



Ministry of Infrastructure  
and Water Management

# Sustainable Public Procurement of Plastics

## Colophon

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**One planet**  
procure with care

# Sustainable Public Procurement of Plastics

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# 1 Introduction

## 1.1 Background

Plastics was adopted as theme across the One Planet network for 2020-2021. In support of the 4th UN Environment Assembly Resolution 6 on Marine litter and microplastics, the One Planet Network committed to provide guidance on addressing plastic packaging in the different sectors and areas covered by its programmes in support of the ambitious 2025 targets to work to eliminate the plastic items we don't need; innovate so all plastics we do need are designed to be safely reused, recycled, or composted; and circulate everything we use to keep it in the economy and out of the environment.

In 2020 the UN One Planet Network Sustainable Public Procurement (SPP) programme to underpinning this high-level guidance with more detailed and practical guidance for procurers on how to address the plastics issue through public procurement. The coordination and delivery of this work was led by Rijkswaterstaat (SPP co-lead).

## 1.2 Objective

The guidance aims to:

- identify and address the challenges around the public procurement of plastics; and

- provide practical support for procurement practitioners in addressing the impacts of unnecessary and problematic plastics within broader procurement practice.

## 1.3 Audience

The guide is aimed at procurement practitioners responsible for embedding and implementing policies to reduce the impact of problematic and unnecessary plastic through their procurement activities. This covers the development and implementation of approaches for identifying where single use plastics occur within procurement spend areas and actions around tendering to help reduce the level of plastics and their impacts within public sector procurement.

The guidance may also be of use for policymakers in understanding the role sustainable public procurement can play in mitigating single use plastic and contributing towards the delivery of a more circular economy and sustainable consumption and production through the closure of plastic materials loops.

# 2 Understanding plastics

This procurement guidance is not a technical primer for plastics. Broad guidance on the sustainability of plastics and policies relating to plastic is widely available<sup>1</sup> and useful for procurers, users and waste managers in the public sector to understand the impacts from plastics arising through public procurement. Understanding the role plastics play can help identify the reasons for those impacts and opportunities to mitigate them through procurement.

The majority of plastics are thermoplastics like PET (Polyethylene terephthalate), HDPE (High-density polyethylene), PP (Polypropylene), PS (Polystyrene and Expanded Polystyrene), PVC (Plasticised Polyvinyl chloride or polyvinyl chloride) and LDPE (Low-density polyethylene).

Although all these polymers may technically be recyclable, the reality in most cases is heavily

dependent on the commercial viability and availability of appropriate recycling and reprocessing infrastructure. Effective recycling is a function of factors like form of the waste item, availability of effective collection systems, reprocessing facilities, transportation costs and end market prices for secondary re-processed materials. It may therefore be appropriate to consider whether plastic items are unnecessary and problematic in a local, contextualised scale as viability and effective infrastructure can vary from region to region within a single country as well as between countries.

There is no universal definition of what problematic plastic is, but in general it relates to plastic that is not easily dealt with via existing waste management infrastructure and is largely landfilled, burnt or littered. In other words, plastic that 'leaks' out of the plastic loop (Figure 1). The following list of criteria can help identify problematic or unnecessary plastic

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<sup>1</sup> For example: [Single-use plastics: A roadmap for sustainability](#). 2018, UN Environment Programme; [Considerations and Criteria for Sustainable Plastics from a Chemicals Perspective](#): Background Paper 1. 2018, OECD. OECD Global Forum on Environment: Plastics in a Circular Economy, Designing sustainable plastics from a chemicals perspective; [Science to enable sustainable plastics](#). 2020, Royal Society of Chemistry/ C3. A white paper from the 8th Chemical Sciences and Society Summit (CS3). See also Section 6 Further sources of Information.

packaging, plastic packaging components and items<sup>2</sup>:

1. It is not reusable, recyclable or compostable.
2. It contains, or its manufacturing requires, hazardous chemicals<sup>3</sup> that pose a significant risk to human health or the environment (applying the precautionary principle).
3. It can be avoided (or replaced by a reuse model) while maintaining utility.
4. It hinders or disrupts the recyclability or compostability of other items.
5. It has a high likelihood of being littered or ending up in the natural environment.

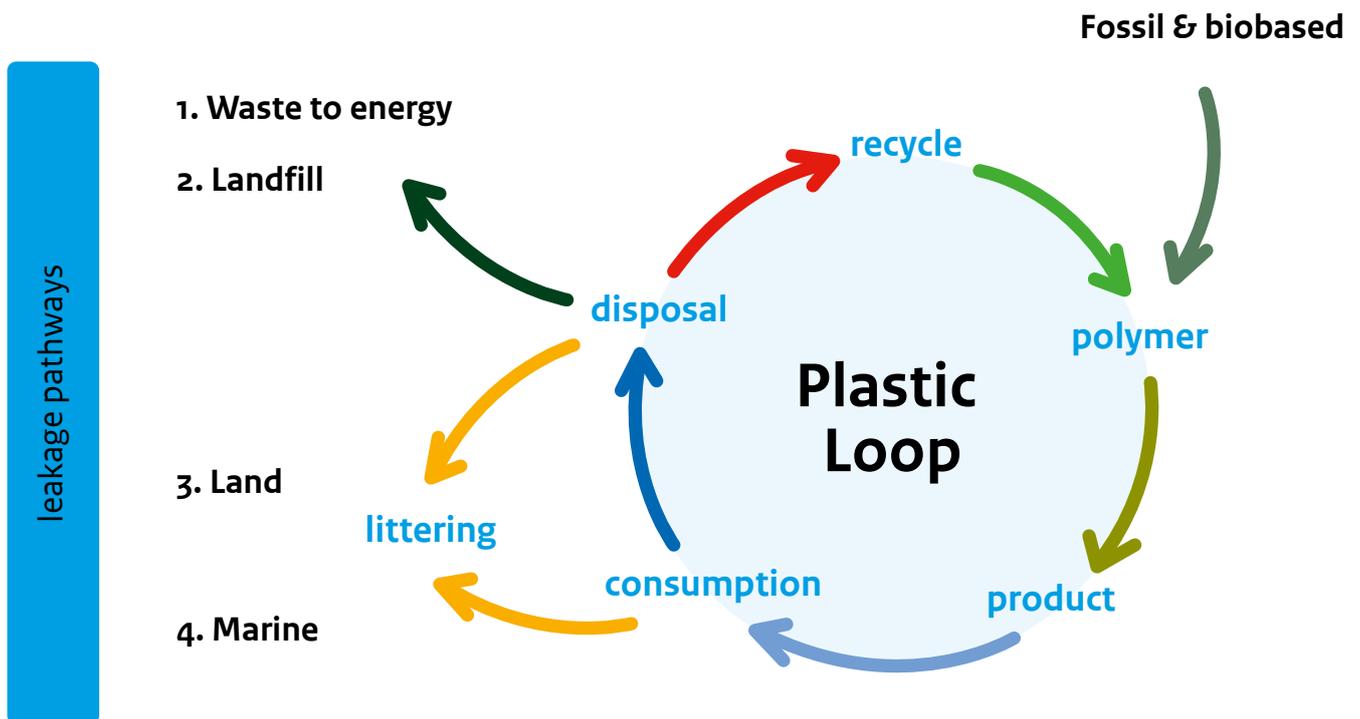
Examples include small single use items such as individual condiment sachets which are difficult to capture in waste systems, certain types of plastics like

PVC and foamed plastics (e.g. expanded polystyrene - EPS), and multi-layer and / or complex formats which currently have no value in the recycling system.

Just because plastic polymer is technically recyclable doesn't mean it will be. Plastic items 'leak' out from the plastics reuse and recycling loop through one of four principal pathways (Figure 1):

1. from the waste management system to energy recovery (or incineration);
2. from the waste management system to landfill;
3. from inefficient waste systems and/or littering and fly-tipping to land; and /or
4. from inefficient waste systems and/or littering and fly-tipping to rivers and the marine environment.

Figure 1 Leakage of plastics into the environment



Source: Sustainable Global Resources

<sup>2</sup> [Global Tourism Plastic Initiative](#)

<sup>3</sup> Hazardous chemicals are those that show intrinsically hazardous properties: persistent, bio-accumulative and toxic (PBT); very persistent and very bio-accumulative (vPvB); carcinogenic, mutagenic, and toxic for reproduction (CMR); endocrine disruptors (ED); or equivalent concern, not just those that have been regulated or restricted in other regions (Source: Roadmap to Zero, definition based on EU REACH regulation - <http://www.roadmaptozero.com>).

# 3 Policy Context

## 3.1 Regulatory approaches for procurement of plastics

An initial review of global policies and practices on plastics was carried out in 2020. Seven regional reviews (South America, North America, Africa, Europe, Middle East, SE Asia and Australasia) identified that the single use and problematic plastics were a globally recognised challenge. As of 2018, 127 countries had implemented some legislative measures targeting single-use plastics. Since then, some jurisdictions have reversed or paused their measures due to pressure from plastic lobbyists, citing the COVID-19 pandemic as the cause for reversal<sup>4</sup>. The majority of regulatory approaches and policies relating to plastics fell into one of three groups:

- Control of plastic bags – plastic bags are the most common target for regulatory approaches in the initial stages of dealing with plastics. Approaches tend to focus on bans, restrictions, technical requirements (e.g. thickness, composition), extended producer responsibility, disposal and recycling targets. However, a more complete

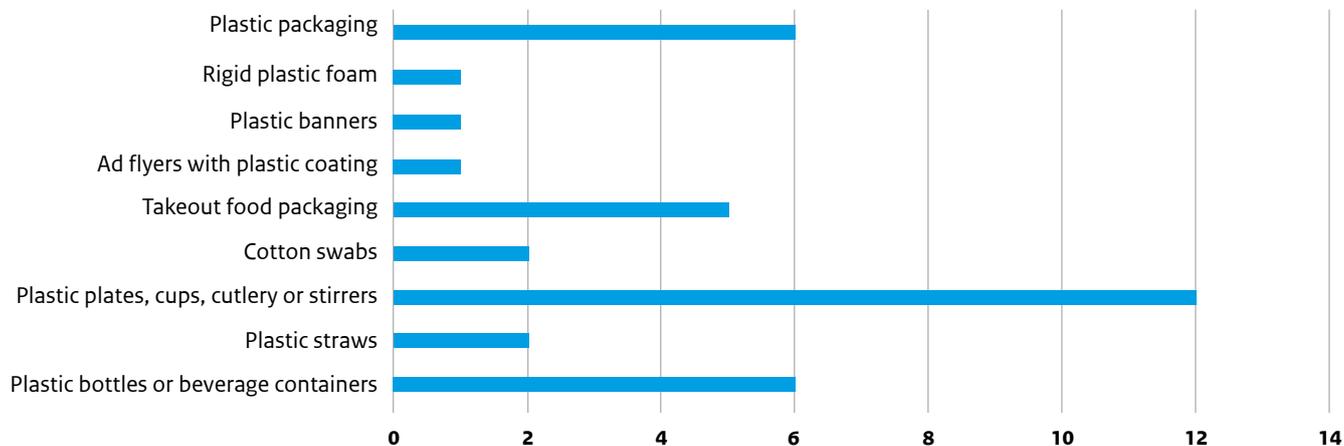
picture is given in the 2018 UNEP report<sup>4</sup>.

