel/EU GPP	<p>Would it be possible to include information for the users of the GPP criteria that they should award sufficient points to companies that obtained the EU Ecolabel? Obtaining the label has a cost, so sufficient flexibility on the price is justifiable.</p>	<p>Comment partially accepted. A section has been added describing the link between the EU Ecolabel and EU GPP criteria. The EU Ecolabel can be used to simplify the verification process but currently it is not proposed to give extra points for having the certification.</p>

Labour standards	Does not work for GPP. It's not linked to the subject matter. You have to rephrase. I can provide text after the meeting.	Comment acknowledged. Labour standards are no longer listed in this criteria proposal.
Lots	We advise the procurement units to procure consumables (paper towels, mugs, and soap for the toilets) separate to cut costs and to be able to make a better procurement. Cloths and mops are included in the service.	Comment acknowledged. The contracting authority can separate all their requirements into different lots, a section has been added at the start of the document highlighting that different criteria correspond to potential separate tenders.
Hospitals	Hospitals are considered as public structures? I think it is better to explicitly mention hospitals in definitions. In Italy the GPP market is driven by Hospitals requests.	Comment accepted. The scope is proposed to be the same as for the EU Ecolabel and therefore would cover public areas in hospitals and it would be up to the contracting authority to see what type of cleaning is necessary in their local hospitals (regulations vary throughout the EU28).
Definitions	What is the definition of sanitized? Is disinfection included in? The disinfection products are a huge market for I&I public procurement.	Comment accepted. The definition is the same as in the EU Ecolabel, moreover disinfection activities are not covered by EU GPP criteria..
Cleaning products	We recommend to require at least 50% by volume at purchase of cleaning products bought per year ecolabelled in the core criteria, and at least 70% in the comprehensive criteria. The detergents product group is one of the most successful and we do not see any reasons to keep such low thresholds. In addition, GPP is an excellent tool to foster the take-up of Ecolabel products in the market. We highly welcome the introduction of the Hazard Statements classification table that is applicable to non-ecolabelled products. However, we recommend introducing additional requirements on the	Comment partially accepted. The comprehensive criteria have been made stricter (all products should be ecolabelled), for the core criteria, the recommended percentage is from 50-70% but the contracting authority should look at local market availability to set the threshold.

	<p>non-ecolabelled products in order to ensure their safety and sustainability and suggest, in this respect, setting requirements aligned with the criterion on excluded or limited substances for All-Purpose Cleaners (APC). Service providers should not be awarded the EU Ecolabel if they make use of non-environmental friendly products containing hazardous compounds and causing harm to consumers and the environment. As many of the existing products available on the market cause damages to the environment through toxic volatile emissions and water pollution, it is essential to ensure their strict exclusion of the EU Ecolabel cleaning services, as the aim of the EU Flower is to promote products and services with the best environmental profile.</p>	
<p>Concentrated undiluted products</p>	<p>We recommend to award points to tenders which have at least 50% by volume of all cleaning products directly related to the cleaning tasks a minimum dilution rate of 1:80.</p> <p>This 50% threshold is achievable as there are today a growing number of concentrated products in the professional sector. In addition, this criterion is optional and concentrated products should be better promoted through the GPP.</p>	<p>Comment partially accepted. The recommended percentage goes from 30-50%, but the contracting authority may choose to have higher requirements if their local market allows.</p>
<p>Microfiber/ecolabelled textiles</p>	<p>We recommend raising the threshold to at least 50% for the core criteria and 70% for the comprehensive criteria of textile cleaning accessories made of microfiber.</p> <p>We see many benefits of using cleaning textiles made of microfiber:</p> <ul style="list-style-type: none"> - It improves the cleaning performance and allows a deep cleaning - It helps reduce the contribution to the waste stream and the use of water and harmful chemicals, compared to other cleaning materials. 	<p>Comment accepted. For the core criteria, the requirements have been set higher at 100% microfiber or ecolabelled textiles. For the comprehensive criteria, the recommended threshold is of 50-75%,but the contracting authority may choose another threshold based on their specific cleaning needs.</p>

	<p>- It helps reduce cross-contamination risks, which is of high importance in areas such as hospitals</p> <p>This is why the use of microfiber materials should be better promoted through GPP criteria.</p> <p>Considering the high potential of environmental benefits of ecolabelled products, BEUC and the EEB recommend raising the thresholds from 20% to at least 50% for the core criteria, and 50% to 70% in the comprehensive criteria.</p> <p>We also hold the view that products labelled with the Nordic Ecolabel should also be accepted in the scope of this criterion like ecolabelled products.</p>	
Consumable goods	<p>We do not agree with the proposed thresholds that we consider too low and not ambitious enough.</p> <p>We recommend :</p> <ul style="list-style-type: none"> - At least 40% by volume of hand soaps - At least 50% of paper towels and tissues - At least 50% of toilet papers. <p>for the core criteria;</p> <p>and</p> <ul style="list-style-type: none"> - At least 70% by volume of hand soaps - At least 90% of paper towels and tissues - At least 90% of toilet papers. <p>for the comprehensive criteria.</p>	<p>Comment partially accepted. The categories for this criterion have been slightly changed, with common requirements for core and comprehensive criteria. The thresholds have also been increased, especially in the case of paper goods.</p>

