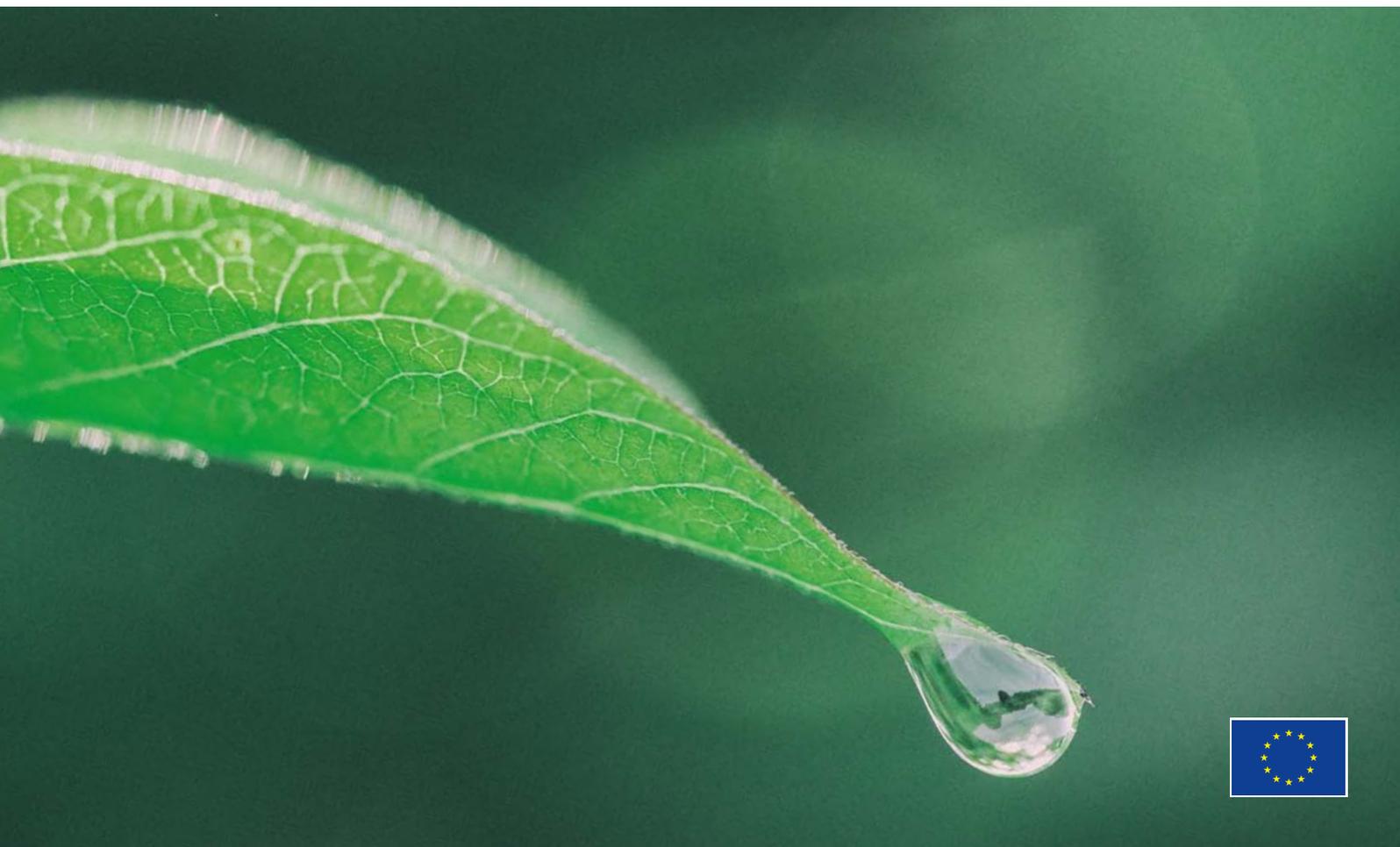


Handbook

ON THE PUBLIC PROCUREMENT OF
BIO-BASED PRODUCTS AND SERVICES

www.innprobio.eu



Imprint

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- About InnProBio:** Launched in March 2015, the European InnProBio project consortium has been raising awareness and increasing the knowledge base of public procurement practitioners about the potential in purchasing products and services made from bio-based materials.
- More information at:**  www.innprobio.eu
www.tools.innprobio.eu
Twitter: #InnProBio

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Foreword



In 2004, when I first came across the ideas of the bio-economy, I could not imagine how this subject would fascinate and inspire me to this day.