- Control of single use plastic items – approaches are similar to those for plastic bags but also include fiscal measures, reuse, and recycling mandates regarding recycling beyond general policy objectives. Bans on specific products most commonly focused on those associated with food service and delivery. However, Figure 2 shows that packaging items are not the sole target of product bans and this should be borne in mind when setting appropriate requirements in procurement policy and tenders.
- Control of microbeads<sup>5</sup> – there is a small number of countries (Australia, Canada, China, Republic of Korea, Italy, Sweden, France, Netherlands, New Zealand, Taiwan, United Kingdom, and the U.S.A.), that have passed some full or partial bans (e.g. in certain products). The regulatory landscape is changing quickly and local regulations concerning microbeads should be checked regularly for compliance purposes regarding scope, any phase-in timescales, technical definitions, sale, manufacture, and exemptions etc.

<sup>4</sup> Walker et al. 2021 Single-use plastic packaging in the Canadian food industry: consumer behaviour and perceptions. Humanities and Social Sciences Communications, Vol. 8

<sup>5</sup> Further information is available in [Legal Limits on Single-Use Plastics and Microplastics: A Global Review of National Laws and Regulations](#). 2018 UN Environment Programme.

**Figure 2** Bans on specific products



Source: *Legal Limits on Single-Use Plastics and Microplastics*. 2018, UN Environment Programme.

Further detail on approaches to plastics bags and single-use plastic items can be found in the 2018 UN report on progress to plastic limits<sup>4</sup>.

### 3.2 Plastics initiatives

Not all initiatives relating plastics pollution are directly relevant to the public sector procurement but the breadth of initiatives, ranging from global through regional and national scales to the local level, may have implications on procurement practices depending on where these are taking place. A brief overview is presented in the following sub-sections.

#### 3.2.1 Global and regional initiatives

Global initiatives like the New Plastics Economy<sup>6</sup> and the Ellen MacArthur Foundation Plastic Pact provide a network of initiatives. Over 450 businesses, governments and other organisations have signed up to the New Plastics Economy Global Commitment. This commits Governments and companies representing 20% of all plastic packaging produced worldwide to taking action in support of the vision of a circular economy for plastic in which it never becomes waste.

The UN One Planet Network [Global Tourism Plastics Initiative](#) (GTPI) is a sectoral global initiative that

focuses on the tourism sector and establishes a common vision to address the root causes of plastic pollution. It enables tourism businesses, governments, and other tourism stakeholders to take concerted action in much the same way as the global commitments do.

The GTPI aligns with the Global Commitments goals and requires tourism organisations to make a set of concrete and actionable commitments by 2025:

- Eliminate problematic or unnecessary plastic packaging and items;
- Take action to move from single-use to reuse models or reusable alternatives;
- Engage the value chain to move towards 100% of plastic packaging to be reusable, recyclable or compostable;
- Take action to increase the amount of recycled content across all plastic packaging and items used;
- Collaborate and invest to increase the recycling and composting rates for plastics; and,
- Report publicly and annually on progress made towards these targets.

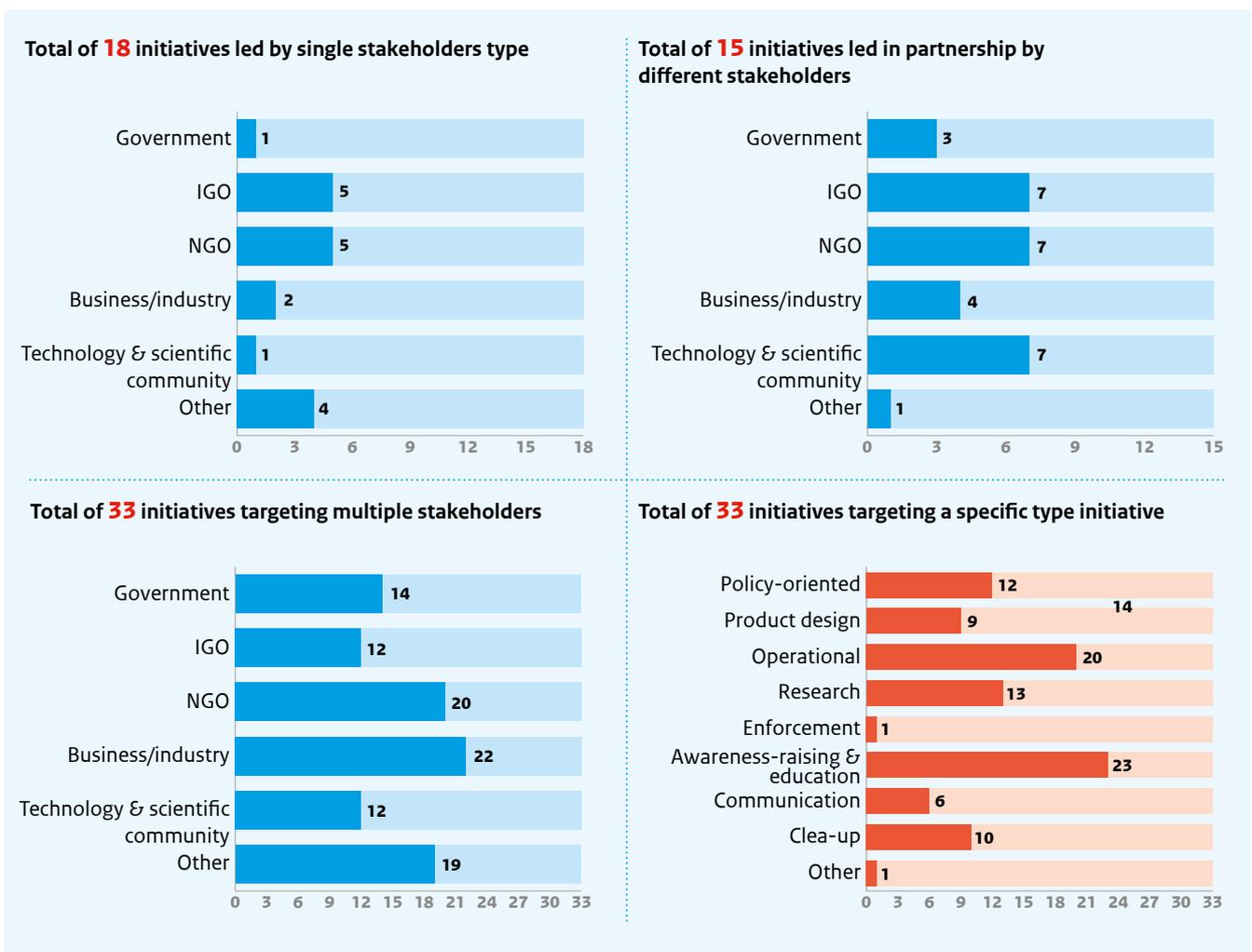
The Basel Convention Partnership on Plastic Waste (2020) undertook a stocktake of initiatives. It found 53 global initiatives, of which at least 29 were created in 2014 or later. Half of the regional level initiatives identified (Figure 3) were also created within the last

<sup>6</sup> [New Plastics Economy](#). Ellen MacArthur Foundation

four years to 2020. Most initiatives define themselves as having a global approach without specifying where they operate. Most initiatives are also relied on developing pilot projects or focused on a few specific countries or regions. Figure 3 summarises the regional initiatives.

A further 54 national initiatives were identified although this is likely to be an underestimate as they were nominated by working group members<sup>7</sup>. Most of the national initiatives propose the adoption of a circular economy principle with member countries looking to improve the recyclability of single-use plastics products.

Figure 3 Regional plastics initiatives summary



Source: UN Basel Convention Partnership on Plastic Waste, 2020

<sup>7</sup> Further details: [First meeting of the Basel Convention Plastic Waste Partnership working group](#). UN Basel Convention, 2020

### 3.2.2 Voluntary agreements

Voluntary agreements, like the Plastics Pacts, have also set sector wide targets at a national scale for single use plastic packaging that cover reduction, increasing recyclability, increasing recycled content and increasing the actual recycling rates for single use plastics. These include the UK Plastics Pact, the Pacte National sur les emballages plastiques in France, Circula El Plástico in Chile, and the Plastic Pact NL in the Netherlands. More recently Pacts have been launched in Africa (South African Plastics Pact), the Pacto Português para os Plásticos in Portugal, the U.S. Plastics Pact, the Polski Pakt Plastikowy in Poland and the Canada Plastics Pact. Regional Plastics Pacts include the European Plastics Pact, Plastic ACTION (PACT), Asia and the Australia, New Zealand and Pacific islands (ANZPAC) Plastics Pact. These typically focus on four key target areas for action:

1. Eliminating problematic or unnecessary single-use packaging.
2. Maximising the amount of plastics packaging that is reusable, recyclable or compostable.
3. Increasing the amount of plastics packaging effectively recycled or composted.
4. Increasing average recycled content across all plastic packaging.

### 3.2.3 Plastics reduction campaigns

The UN One Planet Network Sustainable Lifestyles and Education Programme published a report on insights and examples to maximize the effectiveness of campaigns for sustainable plastic consumption<sup>8</sup>. A review of 50 campaigns covered national, organisational and consumer campaigns and found a number of common factors. It found that there are three necessary elements to effectively shift individuals toward sustainable consumption of plastic:

- **Information** - accessible, relevant, comparable and timely information about the sustainability of plastic products and packaging is essential to enabling sustainable consumption.

- **Motivation** - beyond simply being aware of the problem, consumers need to feel that the plastic waste problem is relevant to them, understand specifically what they can do about it, and be prepared to make different choices in their plastic consumption.
- **Opportunity** - consumers cannot shift toward sustainable consumption of plastic when they do not have sustainable options. Companies can enable sustainable consumption of plastic by designing products and packages to maximize circularity. Governments can also require a minimum level of sustainability or circularity in others.

At a local level, some local governments and public sector organisations have initiated pledge and awareness campaigns, for example, #PlasticFreeGM (Greater Manchester, UK)<sup>9</sup> and [Keep Plastics Off Our Parks](#) (Kenya Wildlife Service, Kenya)<sup>10</sup>. One of the common mistakes the UN campaign insights report found was stopping at awareness on the assumption that making people aware of the problem will lead to behaviour change. Awareness can be a first step on the path to action but the journey is not inevitable.

These findings are also relevant to procurers when seeking to reduce single use plastics either through direct procurement, for example of catering consumables, or indirectly through primary, secondary or tertiary packaging. Further information on the principles of ‘nudging’, identifying a suitable level for intervention and bringing campaign ideas to scale can be found in the UN One Planet Network report on tackling plastic litter (2021)<sup>11</sup>.

<sup>8</sup> [Reducing plastics Pollution: Campaigns that work](#). 2021 UN OPN Sustainable Lifestyles and Education Programme/SEI

<sup>9</sup> PlasticFree Greater Manchester pledge: <https://plasticfreegm.com/>

<sup>10</sup> Kenya Wildlife Service Twitter: @kwskenya

<sup>11</sup> [Next Steps: Tackling Plastic Litter](#). 2021 Swedish Environmental Protection Agency.

# 4 Implementing an approach to plastics in procurement

## 4.1 Pre-tender actions

### 4.1.1 Understanding current purchasing practice

Procurement choices should be guided by an understanding of how plastics are used across the organisation's purchasing of goods, works and services. A significant hurdle is the fact that procurers typically procure products e.g. laptops, piping, catering consumables, packaging etc, or products as part of services. Therefore, understanding where plastic components arise and what type of plastic they are, is a critical first step in understanding how best to deal with plastics.

Understanding what current purchase patterns are will inform decisions including what to avoid, what to replace, and what can be captured through recycling systems. This requires a lifecycle approach to procurement and its impacts and, by definition, involves more stakeholders in the procurement cycle. Speaking to the waste manager and/or contractor will enable the organisation to understand how waste materials are currently dealt with, what materials can be recycled and what the actual disposal routes are.