	<p>We consider these thresholds as minimum requirements. The Ecolabel paper products are among the most successful ones and have a high market penetration in all EU-28 countries. We do not see any reasons why the thresholds cannot be raised further.</p> <p>This criterion is of high importance as consumable goods generate waste and cannot be recycled or reused. They have therefore a strong environmental impact. It is crucial to ensure that the majority of the products are Ecolabel and have less environmental impact.</p>	
Training	<p>Finally, training is carried out very differently all over Europe. This has to be taken into account. Training staff requires time and (human and financial) investment and directly translates into cost. In any case, the requirement that this training should be for a duration of 16 hours (2 days per 8 hours) is much too demanding. A much shorter timeframe is enough. Otherwise this would lead to a massive exclusion of SME's.</p>	<p>Comment partially accepted. With this proposal, the training time is added as a suggestion and it would be up to the contracting authority to see if 16 hours is fit for them.</p>
Training	<p>Temporary workers have to be treated differently from permanently employed staff. Those hired for just a short time assignment cannot be treated equally to permanent employed staff. Therefore an initial training of 3-4 hours is sufficient.</p>	<p>Comment rejected. In order to provide an efficient and environmentally sound service, it is not proposed to differentiate between temporary and permanent staff.</p>
Vacuum cleaners	<p>BEUC and the EEB do not support this requirement. We rather recommend requiring that all new vacuum cleaners bought by the company meet class A on energy efficiency. This can be verified by invoices and technical data sheets.</p> <p>Furthermore, we encourage the JRC to include the above mentioned criterion in the mandatory technical specifications.</p>	<p>Comment partially accepted. The purchase of new vacuum cleaners to be used as part of the contract is now covered as part of Contract Performance Clause.</p>
Waste management	<p>Solid waste should be sorted into the waste stream categories provided at the client's premises. However, in case hazardous waste such as low energy bulbs, paints, electronic devices, cannot be collected at the premises, the cleaning service company should be able to provide this service and collect them. This requirement should</p>	<p>Comment partially accepted. Waste management is now an explicit part of the environmental management measures to be put in place and monitored by the tenderer. They should also find ways of minimising</p>

	<p>be included in the core criteria.</p> <p>In relation to this, BEUC and the EEB consider that it would be very beneficial to require more waste fractions from the company than the ones existing at the clients' premises. If it is not possible to sort certain material at the clients' premises, requirements should be set forcing the company to take away the material and put it in the relevant waste fraction at the company's premises. Since, the clients cannot always decide which waste fractions they implement in their buildings or houses, efficient and complete waste sorting should fall under the ecolabelled company's responsibility.</p>	this waste.
Verification	<p>However Malta would wish to highlight that in our national context, the current GPP criteria which are based on the previous version of the EU comprehensive criteria have resulted in a number of verification issues for contracting authorities. This in turn has resulted in an additional administrative effort to ensure corrective actions to rectify non-compliance with our national criteria for cleaning products and services. This has and continues to be a substantial area of concern leading to delays in tendering processes.</p>	<p>Comment accepted. The new criteria are based on the latest interpretation of the GPP directive.</p>
Cleaning products	<p>Technical Specification 1 - Use of cleaning products with lower environmental impact:</p> <p>Whilst supportive of the principle of utilising cleaning products with lower environmental impact, Malta would wish to again highlight the need for capacity building with regards to providing for sufficient technical expertise to assess products as being of lower environmental impact. With particular note to the percentages suggested for utilising products with lower environmental impact, Malta would highlight that currently our national cleaning product criteria are mandatory, in that all tenders for such products and services need to be compliant with the standards prescribed. Nevertheless Malta does acknowledge the principle of setting a minimum threshold at the EU level to obtain a set environmental performance standard and as such considers the proposed 30% under the core and 50% under the comprehensive</p>	<p>Comment partially accepted. Due to the high availability of ecolabelled cleaning products in some part of the EU28 and the expanded scope of the EU Ecolabel for Hard-Surface Cleaning Products, the thresholds have been increased. Local contracting authorities should always consider their local market availability before writing tenders as it is true that in some parts, such as Malta, ecolabelled product availability might be low.</p>