The transition of the economy which is linked to fossil-based products to an economy based on sustainably produced biomass and its intelligent use is not only unavoidable for all sorts of reasons, but it also offers many opportunities for the current and future generations. It fits well within the ideas of sustainable use of raw materials and it is essential for achieving climate goals and reducing dependence on coal and petroleum. At the same time, we see spectacular developments in agriculture, forestry and aquaculture as well as in the processing industry, which, combined with years of research and development, lead to the introduction of many new non-food products and materials. Not at the expense of the necessary food production and other traditional uses of biomass, but in addition to that.

We see that the transition to a bioeconomy is underway worldwide. Meanwhile, in my work within the Dutch government as Director of Bio-based Economy and now at the Federation of Bio-economics Netherlands, I note that targeted actions can accelerate this transition. In this way, we in Europe can get a global position in the bioeconomy if cooperate well and respond to developments in the market. Public procurement can play an important role in developing new markets, and can also provide a stable investment climate for bio-based products and services.

A wonderful example of cross-border cooperation I think is the forum for bio-based innovation in public procurement - InnProBio. In this forum, with parties from Germany, the UK, Poland and the Netherlands, this Handbook has been drafted with great effort and commitment. I am convinced that this handbook will find its way to the target group and will enable procurement professionals to contribute substantially to the market development of the bio-economy.

Roel P J Bol

Federation Bio-economy Netherlands

Abbreviations / Acronyms:

ASTM – American Society for Testing Materials, a voluntary standards developing organization
BBPS – Bio-Based Products and Services
CEN TS – European Committee for Standardisation Technical Specification
CPN – Competitive Procedure with Negotiation
CPP – Circular Public Procurement
CPV – Common Procurement Vocabulary
DST – Decision Support Tool
EASME – Executive Agency for Small and Medium-size Enterprises
EC – European Commission
EU – European Union
FAQ – Frequently Asked Questions
GHG – Greenhouse Gas
GPP – Green Public Procurement
InnProBio – Forum for bio-based innovation in public procurement (Horizon 2020 project)
PP – Public Procurement
IPR – Intellectual Property Rights

LCA – Life Cycle Assessment
LCC – Life Cycle Costing
MEAT – Most Economically Advantageous Tender
NEN – The Stichting Nederlands Normalisatie – Instituut, Netherlands standardisation institute
OpenBio – Opening bio-based markets via standards, labelling and procurement (FP7 project, 2013-2016)
PCP – Pre-Commercial Procurement
PPI – Public Procurement of Innovation
R&D – Research and Development
RED – Renewable Energy Directive
SPP – Sustainable Public Procurement
RSB – Roundtable on Sustainable Biomaterials
RTRS – Roundtable Responsible Soy
SME – Small and medium-sized enterprise
TCO – Total Cost of Ownership
WWF – World Wide Fund For Nature

Part 1: Introduction

Many of the products people use on a daily basis are made from fossil raw materials. However, 'bio-based' alternatives for these products are available at an increased rate. Bio-based products are an important step in the transition to the bioeconomy. In the bioeconomy renewable biological resources ("biomass") replace fossil raw materials. Bio-based products are products that are wholly or partly made from biomass (European Standard EN 16575:2014 'Bio-based products – Vocabulary').

1.1 WHAT IS THE BIOECONOMY?

Bioeconomy is a spectrum of economic activities which depart from fossil-based materials. In accordance with the European Commission, bioeconomy refers to the production and extraction of renewable biological resources (known as 'biomass') and their conversion into food and feed; bio-based products (such as timber, fibre, chemicals or bioplastics) and bioenergy (for instance through firewood, biofuels or biogas). In the European Union (EU), the bioeconomy sector has an annual turnover of about 2.1 € trillion (a 2008-2014 average) and employs 18.6 million people (in 2014) constituting about 8.5 % of the jobs in all economic sectors.¹

Although primarily based on activities that have been carried out, in some form or another, for many centuries, such as farming, fisheries or forestry, bioeconomy emerged in the past decade as a knowledge-driven concept aimed at meeting a number of current legal and policy challenges, primarily related to the protection of the environment and emissions reduction but also covering fields such as research and development and innovation. Bioeconomy embraces a wide range of economic sectors, in particular agriculture, forestry, fisheries, food processing, energy, pulp and paper, chemicals and biotechnology.