A relatively simple and rapid approach is to undertake a spend analysis in order to identify categories likely to contain significant amounts of plastic and where high impact areas such as packaging or consumables occur within those categories. This approach can help generate a *Product Categorisation Scorecard* and enables those involved in the procurement cycle to identify relevant actions based on steps set out in Section 4.2 below. Table A1 (Annex 1) provides an illustration of typical procurement categories that contain plastic packaging and the *product categorisation scorecard* approach. A more detailed analysis of plastics hotspots can help identify key suppliers for targeting with regard to eliminating, innovating and closing plastic loops on the road to a more circular economy.

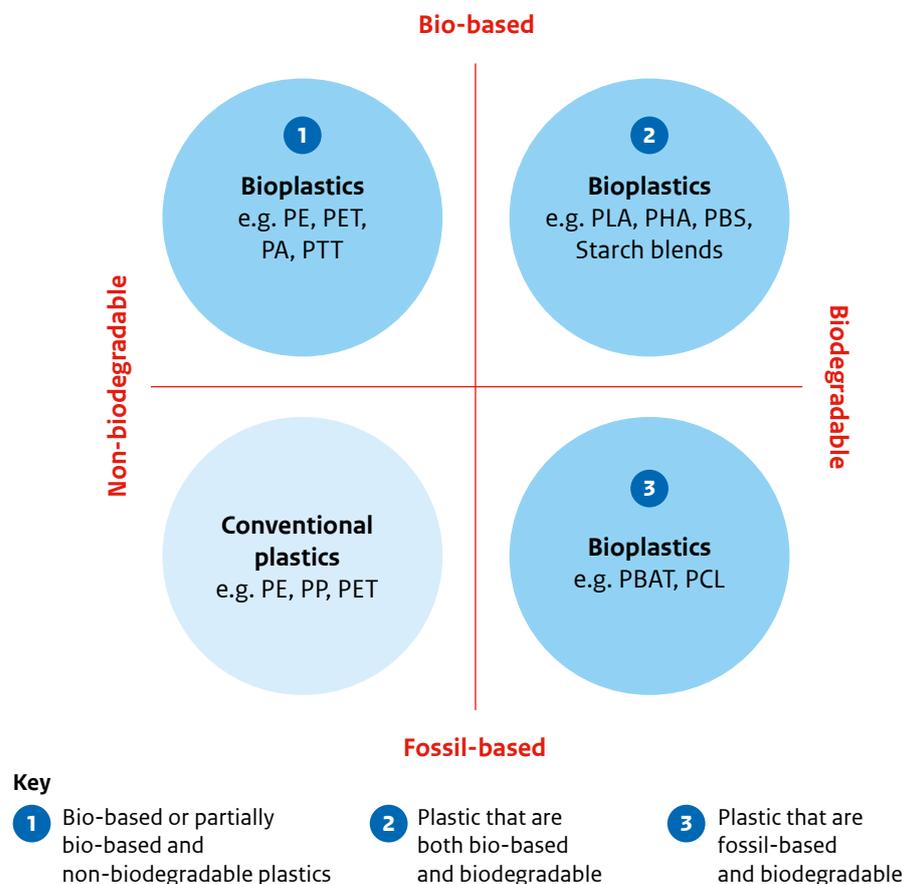
Suppliers should be able to provide details about the recyclability of packaging and product formats, detailing the specific polymers used, their recyclability and the use of recycled content. Packaging also often includes information to help identify the plastic polymer type. It will also be helpful to define what plastics are 'problematic' in the context of your own organisation.

## What is the nature of the materials used to make plastics?

The majority of plastics are fossil-based. These conventional plastics are non-biodegradable can be recycled in conventional recycling systems, where available, if collected and sorted into separate material reprocessing streams.

Biodegradable plastics are materials that break down in a defined period of time in certain conditions. This does not mean that these materials should be freely released into the environment in an uncontrolled manner. Most biodegradable materials do not degrade fully or quickly in natural environments and can only be composted when treated to the appropriate composting standard, where facilities exist. Biodegradable items should be clearly labelled and collected separately from non-biodegradables to avoid contamination in the recycling stream. Biodegradable products should not be confused with oxodegradable materials which are designed to break down quicker in the short to medium term but create microplastics.

Compostable plastics are a sub-set of biodegradable materials and should meet the appropriate standard (e.g. EN 13432 for compostable packaging, ASTM D6400-99, AS4736-2006 etc) so that the material decomposes/biodegrades in industrial composting conditions such as in-vessel composting (IVC) or anaerobic digestion (AD) composting. Materials that meet an appropriate home composting standard can be composted in home composting systems. It is important to note that these standards relate to the properties of the plastic. Procurers should ensure that these plastics can be collected and composted effectively in local waste management systems before specifying them.



Source: Public sector guidance on the procurement of plastics. WRAP, 2019

Plastics waste is challenging to measure and sources of global plastic pollution are varied. The actual amount of plastic pollution is largely unknown (UNEP 2016)<sup>12</sup>. Studies of plastic waste generation are still uncommon. In Canada an estimation of waste across the main industrial sectors found that plastic packaging is the single largest contributor of plastic waste, followed by the automotive, textile and electrical and electronic equipment sectors. Table 1 shows the estimated percentage contribution to overall plastic waste in Canada. Whilst this will change from country to country and organisation to organisation, it potentially provides a starting point for where plastics are being used within procurement spend areas.

**Table 1** Main industrial sectors generating plastic waste in Canada in 2016

Sector	Total plastic waste (%)
Packaging	47
Automotive	9
Textiles	7
Electrical & electronic equipment	7
Construction	5
White Goods (large & small appliances)	4
Agriculture	1
Other	19

Source: Draft Science Assessment of Plastic Pollution, Environment and Climate Change Canada & Health Canada. Government of Canada, 2020

Annex 1 provides an illustration of typical procurement categories that contain plastic packaging. Applying a simple 3-step assessment across key variables (e.g. spend, impact and potential for action) to each category can help identify and prioritise product categories and spend areas for action on plastics. The categories in Annex 1 are prioritised according to a recent assessment by Eunomia Research & Consulting based on EU public sector spend across typical categories<sup>13</sup>.

The analysis found the following spend areas to be high potential areas for action:

- Office equipment, accessories and supplies
- Computer Equipment, peripherals, components and supplies
- Medical equipment, accessories and supplies
- Food and beverage products
- Domestic appliances
- Cleaning equipment and supplies
- Building & infrastructure construction products, components and supplies
- Building and facility management and maintenance Services

Good practice should also consider the impacts of accessories (e.g. cables, chargers, keyboards etc) and supplies (e.g. consumables) as these not only frequently contain plastic components but also require additional packaging and may also be unnecessary as part of the purchasing need.

Other spend areas of potentially high plastic impact include:

- Medical equipment, accessories and supplies
- Textiles and apparel (clothing)
- Furniture (e.g. accommodation, educational, commercial and industrial)
- Transportation, storage and mail services (e.g. logistics)
- Telecommunications Equipment, components, accessories and supplies
- Printing and photographic and Audio Visual equipment and supplies
- Electronic components, electrical systems and lighting components, accessories and supplies
- Laboratory and measuring and observing and testing equipment

Many of these procurement areas are also spend areas of high carbon reduction potential, so procurement actions to reduce plastics and carbon can be considered in parallel. Adopting a circular approach to procurement facilitates lifecycle thinking and can help close plastic materials loops as well as reducing carbon impacts.

<sup>12</sup> United Nations Environment Programme. 2016. Marine plastic debris and microplastics: Global lessons and research to inspire action and guide policy change.

<sup>13</sup> EU DG Environment (in prep.). Assessment of options for reinforcing the Packaging and Packaging Waste Directive's essential requirements and other measures to reduce the generation of packaging waste.'

One co-benefit from adopting a circular procurement approach to plastics is encouraging markets for secondary plastics, for example through the incorporation of recycled content targets, where applicable.

The increasing use of biodegradable and compostable plastics will affect the disposal routes available and there is a need to avoid mixing at the point of disposal. The inclusion of compostable plastics and some biodegradable materials in non-compostable recycling processes will compromise the quality and performance of recycled end products. Separate, uncontaminated collections and disposal are required, and your waste contractor should be able to tell you if this is possible. Additional training, information and guidance may be necessary to avoid cross-contamination of recycling streams and increased waste going to incineration or landfill as a consequence.

#### 4.1.2 Using the waste hierarchy to close the plastic loop

Applying waste hierarchy principles to the procurement process (Figure 4) provides a good basis for action on problematic and unnecessary plastics. The hierarchy prioritises the management of waste, such as single use plastics and packaging. The waste hierarchy is ranked according to environmental impact, with prevention being the most preferable option.

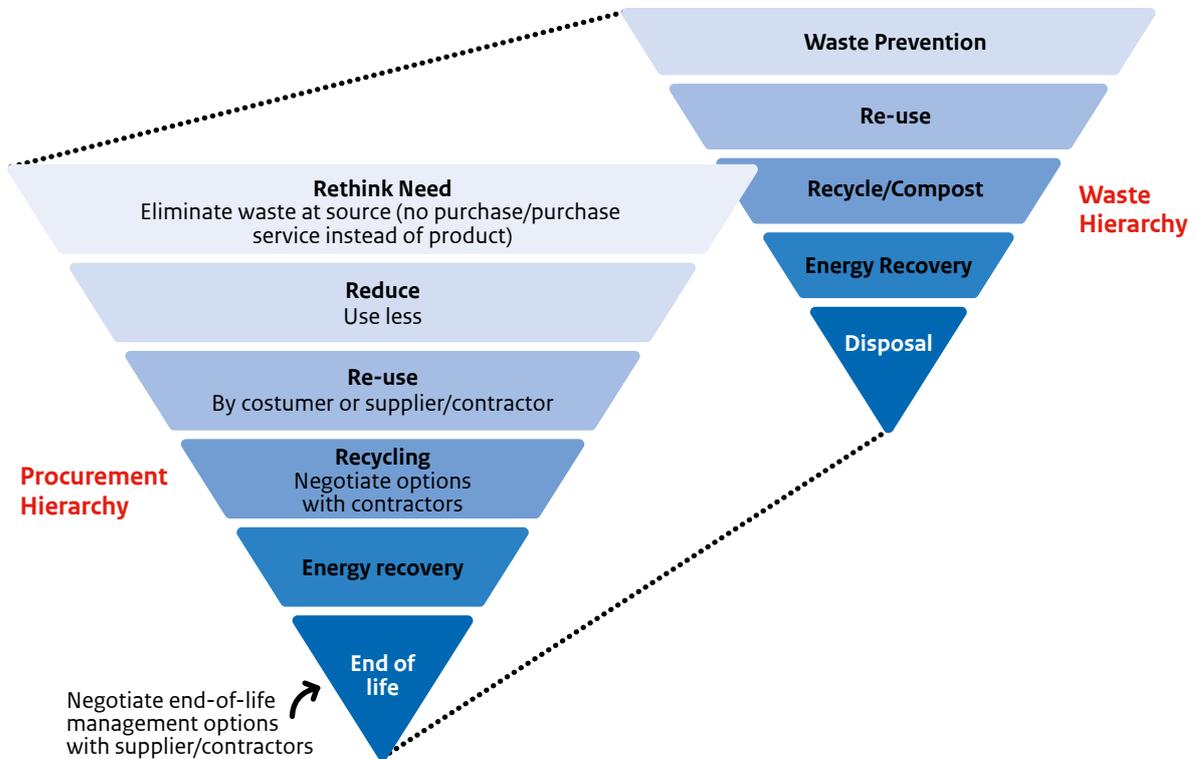
Although disposal options are typically considered as part of separate waste management contracts, thinking about the impacts that disposal of plastic items, such as single use packaging, at the time of initial product purchase will help avoid issues for the organisation and environment downstream. Consulting waste

managers early in the procurement cycle can highlight which plastic items are likely to be problematic in terms of disposal and recycling. Engaging with suppliers can help identify unnecessary items and then help identify alternatives.