	<p>criteria to be suitable. With regards to the applicability of the set criteria on toxicity to aquatic organisms and excluded or restricted substances in line with the EU Eco-label for hard surface cleaning products, Malta is in agreement with what is proposed. Malta would wish to highlight the need to consider the cost and supply implications for the local industry in setting such a standard.</p>	
Microfibre products	<p>Technical Specification 2 – Use of Microfiber Products:</p> <p>Malta again in principle supports the proposed technical specification but would again wish to stress that cost and availability implications for contracting authorities need to be considered. With regards to the prescribed percentages under the core and comprehensive criteria (30 and 50% of textile cleaning accessories consisting of microfiber respectively) Malta would suggest that setting such percentage targets may lead to monitoring issues downstream for contracting authorities. In this respect Malta would enquire whether setting a 100% threshold has been explored during the development of the criteria.</p>	<p>Comment accepted. The comprehensive criteria now list a threshold of 100%, but it should be kept in mind that in some cases a local contracting authority might need to lower this requirement when microfiber cannot be used for a task.</p>
Waste sorting	<p>Technical Specification 3 - Solid Waste sorting and disposal at cleaning sites: Malta does not currently have a set prescribed waste collection and sorting specification in our current GPP criteria for cleaning services. Malta does however acknowledge the value to consider waste generated in the undertaking of cleaning contracts and welcomes the proposals being put forward in the revised Indoor Cleaning Criteria. Having said this however whilst not having a set policy in place in this regard, a number of contracting authorities in Malta do already implement policies to sort and dispose of waste generated during cleaning contracts, in line with our national waste management plan.</p> <p>In relation to the specific wording of the technical specification Malta would agree to amend title of the specification to read as, "solid waste generated at the cleaning sites shall be sorted into the correct waste stream categories". Malta would also agree that in order to effectively address solid waste generated in the course of cleaning contracts then</p>	<p>Comment partially accepted. The requirements on solid waste sorting are now included in the criteria on Environmental Management Measures and Practices. They propose to consider solid waste, its reduction and sorting as part of environmental indicators that should be improved over time.</p>

	<p>pre-sorting is a necessary step and that this would be in line with current national waste management practices. Malta also agrees that encouraging cleaning contractors to bring pre-sorting bins into offices in order to ensure the correct sorting of waste in line with our national waste management plan is a suitable option for improving the environmental performance of cleaning contracts.</p>	
Consumables	<p>Technical Specification 4 – Consumable Goods:</p> <p>Malta is in principle in support of the proposed inclusion of consumable goods as part of the technical specifications. However Malta would wish to highlight the issue of availability of such products on the local market, as well as the price of such goods. In addition Malta would wish to suggest that the Commission and JRC could explore the possibility of also including garbage bags under the scope of consumable goods.</p>	<p>Comment partially accepted. Currently the availability of ecolabelled (ISO Type I label) garbage bags relatively low, more can be found with ISO Type II and Type III labels and, as such, no requirements has been set on this type of product.</p> <p>For all other consumable goods, it is up to the contracting authority to verify market availability.</p>
Cleaning products (staff training?)	<p>Award Criteria 1 - Use of cleaning products with lower environmental impact:</p> <p>Malta would agree that the requirement for staff training is an important element to be included and one that Malta would in principle support. However Malta would also wish to highlight that training requirements may require significant resource allocation, both financially and logistically for local industry. This is an important consideration for Maltese contracting authorities.</p>	<p>Comment accepted. As shown in Section 3, training costs usually are a high part of cleaning service costs but they can great help with reducing environmental impacts.</p>
Cleaning products	<p>Award Criteria 2 - Use of concentrated undiluted cleaning products:</p> <p>The Maltese contracting authorities would wish to stress that the use of concentrated undiluted cleaning products is an area requiring further consideration. Whilst acknowledging the potential positive environmental effects of using such products in terms of resource efficiencies, the implication in terms of the need to increase staff training in the correct use of undiluted products is a significant consideration for Maltese industry. Malta would also wish to highlight</p>	<p>Comment accepted. There are trade-off for the use of concentrated products and that is why a Contract Performance Clause requiring the provision of dosing apparatus has been added. Nevertheless, they are more and more used throughout the EU28.</p>