The bioeconomy spans numerous policy areas, including industry and energy, agriculture, forestry, fisheries and marine resources, climate and environment, science and

research and development. The transition from a fossil-based economy to a bio-based economy can only be successful and sustainable if it ensures the protection of food supply, the environment, climate and biodiversity and if it deals effectively with potential side effects such as loss in soil fertility, hydrologic imbalance and climate change.



¹ https://biobs.jrc.ec.europa.eu/sites/default/files/files/JRC_Bioeconomy_Report2016.pdf

Overall, there are four principles the sustainable bioeconomy should comply with:²

- **Principle of priority for food security:** Food security takes priority over the production of raw materials for industry and energy. Support must be given to the use of synergy effects between food production and the provision of raw materials for energy and industry.
- **Principle of priority for biomass:** Where possible and purposeful, the objective is to cascade the use and combined use of biomass. The cascade of use and intelligent interlinking of value chains or process chains in biomass respectively can improve resource efficiency, defuse possible areas of competition among paths of use and make use of innovation potential.
- **Principle of standards harmonisation:** The bioeconomy needs to take into account increasingly challenging requirements placed upon the way in which goods and commodities are produced. This applies predominantly to standards governing the protection of the environment, nature, and animals, and also compliance with standards of social responsibility.
- **Principle of co-operation:** In developing the bioeconomy there is a need for tightly-knit cooperation between all stakeholders involved, from the political, economic, scientific, and environmental spheres and from civic society.

(Based on the National Policy Strategy on Bioeconomy, Federal Ministry of Food and Agriculture, Germany)³

1.2 WHY PROMOTE BIO-BASED PROCUREMENT?

Drivers of the bio-economy include sustainability, economic opportunities for new products, energy and raw materials security, and improvement of the local and regional economy, particularly the agro-economy. On the basis of accepting that bio-based products can offer significant advantages with their use and application, it is logical that public authorities could set an example, especially in those application categories where a significant portion of public spending goes to.

Since the current market in bio-based products and services is still small, public authorities could provide a platform by functioning as lead customer and increasing demand and thereby strengthening the market for bio-based products and services.

In doing so, public authorities in their procurement function must be transparent and objective in their assessment of products and services and offer bio-based products and services a fair and equal chance within public procurement procedures.

Examples of such function of public authorities as procurement platforms include the encouragement for the use of cleaning agents for cleaning services and packaging and disposable cups in catering services. Often, the use of bio-based products and services amounts to a small proportion of the total costs of a service, however, by requiring this in a tender when procuring these services, demand for bio-based products can be increased.



1.3 VIABLE PRODUCT CATEGORIES

The following categories are relevant for procurement of innovative bio-based products and services (BBPS). The categories represent a significant portion of public spending, have a potential for BBPS and already have multiple alternative innovative BBPS available. They have been cross-checked on availability, applicability and completeness.

Procurement sector	Bio-based products
FOOD, CATERING AND EVENTS 	Disposable cups and tableware from bio-based polymers
	Packaging materials and utensils from bio-based polymers
HOSPITALS AND LABORATORIES 	Disposable lab materials: tubes, gloves, petri dishes
	Disposable nursing articles: bedpans, urinals, gloves, bed sheets, towels
CLOTHES AND TEXTILES 	Textiles for public personnel
ICT & OFFICE SUPPLIES 	Office supplies from bio-based composites
	Toner for cartridge
VEHICLES AND MOBILITY 	Tyres from natural rubber from dandelions or other innovative materials
	Light weight automobile interior parts
	Bio-based lubricants for vehicles and tools
	Under the hood parts of bio-based polymers
	Upholstery of soybean foams
	Floor mats of bio-based polymers
	Textiles for seating
CLEANING, HYGIENE & SANITARY 	Bio-based cleaning detergents including bio-based surfactants
	Biodegradable plastic bags for disposal & other materials relevant for hygiene