Procurers can take unilateral action or be part of an internal or peer-2-peer wider team addressing plastics use in support of organisational or national policy goals. Actions should be prioritised in line with the waste hierarchy principles:

- **Reduce** - avoid the unnecessary use of plastic in the first place by challenging the need for items via internal stakeholders, for example considering the use of fully recyclable paper/fibre-based items in catering packaging as an alternative.
- **Reuse** – opt for reusable rather than single use items and challenge the use of single use items such as coffee cups and takeaway trays. Also, source and incentivise the use of durable and reusable containers, where possible.
- **Recycle** – ensure that only those polymers that are easily recycled within local waste systems are purchased - typically PET, HDPE and LDPE. Also ensure that compostable packaging is only used where the right facilities exist.
- **Recover** – ensure that only items that are difficult to eliminate or recycle (e.g. multi-layer films, laminated paper) are effectively captured for energy recovery, where applicable.
- **Landfill** – as a last resort, ensure that only items that are difficult to eliminate or recycle, are disposed of in regulated and controlled landfill to avoid leakage through intentional or unintentional littering.

Figure 4 Applying waste hierarchy principles to procurement



Source: Procuring the Future: Sustainable Procurement National Action Plan. 2008 DEFRA, UK.

The rationale for using the hierarchy is to ensure that the procurement of products containing plastics should include requirements for:

1. Repairability, reusability, recyclability and for recycled plastics whenever feasible.
2. Avoiding composite materials, polymers that are hard to recycle, and plastics with black/near black color (except when made from recycled plastics) as these complicate recycling processes.
3. Excluding plastics exceeding certain threshold levels of harmful substances and/or mixtures.

Including requirements across these 3 groups will fulfill the following objectives:

- Increasing demand for recycled plastic.
- Increasing recyclability.
- Reducing use of harmful substances.

#### 4.1.3 Identifying options for avoidance

Any procurement decisions aiming to tackle the consumption, use and disposal of packaging and single use plastics should focus on prevention and reduction as the initial steps, followed by optimising the functional life of the product:

- **Prevention** - avoidance starts with preventing or reducing waste as the first measure and the best way achieve that is challenging the need to buy new, e.g. single use items, in the first place.
- **Elimination** – targeting particular polymers and formats (e.g. expanded polystyrene trays) through substitution of plastics with non-plastic alternatives. Setting targets can achieve some simple quick wins, for example:
  - eliminate disposable knives forks, spoons, straws and stirrers from the facility canteen immediately; and/or,
  - ban the use of disposable plates, bowls, single use pouches and sachets, and clamshell food containers in outsourced food services when the contract is renewed.
- **Reuse** – Replacing single use items with reusable items, for example in healthcare, catering and other environments substituting single use gowns, aprons, caps, shoe covers etc. with washable natural fibre alternatives. Purchasing reusable products also means less packaging overall.

It is important to understand the specific consequences of avoidance (i.e. not providing a consumable item like a single use tumbler or straws) and to carefully evaluate the alternative products available considering the overall 'life-cycle' impact of a replacement, alternative routes required for disposal and the business case for change. This will help to

avoid unintended consequences, by taking measures to ensure that banned or replaced items are substituted with alternatives - reusable or single-use products in another material. Single use glass containers, for example, can have a far higher carbon footprint than plastic unless they are reused/refilled many times over<sup>14</sup>.

### Hidden plastics

Some products are not obviously plastic and can easily be missed. This can result in unintended consequences or 'regrettable' substitution. For example, "Paper" cups and some packaging like catering consumables that look like paper, are made of paper coated with plastic. These may be more difficult to recycle than conventional monomer plastics. Surgical masks, caps, shoe covers, disposable surgical gowns, and wet wipes are all made of non-woven plastic fabric (olefin fabrics).

Plastics may also be 'hidden', for example in washrooms, as part of cleaning packaging or even as additives (microbeads) in cleaning products. A 2020 report by SCP/RAC on substances of concern in plastics identified packaging along with food and beverage contact materials, electrical and electronic equipment (EEE) and related waste (WEEE/E-waste), textiles, furniture, and construction as relevant sectors in terms of public procurement. Additives in plastics include flame retardants, perfluorinated chemicals, phthalates, bisphenols, and nonylphenols. These may cause challenges of the life cycle management of plastics in different phases of a product lifecycle depending on how it is made, used and ultimately management as waste.

Source: HealthCare Without Harm. A Plastics Toolkit for Hospitals, 2019; UN Sustainable Lifestyles and Education Programme. Reducing Plastic Pollution: Campaigns That Work, 2020; Plastic's toxic additives and the circular economy. SCP/RAC, 2020

Likewise, replacing single use cups and cutlery with reusable alternatives will require additional staff time and kitchen washing facilities. Specifying plastic plates and cutlery made from biodegradable materials will require separate collection and disposal

in industrial composting facilities - which may, or may not, be available locally. Working closely with your local waste management contractor will identify what can be collected/accepted for recycling as intended.

<sup>14</sup> Comparing Milk Packaging Options for Monmouthshire Primary Schools. 2020, WRAP Cymru

#### 4.1.4 Planning an approach to plastics

The options for dealing with plastics in public procurement depends on a combination of factors including where the plastics occur, existing regulatory conditions regarding plastics and the options available. A basic decision matrix like that shown in Figure 5 may help identify some key decision points and potential actions to reduce the impacts of problematic plastics. The decision-making process will need to take account of any regional variations and desired goals relating to plastics (e.g. bans and restrictions) and to wider sustainable procurement goals (e.g. to reduce CO<sub>2</sub> from packaging choices; or reduce single-use plastics; or increase percentage of recycled content etc.).

The aim is to ensure that key decision points (Figure 5 – green boxes) lead to potential actions (Figure 5 – blue boxes) that follow the waste hierarchy principles (Section 4.1.2). The pathways referred to in Figure 5 relate to those outlined in Section 2 (Figure 1).

In practice, many of the decision points will trigger a whole series of actions, some of which may be directly related to the tender in question. Other actions will relate more towards thinking strategically about both the lifecycle impacts of plastics and by extension, the lifecycle impacts of procurement

choices in general. A strategic approach to sustainable is all the more necessary since many of the impacts from procuring plastics (e.g. within products and as packaging), are downstream at end-of-life. Where avoidance is not an option, these impacts may only be mitigated if an effective waste management infrastructure is in place. The waste management infrastructure may form the subject matter of other public sector contracts which will need to be evaluated, or of waste management services that need to be commissioned through the public sector.

The lifecycle approach to procurement highlights the role it plays as a mechanism for reducing impacts and contributing towards more sustainable consumption and production, e.g. as part of the UN Sustainable Development Goals. SDG12. In the context of sustainable procurement, there are 7 targets in SDG12 (Sustainable Consumption & Production) - one of which (SDG12.7) specifically relates to sustainable public procurement. Different public sector bodies will take a different perspective on the relevant priorities within the SDG goals. Therefore, the challenge is to ensure that the management of plastics is proactive, visible and actionable within the wider goal of implementing sustainable procurement.

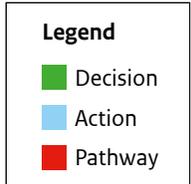
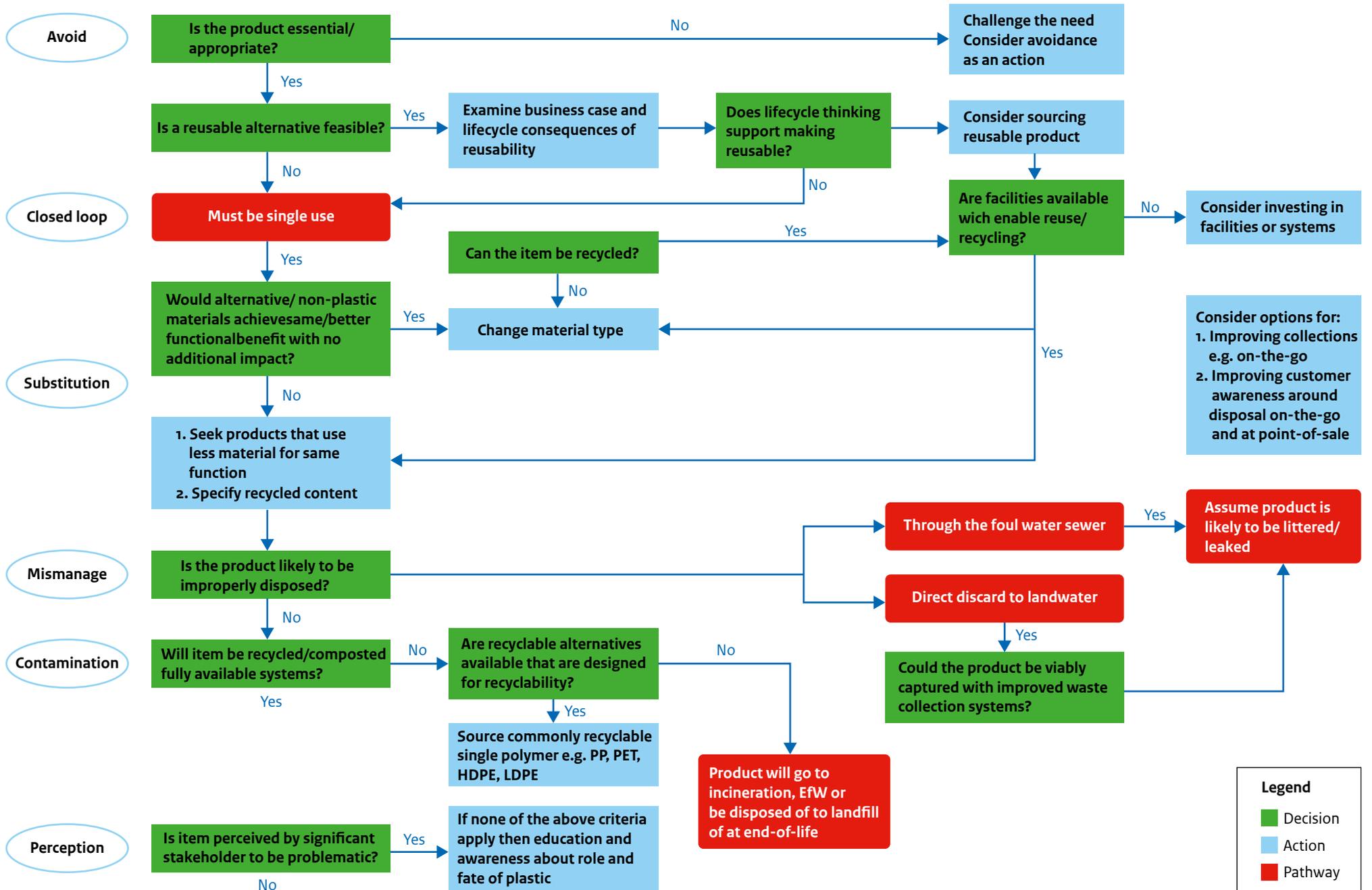
### Testing procurement decisions

In some cases, alternatives to single-use plastics may be clearly defined, such as switching from plastic to paper straws or from PVC to nitrile gloves. In many cases it will be necessary to define clear specifications regarding medical functionality, compatibility with other equipment, and allowable polymers and additives. The first step is checking with existing suppliers to see what available and what, if any, variation there is. Wider **Market Engagement** will also help understand the broader range of alternatives available, cost variances, the scope for the market to supply new alternatives going forward and importantly to communicate goals and ambitions for reducing impacts of plastic through procurement.