	that in the case of accidental spillage of such undiluted products, the implications for human and environmental health are not insignificant and again the need to increase training in this regard would be needed. This could have potential cost implications for the procurement of cleaning services.	
Cleaning accessories	Award Criteria 3 - Use of cleaning accessories with lower environmental impact: Malta is supportive the proposed text of this award criteria.	Comment accepted.
Vacuum cleaners	Award Criteria 4 - Energy efficiency of vacuum cleaners: Malta is supportive of the proposals with regards to inclusion of the award criteria and recognises the potential environmental benefits associated with ensuring energy efficiency of cleaning accessories.	Comment accepted.
Cleaning products	Contract Performance Clause 1 - Cleaning Products, accessories used and procedures followed: Malta agrees with the proposals and acknowledges that the idea of a biannual documentation and reporting system throughout the duration of the contract, would be significant benefit to the Contracting Authorities with respect to monitoring environmental performance. However Malta would wish to suggest that such as system requires a degree of trust between contractor authority and the appointed supplier, and therefore additional administrative effort on behalf of contracting authorities would be needed in this regard.	Comment accepted. The verification of the Contract Performance Clauses requires for the contracting authorities to develop a system which they can use to verify the information provided by the tenderers.
Staff training	Contract Performance Clause 2 - Staff Training: As previously stated Malta agrees that staff training is necessary and an essential element of ensuring compliance not only with the proposed criteria but to any standard that we would wish to achieve. Malta would also wish to stress that staff training needs to be sufficiently adequate, to ensure that staff undertaking such contracts are fully aware of the correct procedures for use of products in line with existing national, regional and international best practice and/or	Comment accepted. The current criterion offers the option of internal training, which, while putting stress on local companies, should help with the overall environmental performance of the company. As stated above, training costs are one of the main costs of a cleaning company and it is cannot be considered as an afterthought.

	<p>legal obligations. However Malta would wish to stress again that staff training at national level would be a potentially significant undertaking for the local cleaning industry with associated cost implications. Nevertheless Malta does welcome the emphasis being placed on staff training in the revised criteria. To this end, Malta can see the benefit of exploring the potential for developing a national certificate for cleaning staff akin to that for food handling. Such training would ensure cleaning staff would be fully aware of their obligations vis-a-vis the correct handling, use and disposal of cleaning products, with particular note to hazardous substances. Notwithstanding this however Malta would also wish to stress the importance of considering the high turn-over rate of cleaning staff, and as such the need to train new staff on a regular basis would again be a potentially significant undertaking for the local cleaning industry.</p>	
Waste management	<p>Contract Performance Clause 3 – Solid Waste sorting and disposal at the cleaning site: Malta is supportive of the inclusion of this contract performance clause and has no specific comment to make in this regard.</p>	<p>Comment acknowledged.</p>
Post-awarding auditing	<p>Other Suggestions: Malta would in addition to the feedback provided above, wish to suggest that in order to ensure effective compliance to any new standard, an emphasis at the EU Level as well as national level on the need to provide for post award auditing could be of benefit.</p>	<p>Comment acknowledged. EU GPP criteria include information on how to verify the proposed criteria but it is under the responsibility of the contracting authority to ensure the full respect of the contract during the execution.</p>
Technical specification for textiles accessories	<p>Currently it does not exist a recognized method to evaluate the fibre dispersion during the washing and, then, there is no possibility to make any scientific analysis (supported by "evidence"). Consequently, the percentage of this dispersion attributable to microfibre products is not scientifically measured.</p> <p>Attention: the mentioned reference analysis, Boucher & Friot 2017, never reports "microfibre textiles", but only "synthetic textiles".</p> <p>Therefore, in our opinion, is not appropriate mentioning this problem</p>	<p>Comment accepted: The verification of the technical specification (TS2.1) specifies that textile materials should be supported by the technical information on product performance and maintenance (technical data sheet)</p>

	<p>in order to avoid a useless negative and wrong attitude towards the microfibre, before having studied their real environmental impact.</p> <p>For a better analysis of microfibre textile products, it could be helpful requiring an appropriate technical data sheet of textiles materials (mops and cloths) written by the manufacturer, where the company name, headquarters, production site, features and washing instructions are indicated.</p>	
<p>Bouclé woven microfibre mops with</p>	<p>We suggest to use microfibre mops with fringe (cleaning part) Bouclé woven with a looped-end structure, which strongly limits the fibre dispersion. As a matter of fact, mops with "cut end" synthetic fibre are available on the market. This type of "cut end" mops sometimes have an important synthetic fibre release. Looped-ends mops (Bouclé manufacturing) have a better washing endurance because they strongly limit the fibre dispersion which is the main cause of the mop consumption.</p>	<p>Comment acknowledged.</p>
<p>Technical specification for accessories</p>	<p>Regarding the textile materials (mops and cloths), we suggest a proper technical data sheet according to sanitary CAM (Minimum Environmental Criteria) Italian Ministerial Decree 9th November 2016 The sanitary CAM, in subchapter 4.4.3, being defined as "equipment", requires the technical data sheets written by the manufacturer where the company name, headquarters and production site are indicated. In subchapter 4.4.4, it explicitly recognizes the technical elements which need to be specified in the technical data sheet of mop and cloths.</p> <p>ref:/http://www.minambiente.it/sites/default/files/archivio/allegati/GP P/al legato_tecnico_sanificazione_07022017.pdf</p>	<p>Comment accepted: The verification of the technical specification (TS2.1) specifies that textile materials should be supported by the technical information on product performance and maintenance (technical data sheet)</p>

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