Procurement sector	Bio-based products
<p data-bbox="172 338 512 398">INFRASTRUCTURE: CONSTRUCTION MATERIALS</p> 	<p data-bbox="600 338 1174 367">Road construction materials: asphalt, bio-asphalt, binder</p> <p data-bbox="600 416 1331 445">Various elements for roads: guide rail, lampposts, sound barrier, railings</p> <p data-bbox="600 495 770 524">Concrete casting</p> <p data-bbox="600 573 975 602">Sewerage: Pipes from bio-based PVC</p> <p data-bbox="600 651 1043 680">Street furniture: bins, benches, picnic tables</p> <p data-bbox="600 730 820 759">Road and street signs</p> <p data-bbox="600 808 1051 837">Bridges and viaducts: construction materials</p> <p data-bbox="600 887 1171 916">Concrete: bio-based filler, reinforcement, hemp concrete</p>
<p data-bbox="172 965 512 1025">BUILDINGS: CONSTRUCTION MATERIALS</p> 	<p data-bbox="600 965 884 994">Wooden-frame construction</p> <p data-bbox="600 1043 807 1072">Bio-based insulation</p> <p data-bbox="600 1122 684 1151">Decking</p> <p data-bbox="600 1200 743 1229">Façade panels</p> <p data-bbox="600 1279 916 1308">Bio-based paints and varnishes</p> <p data-bbox="600 1357 1083 1386">Various bio-based indoor products for buildings</p>
<p data-bbox="204 1431 480 1491">FURNITURE & INDOOR INTERIORS</p> 	<p data-bbox="600 1431 1038 1460">Office furniture from bio-based composites</p> <p data-bbox="600 1509 1214 1538">Office upholstery and carpets from bio-based polymer fibres</p> <p data-bbox="600 1588 1182 1617">Other innovative bio-based man-made textiles for interior</p>
<p data-bbox="164 1666 520 1695">GARDENING & LANDSCAPING</p> 	<p data-bbox="600 1666 1086 1695">Biodegradable bio-based pots and seeding beds</p> <p data-bbox="600 1744 1118 1774">Clips and binders from biodegradable bio-polymers</p> <p data-bbox="600 1823 895 1852">Erosion mats and geotextiles</p> <p data-bbox="600 1901 1054 1930">Gardening tools with removable plastic parts</p> <p data-bbox="600 1980 799 2009">Drainage and pipes</p> <p data-bbox="600 2058 1015 2087">Valorising waste streams from gardening</p>

According to the recently published bio-based procurement guidance by the EC Executive Agency for Small and Medium-size Enterprises (EASME) a set of Factsheets with detailed product information has been prepared for the procurement sectors ‘**Infrastructure: Construction materials**’ and ‘**Gardening and Landscaping**’. These can be accessed at: <http://www.biobasedinprocurement.eu/>.

1.4 ADVANTAGES AND BENEFITS

The increased and intense industrial and individual use of and reliance upon fossil raw-materials has placed the environment under threat. As a result, the security of the earth’s climate is one of the biggest tasks for the future. The increasing depletion and volatile prices of fossil raw materials are further reasons to look for alternatives. One opportunity to overcome the dependency on fossil fuels and to help mitigate climate change is the increased use of renewable raw materials from agriculture and forestry for the production and use of bio-based products and services.

By order of the EC Executive Agency for Small and Medium-size Enterprises (EASME) Royal HaskoningDHV has developed a guidance document which discusses general and specific advantages and benefits of bio-based products in procurement. Potential general benefits of using bio-based products in procurement are related to the bio-based nature of the products, and include for example:

- Improved resource efficiency
- Reduced dependency on or even avoidance of the use of fossil resources
- Reduced Greenhouse Gas (GHG) emissions and avoidance of GHG emissions
- Help public authorities to achieve their environmental targets and contribute to policy priorities
- Raise awareness of environmental issues
- Achieving social goals and improving people’s quality of life
- Driver of innovation
- Driver of the secondary material market and circular economy

Furthermore BBPS play an important role in a circular economy. In a perfectly functioning circular economy, there is total elimination of waste. Wastage of raw materials is prevented by maximising the reusability of products and materials and by minimising value destruction. This differs from the current linear system, in which raw materials are converted into products that are usually discarded at the end of their service life. For a more detailed description of the terms “circular economy” and “bio-based economy”, please refer to **InnProBio Factsheet #4**.