**Avoid unintended consequences /regrettable substitutions by testing alternatives** – ensure that when substituting plastics with alternatives that these have a better environmental outcome. For example, if replacing single use gowns or protective clothing with reusable alternatives, check that additives do not increase the toxicity compared with single use. If synthetic reusable alternatives are offered, be aware that olefin fabrics are made from plastics like polyethylene and polypropylene, and petroleum-based fabrics of all types contribute to environmental microplastics contamination<sup>15</sup>.

<sup>15</sup> Allen et al., 2019. [Atmospheric transport and deposition of microplastics in a remote mountain catchment](#). Nature Geoscience

Figure 1 Plastics procurement decision tree



Soucre: WRAP Cymru (2019). Public sector guidance on the procurement of plastics.

## Case Study: Eliminating single-use plastic cups and bottles in healthcare: Mutuaia, Basque Region, Spain

Mutuaia provides social services and medical care across 17 social and medical service centres in the Basque country, Spain. Until recently, drinking water was provided in all facilities by water fountains which dispensed water from large plastic bottles (11 litres) into single-use plastic cups. In addition, patients also received bottled water with their meals and they provided bottled water during meetings. This led to high costs for mineral water and (plastic) waste - approximately 147,000 glasses, 4,000 large cooler bottles for the fountains, and 7,000 small water bottles were disposed of each year. To address these issues Mutuaia decided to install water fountains connected to the public water network instead of buying bottled water. To reduce the use of plastic cups and bottles they aimed to:

- Replace plastic cups at the water fountains with recyclable cardboard cups.
- Use glass jars and washable and reusable cups to serve the water to patients and during meetings.
- Distribute 0.5 litre glass bottles to staff to refill with water from the new water fountains.
- Remove plastic water bottles from existing vending machines.

### **Criteria used**

Technical specifications included the delivery of a minimum 600 glass bottles, machine and hand-washable, and including a screw cap for easy refill. In addition, a minimum of 100 glass jars had to be delivered, also washable by hand or machine. Bidders were required to submit a demonstration of the product that they planned to supply, as part of the procurement process.

The contract Lot (2) was awarded to the most economically advantageous offer, weighted according to price (50%) and quality (50%). Bidders were asked to submit a report covering, inter alia:

- The design of the jars and bottles (15 points)
- The packaging and presentation of the jars and bottles (10 points)
- Delivery and replacement time (15 points)

### **Results**

The 2018 call for tender received and two made it to the evaluation phase. In January 2019, Mutuaia introduced 40 new water fountains in its 17 service centres, provided its staff and rooms with the new glass bottles and jars, and purchased recyclable paper cups.

The procurement is saving an estimated €17,000 annually on water for its patients, employees, and visitors - Mutuaia opted to manage the purchase of single-use paper cups for visitors separately.

Based on ca.5,000 patients and about 600 employees, an estimated 147,000 plastic cups, 4,000 big plastic water cooler bottles, and 7,000 small plastic bottles will be saved annually.

Source: [PLASTECO EU Interreg project](#)

#### 4.1.5 Summary of pre-tender actions

##### Key questions and actions at the pre-tender planning stage

1. What types of plastics occur and in what context?
  - a. Has a plastics audit been undertaken as part of any existing procurement reviews or policy commitments?
  - b. Are all currently used plastics recyclable?
2. How effective is the local waste collection at managing plastics? –
  - a. What currently happens in terms of waste management from the public sector organisation?
  - b. Are all plastics and/or the packaging actually recyclable in line with your own waste contracts and is infrastructure available for recycling, and if so which types?
3. Can your suppliers deliver goods in reusable packaging, or offer take-back arrangements for packaging that facilitate an overall increase in recycling?

##### Key Actions

1. Leverage the company's circular economy strategy, if you have one, to make procurement decisions more circular?
2. Define what full circularity looks like for your procurement strategy and target how it influences your key sourcing needs.
3. Identify the role plastics play in the procurement of goods, services and work across the organisation and be mindful that these may vary across spend categories, departments /divisions, venues, and locations.
4. Identify how recyclable the different plastics are at a local level to inform tactical planning for procurement priorities (eliminate, reduce, reuse, recycle). Speak with suppliers who should be able to provide details about the recyclability of different products such as packaging. If required conduct market dialogue.

Recyclability is not just about the type of plastic but also the form of the product. Is it too small to be effectively recycled, like plastic stirrers? Is it a composite form like many plastic pouches or a mixture of materials like some sandwich packs and food bags? If so, or you are unsure, then aim to eliminate or reduce the dependency on these types of products.
5. Engage with internal (e.g. users, sustainability manager, waste manager) and external stakeholders (suppliers, waste contractors, interest groups) to inform planning and procurement decisions.
6. Speak to waste team and /or sustainability team to identify what can be recycled locally and aim to exclude any polymers that can't through the technical specification (Step 3).
7. Do not specify compostable plastics if they cannot be composted to a recognised standard locally. Where compostable materials are used, they should be captured separately from other plastics and recyclable materials and sent to composting facilities to avoid cross-contamination of material streams. Your waste contractor should be able to tell you if this is possible and how to avoid recycling stream contamination and increased waste going to incineration or landfill.
8. Challenge the procurement requirements and reframe to find circular economy opportunities and alternative sourcing opportunities to reduce the dependency on plastics and to substitute virgin plastic inputs.
9. Use the knowledge gained in the pre-tender planning stage to make tactical decisions regarding the tender process (see Section 4.2).

## 4.2 Tender stage actions

### 4.2.1 Using purchasing power

Alternatives to plastic catering packaging and consumables may initially be more expensive than the current plastic equivalent. Market dialogue should therefore seek to understand the options available, and the associated costs compared to the standard plastic packaging item. Public sector purchasing power via framework agreements or collaborative purchasing arrangements (e.g. across municipalities) may present options to ensure sustainable alternatives can be sourced at the best available price.

For other packaging, e.g. packaging of ICT products or furniture or other products and consumables, creating and presenting a consistent message to suppliers around packaging requirements will help suppliers and their supply chains adapt more quickly and cost effectively. This will also help reduce the chance of price fluctuations and potentially of revision back to non-recyclable types of plastics. One controlling factor in encouraging demand-pull to reduce single use plastic is the availability of suitable collection and recycling facilities -waste infrastructure. The potential for demand-pull can not only influence the avoidance of hard-to-recycle plastic packaging but can also potentially create a critical mass for effective collection and recycling services across municipalities or public sector organisations. Demand-pull is not limited to the public sector and may best be achieved through collaborative procurement. Recycling facilities will most likely be dominated by municipal (household) waste recycling along with commercial and even industrial/agricultural waste recycling and understanding the mix will inform demand and the options available.

Addressing plastic impacts therefore has important implications in the public procurement of waste and collection infrastructure or the procurement of private sector waste management services. One alternative is to ensure suppliers are able to offer take-back services and are able to reuse or recycle the used packaging. This can also 'incentivise' suppliers to adopt reusable packaging materials as a more cost-effective solution. Suppliers able to take-back packaging materials, including plastics, can be rewarded in the evaluation criteria for suppliers.

### Supplier selection: take-back of packaging

#### Minimising packaging impacts –

The Tenderer should provide details of how sustainable materials and recycled content are used to the maximum degree that is feasible in plastic and cardboard packaging materials including any innovative approaches/materials. (max 1 point)

#### Services which extend the useful life of materials, components, products, packaging –

The Tenderer should outline their current take-back furniture scheme and current or future initiatives for repair, renovation, reupholstery, take-back for reuse and re-manufacturing of products that have become surplus to Council requirements or have reached the end of their useful lives. Initiatives in conjunction with supply chain partners including SMEs, third sector organisations and supported businesses and details of relevant warranties provided may be included. Tenderers should note that only those products that relate to the subject matter of the framework can be taken into account in this evaluation. (max 1 point)

*Source: Scotland Excel - Supply, Delivery & Installation of Education & Office Furniture Framework, 2021*

### 4.2.2 Standards and labels

Standards and guidance are useful procurement tools and lay the foundations for a range of more sustainable products and services. Environmental labelling standards require that consideration be given to all relevant aspects of the life cycle of the product when such claims are developed. Self-declared environmental claims may be made by manufacturers, importers, distributors, retailers or anyone else likely to benefit from such claims. Environmental claims made in regard to products may take the form of statements, symbols or graphics on product or package labels, or in product literature, technical bulletins, advertising, publicity, telemarketing, as well as digital or electronic media, such as the Internet.

There are three primary international bodies: International Organization for Standardization (ISO), ASTM International (ASTM), and The European Committee for Standardization (EN).

However, there are many national standards bodies that have significant outreach since they cover the manufacture of products like packaging, for example the China Environmental United Certification Center (CEC)<sup>16</sup>.

Verification of self-declared claims in products, e.g. recycled content of plastic packaging, can be challenging. Standards like ISO 14021 can help in determining self assessed claims for recycled content.

The EU has also developed a specific standard, EN 15343, for plastics recycling traceability and assessment of conformity and recycled content. It aims to encourage proper recycling of plastics by standardising it, particularly focusing on the process for the traceability and assessment of conformity and recycled content of recycled plastics.

Selected standards and ecolabels relating to plastics (and packaging) are summarised in Table 2.

**Table 2** Selected international standards relating to plastics packaging

Category	International standard
Packaging reuse	ISO 18603 specifies the requirements for a packaging to be classified as reusable and sets out procedures for assessment of meeting the requirements, including the associated systems. The procedure for applying this International Standard is contained in ISO 18601.
Materials & Recyclability	ISO 18604 Material Recycling - gives guidance on which packaging can be classified as recoverable by material recycling
Compostable & Biodegradable	ASTM D6400 Standard Specification for Labelling of Plastics Designed to be Aerobically Composted in Municipal or Industrial Facilities, and/or ASTM D6868 Standard Specification for Labelling of End Items that Incorporate Plastics and Polymers as Coatings or Additives with Paper and Other Substrates Designed to be Aerobically Composted in Municipal or Industrial Facilities.  ISO 18606 Packaging and the environment — Organic recycling.  EN 13432 Packaging - Requirements for packaging recoverable through composting and biodegradation. Note: home compostability is not currently addressed through international or European standards.
Biobased	ASTM D6866 Test Methods for Determining the Biobased Content of Solid, Liquid and Gaseous Samples Using Radiocarbon Analysis.
Recycled Content	EN 15343, for plastics recycling traceability and assessment of conformity and recycled content.
General Eco-Labels	These can also cover the categories above depending on the nature of the claim.  ISO 14020 Environmental labels and declarations — General principles  ISO 14024 Environmental labels and declarations — Type I environmental labelling — Principles and procedures. The definition of an ISO 14024 Type 1 label is: “a voluntary, multiple-criteria based, third party programme that awards a license that authorizes the use of environmental labels on products indicating overall environmental preferability of a product within a particular product category based on life cycle considerations”.  ISO 14021:2016 Environmental labels and declarations — Self-declared environmental claims (Type II environmental labelling). Type II claims made by manufacturers, importers, retailers, or distributors about environmental characteristics of a product or service.  ISO 14025 Type III environmental declarations — Principles and procedures. Type III environmental declarations as described in ISO 14025 are primarily intended for use in business-to-business communication.  Further information on ecolabels can be found through a variety of consolidated sources, for example the <a href="#">Ecolabel Index</a> .

\* [Environmental labels](#). ISO Environment, 2019

<sup>16</sup> For example, the Technical requirement for environmental labelling products: Plastic packaging products (HJ 209-2017). 2017, CEC Environmental Label.

Procurers should always be aware there are variations across standards just as there are across certification labels. For example, the requirements and calculations for recycled content percentage of packaging vary by the different certifiers who are implementing them. Further, while standards provide the testing requirements for specific claims, they are often disconnected from real life practice as they don't consider accessibility or availability of necessary infrastructure or how real-life conditions may impact the potential for the claim to be fulfilled. One example is the mismatch in timeframes on composting. Most industrial composting standards use 12 weeks as the maximum amount of time it can take a plastic item to fully biodegrade. However, many composting facilities that have accelerated their processes and composting times to drive greater throughput and financial viability. This often means that composters either no longer accept 'compostable' plastic items or they may be screened out as contamination from the compost product and end up in landfill or incineration<sup>17</sup>.

There are also numerous 'on-pack' and plastics product labels – not to be confused with ecolabels – that are common, recognisable consumer communication tools. These typically cover 6 main themes, and understanding the scope and limitations of these types of labels is important from a procurement perspective if they are referred to in requirements or specifications:

- Recycled content;
- Biobased plastics;
- Recycling guidance;
- Recycling financing; and,
- Compostability and biodegradability.

The 2020 Consumer Information Programme of the One Planet Network on recycling guidance covers the strengths and weaknesses of these types of consumer information label in depth<sup>74</sup>.

#### 4.2.3 Procurement criteria

Green public procurement (GPP) criteria provide clear, verifiable, justifiable and potentially ambitious environmental criteria based on a life-cycle approach for products containing plastics.

Procurement criteria relating to plastics may be covered through:

- Supplier selection;
- Technical specification requirements;
- Award criteria; and,
- Contract management & performance clauses.

The majority of criteria relating to plastics are typically associated with one, or a combination of the following:

- Packaging;
- Recycled content;
- The marking of plastics over a given size (e.g. 25g) according to ISO 11469 with ISO 1043 for the purposes of improving recycling; and/or
- Toxicity, e.g. additives in the form of colourants, fillers, plasticisers, stabilisers, and flame retardants (see Box: Hidden Plastics).

Model wording, e.g. for packaging (see Box I), can be adapted for use where no existing criteria wording is available.

<sup>17</sup> "Can I Recycle This?": A Global Mapping and Assessment of Standards, Labels and Claims on Plastic Packaging. 2020 UN Environment Consumer Information Programme of the One Planet Network

### Box I: Example of model wording - packaging

[Single use] plastic packaging may only be used where alternatives with lower environmental impacts are not available. When [plastic] packaging is needed, preference should be given to reusable packaging.

When single-use packaging is used, the following shall apply:

- The packaging consists of one polymer or plastic polymers that are separate from each other (not composite or bonded), and other packaging materials.
- The [plastic] packaging materials are widely recyclable through the local collection and recycling infrastructure\*.
- Plastic packaging should consist only of [*specify*, for example PET, PP, HDPE, LDPE or PS] and these may consist of both biobased and fossil raw materials.
- A minimum [*specify*]% of recycled content for plastic packaging to help close material loops may also be set or assessed in the context of the award criteria.

\* On the basis of pre-tender research and/or prior market engagement. This does not limit reprocessing to local infrastructure but means a cost-effective system for collection should be in place. This also addresses the use of compostable plastics with regard to ability to collect and recycle separately from non-compostable plastics.

Criteria may also be used to ensure that suppliers are complying with mandatory requirements and providing explanations for the products offered, e.g. packaging formats and materials, as the example from the Netherlands shows.

## Criteria examples: Packaging recycled content

### Use of recycled materials for packaging #1:

Where cardboard boxes are used, they must have a recycled material content<sup>1</sup> of at least 80%. Where plastic bags or plastic sheets are used for the final packaging, they must have a recycled content of at least 75%<sup>2</sup>. This minimum requirement will not apply if bio-based material is chosen.

#### Verification:

The tenderer may be asked to provide a sample of the product packaging with the proposal, together with an accompanying statement declaring that this criterion has been satisfied.

Source: *Environmental Criteria for Sustainable Workwear*. Pianoo, Netherlands

### Packaging #2:

The packaging must consist of:

- a) At least 80% by weight<sup>2</sup> of recycled material<sup>1</sup> in paper or cardboard; or,
- b) At least 60% by weight of recycled material if made of plastic.

Source: *Italian Government Minimum GPP Criteria for Interior Furniture*

### Packaging #3:

The packaging above a minimum limit of 30g per sales unit must be:

- a) made of recycled material<sup>1</sup>; or
- b) consist of renewable resources; or
- c) be reused (reusable system).

Every packaging material must easily be broken down into usable parts be dismantled, each made of one material (e.g. cardboard, paper, plastic, textile).

#### Verification:

A description of the product packaging must be submitted and a corresponding declaration stating that the packaging meets these criteria.

Source: *Mandatory Packaging Requirements for Furniture Procurement*. Austrian Federal Government

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### Post-consumer recycled content

Proportion, by mass, of post-consumer (1) recycled material in a product or packaging.

Notes –

1. ISO14021's usage of term clarifies post-consumer material as material generated by households or by commercial, industrial and institutional facilities in their role as end users of the product which can no longer be used for its intended purpose. This includes returns of material from the distribution chain.

Source: *ISO 14021:2016 modified, Environmental labels and declarations — Self-declared environmental claims (Type II environmental labelling), Usage of terms, modified (focus on post-consumer recycled material)*

2. Recycled content declarations or targets should aim to be beyond a threshold value outperforming the market average (based on a verifiable certification scheme).

### Criteria example: Mandatory explanation of choice of packaging

The tenderer must explain the choice of packaging, in line with the Essential Requirements arising from the European Packaging Directive and the Packaging Management Decree<sup>18</sup>. The explanation must set out:

1. the substantiation for the choice of packaging;
2. the way in which you test whether your choice of packaging is the most optimal from an environmental point of view, for example, using the standards NEN-EN 13427 to NEN-EN 13430 or your own assessment framework;
3. What measures have been carried out and will be taken to keep the volume and weight of the packaging as small as possible while continuing to meet the functional requirements in the field of safety, hygiene and acceptability for the packaged product.

#### **Verification:**

Documentary evidence showing that the NEN-EN 13427 to NEN-EN 13430 standards have been applied by the tenderer and/or his supplier. This way, the choice of packaging is in any case in line with the Essential Requirements.

Document showing that another appropriate/ own assessment framework has been applied. Or equivalent.

*Source: Netherlands government, MVI Criteria tool*

The 2019 EC GPP criteria for food and catering now also includes vending machines. This introduces the requirement for vending machines to enable reusable cups as an option (see Box II).

### Criteria example: Reuse – Vending machines

#### **Reusable cups**

The tenderer must provide drink machines dispensing non-prepacked hot and/or cold drinks that enable the use of reusable cups (e.g. porcelain cups, glass cups) instead of disposable cups. If disposable cups are not avoidable on grounds of food hygiene, consumer safety and public health (see note above), they must be recyclable, made of either recyclable plastic or compostable material.

#### **Verification:**

The tenderer must provide the technical sheet of the vending machine to be used to provide the service where compliance with this requirement is stated.

Note: This criterion covers drink machines dispensing hot and/or cold drinks. This requirement only applies when it is appropriate on grounds of food hygiene, consumer safety and public health; under those conditions the tenderers must be excluded from liability if the beverage provided is contaminated by the reused cup.

*Source: Food, catering & vending machines. GPP Criteria. European Commission, 2019*

Recycled content can be specified as targets in criteria, e.g. in packaging. Verification can be an issue so evidence of standards or ecolabel (third party certified – Type 1; or, self-declared – Type 2) compliance may be required (see Step 7). The presence of recycled content should not limit the functional performance of the packaging. This also applies if requirements are set for 'lightweighting' packaging to reduce packaging waste.

<sup>18</sup> [Factsheet: Dutch legislation](#). 2015, Netherlands Institute for Sustainable Packaging

### Criteria example: Mandatory explanation of choice of packaging

Recycled content (Advanced competency): Packaging should include recycled content, in such a way that packaging functional features to protect the product do not weaken and there is no danger packaging breakage or food pollution. Recycled content percentage shall be specified on a contract-by-contract basis.

**Verification:**  
Supplier confirmation.

*Source: Netherlands government, MVI Criteria tool*

As well as technical requirements for products, criteria can also require logistical and communication activities, for example, the tender for catering services to the US National Cancer Center, Rockville, Maryland required bidders to enable both service provision for customers bringing their own reusable items like cups and also communicating the option (See Box IV).

### Criteria example: Catering

Sustainability (*inter alia*):

- ... Utilizing bulk purchasing programs in lieu of individually packaged products to include, but not be limited to, beverages and condiments.
- ... Programming for customers that bring their own re-usable products (e.g. coffee mugs, soda cups, lunch trays, etc.).
- ... Utilizing compostable pre-bottled beverages or pre-bottled beverages that minimize plastic content.
- ... Featuring disposables and trays (reusable and disposable) that contain recycled content, are processed chlorine free and are petroleum-free (except reusable trays). All disposable products must be “compostable” specify brand or organic composition and compatible with the recycling/compost system provided. Use of Polystyrene Foam is prohibited.
- ... Minimize waste stream and maximizing the use of recyclable content products.

*Source: Solicitation # GS-11P-12-YE-C-0165 (2013), Instructions to Offerors and Evaluation Factors.  
GSA Cafeteria Services for National Cancer Center, USA*

As well as setting technical requirements for the use of plastics, criteria may also be used for the evaluation of offers and contract award. These can be used to encourage the supply of greener products (see Box V), for example, those going beyond minimum levels of recycled content (where appropriate).

### Criteria example: Award (evaluation) – Food

**Packaging** (core criteria)  
Additional points will be awarded for the percentage of products that:

- Are supplied in secondary and/or transport packaging with more than 45% recycled content.
- Are supplied in packaging materials based on renewable raw materials.
- Are not supplied in individual portions (single-unit packages).

**Verification:**  
The supplier must provide a signed declaration indicating which of these criteria it is able to meet. The contracting authority will verify compliance during the contract period, and appropriate penalties will be applied for non-compliance.

*Source: European Commission, Catering & Food Green Public procurement (GPP) Product Sheet. 2009*

*Note: packaging has been removed from the latest (2019) GPP criteria. The rationale for this is provided in the EC GPP criteria for food procurement, catering services and vending machines: Final Technical Report (p.38). European Commission JRC, 2019*

#### 4.2.4 Summary of tender actions

##### Key Questions

1. Can your supplier(s) substitute plastic in items with another material of lower environmental impact?  
For example:
  - replacing single use items with reusable items. For example, substituting single use aprons, caps, shoe covers etc. with washable natural fibre alternatives.
  - targeting particular polymers and formats (e.g. expanded polystyrene trays) through substitution of plastics with non-plastic, fully recyclable, alternatives. Some quick wins include:
    - eliminate disposable knives forks, spoons, straws and stirrers from the facility canteen immediately; and/or,
    - prohibit the use of disposable plates, bowls, single use pouches and sachets, and clamshell food containers in outsourced food services when the contract is renewed.
2. Can you combine the total cost of ownership and circular economy related value in one analysis to maximise value within tenders?
3. Determine whether you can ask a functional question that allows suppliers to offer more innovative and circular solutions for eliminating, reducing or reusing plastics.
4. Can you purchase items that eliminate or use less plastic?
5. Can you purchase items containing reusable plastics? For example, can your supplier(s) deliver goods in reusable packaging, or offer take-back arrangements for packaging that facilitate an overall increase in recycling?
6. Can you ensure that all plastics used are recyclable?
7. Can you specify levels of recycled content for plastics?
8. Can you purchase items that are made from safe and renewable plastics?
9. Can you set requirements to eliminate problematic or unnecessary packaging through redesign and innovation, to avoid materials, components or formats that:
  - a. are not reusable, recyclable or compostable;
  - b. can be avoided altogether;
  - c. hinder or disrupt recycling;
  - d. have a high likelihood of being littered; or,
  - e. contain hazardous chemicals?

##### Actions

1. Ensure that relevant national requirements are included in tender requirements as a minimum. There are various international conventions (e.g. multilateral environmental agreements) and restrictions on the inclusion of certain substances. These typically apply to electrical equipment and building products and to the transnational shipment of wastes.
2. Ensure requirements comply or exceed local restrictions on plastics and ensure that manufacturer claims are fully verified at the tender evaluation and contract management stages.
3. Also consider the impacts of accessories (e.g. cables, chargers, keyboards etc) and supplies (e.g. consumables) as these not only frequently contain plastic components but also require additional packaging.
4. Determine what well of market engagement is necessary in proportion to the subject matter.
5. Ensure a balanced and proportionate approach to both technical and evaluation criteria with regard to sustainable procurement and whole life, circular impacts.

## 4.3 Post-tender actions

### 4.3.1 Capacity building to support behaviour change

Building both capacity and knowledge on reducing the impacts of plastic through sustainable procurement covers two principal areas:

1. understanding the impacts of procurement at an organisational scale; and,
2. developing sufficient knowledge and capacity to implement impact reduction strategies through sustainable procurement.

One of the main challenges previously noted is that procurers typically procure products made entirely or partly from plastic rather than ‘procuring plastic’ as a material product. As Step 1 (Section 4.2.1) noted, the first action is to understand which plastics are currently being used, where and what the potential to address them is. Building this knowledge requires both auditing – directly and in conjunction with suppliers – and procurement spend analysis and prioritisation. One example is the Health Care Without Harm plastics toolkit for hospitals<sup>19</sup>. This provides a practical how-to guide for conducting a simplified plastics audit, guidance on how to reduce plastics within healthcare, and an outline of advocacy options within and beyond the healthcare sector. In the absence of more sophisticated spend analysis approaches, the Product Categorisation Scorecard in Annex 1 provides a simple approach to identifying categories with likely hotspots for plastics actions. Communication, such as the on-product labels for consumers, is especially important as the impacts from plastics require a lifecycle approach to thinking about the impacts of procurement. This, however, needs to be complemented by internal capacity building around the lifecycle impacts of procurement choices relating to the reduction of impact from plastics. This capacity building involves a much broader group of stakeholders than is traditionally considered when talking about purchasing and procurement.

Any changes to operational practices should be supported by relevant guidance and training, as required, in order to build capacity as part of procurement professionalisation. It should also be supported through staff communication that explains

the reasons for the changes and provide guidance to ensure that initiatives are effective, and plastic products and packaging being disposed of correctly. Communicating actions to stakeholders may also be appropriate where decisions are made to maintain (rather than seek alternatives to) existing packaging or consumables – for example, where decisions are made to continue using plastic packaging where this is already recycled.

Capacity building around the role of procurement in reducing impacts from plastics should be integrated into broader sustainable procurement training and performance improvement programmes. This enables the wider impacts and benefits of sustainable procurement to be viewed and undertaken in a more strategic manner. It also enables sustainable procurement to be more clearly recognised as a strategic for policy delivery, for example in encouraging a more circular economy<sup>20</sup>.

### 4.3.2 Monitoring and evaluating the impact of changes

To ensure that outcomes of any changes can be communicated to relevant internal and external stakeholders, it is important to set out a clear framework for monitoring the impact of any interventions. Indicators may include financial (cost implications), environmental (waste reduction, increased recycling, reduced littering etc.), and social (funds raised for good causes), and provide the basis for setting and delivering attainable targets.

Targets should consider the aims and objectives of internal and external stakeholders, and be SMART - Specific, Measurable, Achievable, Relevant, Time-bound – for example, reduce the purchase of avoidable packaging in catering applications by 75% by 2024, against the 2021 baseline. These should also be linked to key performance indicators (KPIs) on sustainable procurement where these already exist.

If plastics reduction KPIs do not already exist, start with a few indicators that are easy to manage – especially if sustainable public procurement is new to the organisation, or when no central electronic tools are available to automatically track data. The number and sophistication of plastics reduction KPIs and broader SPP KPIs can then increase over time and as necessary.

<sup>19</sup> [Mobilizing Health Care to Prevent Plastic Pollution: A Plastics Toolkit for Hospitals](#). Health Care Without Harm, 2019

<sup>20</sup> [Building Circularity into our Economies through Sustainable Procurement](#). UN Environment, 2018

Define the scope of output indicators and monitoring methodologies by determining whether they cover, for example:

- all products, services or works or only certain prioritised groups (following an initial prioritisation exercise (see Step 1));
- all procurements, or only those above a certain threshold; or,
- only direct purchases or also indirect, i.e. purchases by sub-contractors - it may be more difficult to track expenditure, polymer types, formats and quantities by the latter.

Establish performance levels to encourage gradual implementation and to demonstrate progress to all relevant stakeholders, especially when monitoring as part of broader SPP institutionalisation and where data acquisition and quality are low.

Further information on setting up monitoring and reporting methodologies can be found in the the UN Environment guidance on reporting and implementation of SPP<sup>21</sup>.

#### 4.3.3 Informing policy

The guidance is aimed primarily at practitioners and focuses on actions within the procurement cycle of tenders. However, public procurement is an important policy lever and a clear action identified has been to identify the capacity and capability of waste infrastructure to the procurement decisions for plastics. Therefore, a key next step is to evaluate how the impacts of procurement influence the development of local and national waste infrastructure going forward. This influence can be in two ways:

- Influencing waste policy by creating an evidence-based approach to improving the collection and management of plastics waste in line with the waste hierarchy and maximising value retention.
- Using existing procurement tools (e.g. carbon, sustainability, life cycle costing etc) to ensure that future procurement of waste infrastructure and waste management services provides the best environmental outcome.

In terms of improving waste management, the 4 main principles according to the UN (2018)<sup>22</sup> are:

- Segregation of waste at sources: plastics, organic, metals, paper, etc.;

- Effective collection of the segregated waste, transport and safe storage;
- Cost-effective recycling of materials, including plastics; and,
- Less landfilling and unregulated dumping in the environment.

The headline findings from the Pew Charitable Trusts 2020 report<sup>23</sup> are of direct relevance to the role procurement can play in delivering policies aimed at reducing the impact of plastics. these state:

3. Business-as-Usual will result in nearly three times more plastic leaking into the ocean in 2040.
4. Current commitments are inadequate for the scale of the challenge.
5. Single-solution strategies cannot stop plastic pollution.
6. Existing solutions can solve about 80 per cent of the problem.
7. Innovation is essential to a future with near-zero plastic pollution.
8. The solution is economically viable, but a major redirection of capital investment is required.
9. The solution requires a new plastics economy, with opportunities, and risks, for industry.
10. Solutions should be differentiated by geography and plastic category.
11. System change offers co-benefits for the climate, health, jobs, and working conditions.
12. An implementation delay of five years will result in an additional 80 million metric tons of plastic going into the ocean.

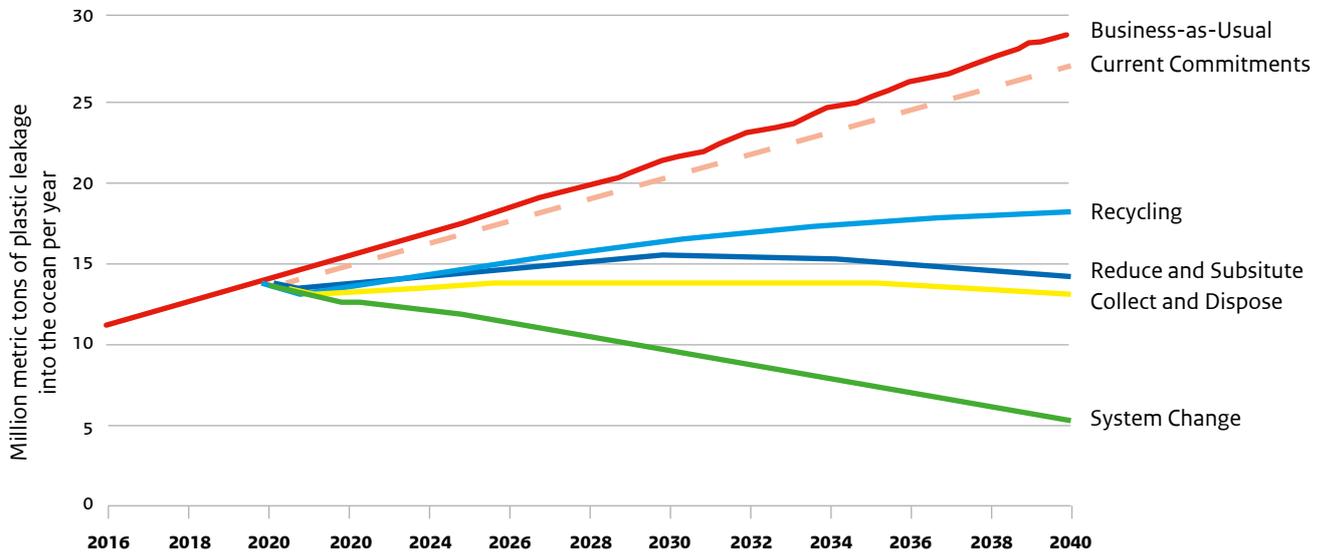
**The recognition that a systemic change is required highlights the fact that procurement has multiple impacts and potentially multiple sustainable benefits. The procurement actions to mitigate the impacts of plastics therefore need to be part of an integrated sustainable procurement policy and practice framework.** This conclusion is supported by the recognition that single solution strategies (Figure 6) cannot address the problem in isolation. It emphasises that focussing procurement actions solely on criteria within tenders is a part of the solution but not the whole solution for procurement.

<sup>21</sup> Monitoring Sustainable Public Procurement Implementation. 2016 UN Environment Programme

<sup>22</sup> [Single-use plastics: A roadmap for sustainability. Factsheet for policymakers.](#) 2018 UN Environment Programme

<sup>23</sup> The Pew Charitable Trusts. [Breaking the Plastic Wave: A Comprehensive Assessment of Pathways Towards Stopping Ocean Plastic Pollution.](#) 2020

Figure 6 Land-based plastic leakage under different scenarios



Source: *Breaking the Plastics Wave*, 2020

Figure 6 shows expected levels of plastic leakage into the ocean over time across different scenarios. The graphic shows that although upstream-focused pathways (Reduce and Substitute Scenario) and downstream-focused pathways (Collect and Dispose

Scenario and Recycling Scenario) reduce annual leakage rates relative to business as usual, they do not reduce leakage below 2016 levels. Only the integrated upstream-and-downstream scenario (System Change Scenario) can significantly reduce leakage levels.

#### 4.3.4 Summary of post-tender actions

##### Actions

1. Establish performance levels to encourage achievable and sustained implementation of (plastics) goals and to demonstrate progress to all relevant stakeholders.
2. Include plastic reduction targets in contract performance management for both suppliers and contract managers.
3. Create an open communication channel with suppliers to routinely evaluate how well they fulfil the targets and circular economy needs set by the organisation and defined in the contract.
4. Ensure all staff involved across the whole procurement and product lifecycle understand, and are committed to, their role in the circular procurement of plastics.
5. Embed sustainable and circular procurement principles within all relevant organisational policies and strategies to create a mandate for procurement action.

# 5 Summary and recommendations

Table 3 provides a summary of procurement actions and benefits around the plastics 'loop'. These follow the waste hierarchy principles set out in Section 4.1 by seeking to avoid, optimise and extend product lifetimes, and close plastic materials loops to avoid further leakage of plastics into the wider environment. Following these principles will contribute to the following objectives:

- Eliminating problematic and unnecessary plastics within public procurement.
- Encouraging greater reuse to reduce the dependency on single use plastic items.
- Increasing demand for recycled plastic, making recycling more commercially viable and therefore more attractive to stakeholders in the plastics value chain.
- Increasing recyclability of plastics to close the plastic 'loop'.
- Reducing use of harmful substances in order to contribute to previous objectives and to make the sustainable consumption and production of plastics safer for all stakeholders involved in the plastics value chain, especially those at end-of-life.

Procurement actions to reduce the impacts of plastic pollution are consistent with circular economy principles. Adopting a circular approach to procurement therefore aligns them and enables a more strategic approach to procurement that reduces the impacts of plastics from public procurement, creates circular economy benefits (Table 2) and support the UN Sustainable Development Goals.

**Table 3** Summary of actions and potential benefits

Circular procurement principle	Circular procurement action	Requirement	Internal benefits	Wider benefits
<b>Avoid unnecessary and problematic plastics</b>	<ul style="list-style-type: none"> <li>• Avoid new products where possible</li> <li>• Avoid packaging where practical, e.g. primary fresh food produce packaging</li> <li>• Substitute single use plastics with other recyclable materials</li> </ul>	<ul style="list-style-type: none"> <li>• Avoid products supplied in individual portions or single units.</li> <li>• Avoid hard to recycle and problematic plastics including, but not limited to, expanded polystyrene (EPS), PVC and halogenated packaging.</li> <li>• Avoid any oxo-degradable plastic packaging.</li> <li>• Avoid problematic single use plastic items like straws, stirrers, in line with national bans on specific items.</li> <li>• Avoid non-recyclable plastic cups in take-away and vending machines.</li> <li>• Buy fresh and seasonal produce with minimal packaging.</li> </ul>	<ul style="list-style-type: none"> <li>• Reduces organisation carbon footprint of packaging and procurement</li> <li>• Contributes to increasing recycling rates and reduction in waste to landfill or incineration/energy recovery.</li> <li>• Reduced waste disposal costs.</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced virgin non-renewable material use</li> <li>• Reduce microplastics in the terrestrial and marine environments</li> </ul>
	<ul style="list-style-type: none"> <li>• Where packaging can't be avoided, minimise packaging where possible</li> <li>• Consider refill options in place of single use items Reduce consumption of virgin materials</li> <li>• Consider bulk buy options to reduce packaging need</li> </ul>	<ul style="list-style-type: none"> <li>• Use reusable primary packaging where possible.</li> <li>• Use concentrated products that can be diluted during use, if needed.</li> <li>• Use recycled content in packaging</li> <li>• Require evaluation of condiments (sugar, salt pepper, sauces, etc.) in individual units to avoid problematic single use formats.</li> <li>• Require the use of reusable tableware (cutlery, glassware, crockery, tablecloths etc) in place of single use items.</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced waste arising through procurement actions</li> <li>• Implement policies on reduction of single use plastics</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced waste to landfill and associated environmental impacts</li> <li>• Increase more sustainable consumption and production</li> </ul>
<b>Optimise lifetimes</b>	<ul style="list-style-type: none"> <li>• Prefer reusable packaging</li> <li>• Repair existing products</li> <li>• Reuse-internally or externally</li> </ul>	<ul style="list-style-type: none"> <li>• Require reusable secondary (transport) packaging where feasible.</li> <li>• Require suppliers to provide take-back schemes for primary and secondary packaging where relevant.</li> </ul>	<ul style="list-style-type: none"> <li>• Improved resource efficiency</li> <li>• Reduces carbon footprint of packaging and procurement</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced environmental impacts</li> <li>• More sustainable consumption and production</li> </ul>
			<ul style="list-style-type: none"> <li>• Smaller carbon footprint</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced waste to landfill and associated carbon emissions</li> </ul>

Circular procurement principle	Circular procurement action	Requirement	Internal benefits	Wider benefits
<b>Close material loops</b>	<ul style="list-style-type: none"> <li>Select more recyclable materials</li> <li>Recycle materials</li> <li>Displace virgin materials</li> <li>Reduce Landfill</li> </ul>	<ul style="list-style-type: none"> <li>Require packaging to be made of materials compatible for recycling with local as well as national reprocessing technology in your area (e.g. PET, HDPE, PE).</li> <li>Require compostable materials only where local recycling infrastructure can deal with it.</li> <li>Require contractors to provide take-back recycling schemes for their packaging.</li> <li>Require waste separation by contractors to maximise recycling and material value.</li> <li>Require contractors to set a minimum and a target level for packaging waste in contracts with high generation of packaging waste, e.g. construction.</li> </ul>	<ul style="list-style-type: none"> <li>Robust framework to ensure partners aligned with organisational aims</li> <li>Reduced waste disposal costs</li> </ul>	<ul style="list-style-type: none"> <li>Bulking homogeneous wastes for more efficient, higher quality recycling</li> <li>New (Green) training &amp; job opportunities throughout the supply chain</li> <li>Reduced demand for landfill space</li> </ul>
		<ul style="list-style-type: none"> <li>Require recycled content in packaging and products containing plastics</li> </ul>	<ul style="list-style-type: none"> <li>Improved reputation</li> </ul>	<ul style="list-style-type: none"> <li>Create demand for secondary materials and increase commercial viability of recycling infrastructure Increased social value</li> </ul>
<b>Reducing waste disposal landfill</b>	<ul style="list-style-type: none"> <li>Ensure transparency in residual waste transfer to designated Energy from Waste and/or regulated landfill</li> </ul>	<ul style="list-style-type: none"> <li>Require waste transfer notes to regulated landfill sites, incineration or energy recovery facilities.</li> </ul>	<ul style="list-style-type: none"> <li>Transparency and legal compliance -reduced risks of non-conformity and penalties.</li> </ul>	<ul style="list-style-type: none"> <li>Reduced waste to landfill, emissions and associated environmental impacts</li> </ul>

# 6 Further sources of information

## See also references in footnotes

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# 7 Annex 1: Common procurement categories and plastic packaging

**Table A1** Common procurement categories containing plastic packaging and Product Categorisation Scorecard template \*

*Note: the spend value, intensity, impact and potential influence scores may be assigned according to a public sector organisation's specific context to provide a prioritised list for targeting actions.*

UNSPSC description	UNSPSC code	CPV description	CPV code	ISIC description	ISIC Code	Spend value (1= low; 2= medium; 3=high)	Packaging intensity (1= low; 2= medium; 3=high)	Packaging impact (1= low; 2= medium; 3=high)	Potential to influence (1= low; 2= medium; 3=high)	Total
<b>Office Equipment and Accessories and Supplies</b>	44000000	Office & computing machinery, equipment & supplies (ex. furniture and software)	30000000	Office Machinery & Equipment (ex. Computers & Peripheral Equipment)	2817					
<b>Computer Equipment and Peripherals and Components and Supplies</b>	43000000	Computer equipment & supplies	30200000	Computers And Peripheral Equipment	2620					
<b>Medical Equipment and Accessories and Supplies</b>	42000000	Medical equipment, pharmaceuticals & personal care products	33000000	Medical & Dental Instruments & Supplies Inclusions	3250					
<b>Food Beverage and Tobacco Products</b>	50000000	Food, beverages, tobacco & related products	15000000	Wholesale of Food, Beverages & Tobacco	4630					
<b>Cleaning Equipment and Supplies</b>	47000000	Cleaning and polishing products	39800000	Manufacture of Soap & Detergents, Cleaning & Polishing Preparations, Perfumes & Toilet Preparations General Cleaning of Buildings	2023 8121					
<b>Domestic appliances</b>	52140000	Domestic appliances	39700000	Manufacture of Domestic Appliances	2750					
<b>Structures and Building and Construction and Manufacturing Components and Supplies</b>	30000000	Construction structures and materials; auxiliary products to construction (excepts electric apparatus)	44000000	Construction of Buildings Construction of Roads & Railways Construction of Utility Projects	4100 4210 4220					
<b>Building and Facility Construction and Maintenance Services</b>	72000000	Construction work Repair and maintenance services	45000000 50000000	Combined Facilities Support Activities Other Construction Installation	8110 4329					
<b>Live Plant and Animal Material and Accessories and Supplies</b>	10000000	Agricultural, farming, fishing, forestry & related products	30000000	Agricultural Raw Materials And Live Animals	4620					

UNSPSC description	UNSPSC code	CPV description	CPV code	ISIC description	ISIC Code	Spend value (1= low; 2= medium; 3=high)	Packaging intensity (1= low; 2= medium; 3=high)	Packaging impact (1= low; 2= medium; 3=high)	Potential to influence (1= low; 2= medium; 3=high)	Total
<b>Medical Equipment and Accessories and Supplies Safety apparel Apparel and Luggage and Personal Care Products</b>	42000000 46181500 53000000	Clothing, footwear, luggage articles and accessories	18000000	Wholesale of Textiles, Clothing & Footwear	4641					
<b>Restaurant furniture Accommodation furniture Commercial and industrial furniture Classroom and instructional and institutional furniture and fixtures</b>	48102000 56100000 56110000 56120000	Furniture (incl office furniture), furnishings, domestic appliances (excl lighting) and cleaning products	39000000	Manufacture of Furniture	3100					
<b>Transportation and Storage and Mail Services</b>	78000000	Transport services (excl Waste transport)	60000000	Postal Activities Courier Activities Freight Transport by Road	5310 5320 4923					
Telecommunications Equipment and Components and Supplies and Accessories	34000000	Telecommunications Equipment and Components and Supplies	43000000	Communication Equipment	2630					
Printing and Photographic and Audio and Visual Equipment and Supplies Published Products	45000000 55000000	Printed matter and related products	22000000	Manufacture of Optical Instruments & Photographic Equipment Printing	2670 1811					
Electronic Components and Supplies Electrical systems and Lighting & components, accessories & supplies	32000000 39000000	Electrical machinery, apparatus, equipment and consumables; Lighting	31000000	Other Electrical Equipment Electric Lighting Equipment	2790 2740					
Laboratory & Measuring & Observing & Testing Equipment	41000000	Laboratory, optical and precision equipment (ex. glassware)	38000000	Manufacture of Measuring, Testing, Navigating And Control Equipment	2651					
Furniture and Furnishings	56000000	Furnishing (includes kitchen equipment and catering supplies)	39200000	Manufacture of Made-Up Textile Articles (ex. Apparel) Other Food Service Activities	1392 5629					

UNSPSC description	UNSPSC code	CPV description	CPV code	ISIC description	ISIC Code	Spend value (1= low; 2= medium; 3=high)	Packaging intensity (1= low; 2= medium; 3=high)	Packaging impact (1= low; 2= medium; 3=high)	Potential to influence (1= low; 2= medium; 3=high)	Total
Machinery and transport equipment manufacture	73160000	Transport equipment and auxiliary products to transportation	34000000	Other General Purpose Machinery Urban & Suburban Passenger Land Transport Freight Transport by Road	2819 4921 4923					
Defence and Law Enforcement and Security and Safety Equipment and Supplies	46000000	Security, fire-fighting, police and defence equipment	35000000	Manufacture of Air & Spacecraft And Related Machinery	3030					
Public Utilities and Public Sector Related Services	83000000	Public utilities	65000000							
Bedclothes and table and kitchen linen and towels	52120000	Textile articles	39500000	Manufacture of Made-Up Textile Articles (ex. Apparel)	1392					

\* Comparisons between classification systems are for example only should be checked for direct equivalents and other category equivalents  
Source: Adapted from original plastic packaging impact analysis by Eunomia Research & Consulting across European CPV codes, on behalf of the European Commission.

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