Factsheet #4: “Bio-based Products and Services in the Circular Economy”

For more information on bio-based products and services in the circular economy, please refer to the InnProBio Factsheet #4 “Bio-based Products and Services in the Circular Economy” which can be accessed at:

<http://innprobio.innovation-procurement.org/bio-based-products-services/factsheets/>

Specific benefits of procuring bio-based products differ from case to case. Examples of specific benefits are:⁴

- Financial efficiency (lower total cost of ownership)
- Benefit from (better) biodegradability
- Product capabilities such as improved strength, flexibility or applicability

Specific benefits need to be assessed on a case by case basis. Bio-based procurement demands a well-informed and critical public procurement professional and procurement process. The current document and associated online Decision Support Tool (<http://www.biobasedconsultancy.com>), and the recently published bio-based procurement guidance prepared for EASME (<http://www.biobasedinprocurement.eu/>) aim to support this.

1.5 CIRCULAR, SUSTAINABLE AND GREEN PUBLIC PROCUREMENT



Bio-based products and services play an important role in 'circular' public procurement, 'sustainable' public procurement, and in 'green' public procurement.

Circular Public Procurement (CPP) enables the purchasing party to help ensure that, at the end of their service life or useful life, products or materials will be re-used effectively in a new cycle. CPP presupposes a different, more functional view on demand. As a result, the concept of “ownership” is seen in an entirely different light. Alternative revenue models such as product-as-a-service offers or sale-repurchase agreements can be useful here.⁵

Sustainable Public Procurement (SPP) is a process by which the purchasing party seeks to achieve the appropriate balance between the three pillars of sustainable development – economic, social and environmental – when procuring goods, services or works at all stages of a project.

Green Public Procurement (GPP) is implemented by many public authorities in the EU as part of a broader approach to sustainability in their operations. GPP is defined as “a process whereby public authorities seek to procure goods, services and works with a reduced environmental impact throughout their life cycle when compared to goods, services and works with the same primary function that would otherwise be procured.”⁶

These different ‘versions’ of public procurement are all about influencing the market. By using their purchasing power to choose goods and services with lower impacts on the environment, public procurers can make an important contribution to sustainable production, consumption and re-use. Public authorities can provide market actors with real incentives for developing green technologies and products. In some sectors, public purchasers command a significant share of the market (e.g. public transport and construction, health services and education) and so their decisions have considerable impact.

In conclusion: The procurement of bio-based products and services is a complementary and not a competing approach to Circular, Sustainable and Green Public Procurement. Despite their different names and different focus, all these approaches to public procurement go hand in hand, and bio-based products can play a role in all of them.



⁴ Source: A guidance on bio-based products in procurement, <http://www.biobasedinprocurement.eu/>

⁵ PIANOo, <https://www.pianoo.nl/public-procurement-in-the-netherlands/sustainable-public-procurement-spp/spp-themes/circular-procurement>, 2016

⁶ European Commission, Directorate-General Environment, http://ec.europa.eu/environment/gpp/versus_en.htm

1.6 CHALLENGES

Procurement in general is much broader than the purchasing activities of the procurement departments. A broader organisational picture is needed involving senior elected members, heads of units, functional specialists, policy makers, senior managers, budget holders, project leaders, etc. It's not only the task of procurers to respond to the many increasingly complex policy agendas (such as SMEs, innovation, sustainability) that procurement is expected to deliver when procurers have limited influence over some policies. Commitment of higher level management for the implementation of bio-based products and services in procurement can be a strong driver for implementation within an organisation. This helps to ensure the necessary cooperation between departments. Such commitment can take the format of a policy or strategy of a public organisation.

A broader organisational view of procurement needs to be established which is important to keep in mind when procuring BBPS. Since bio-based products and services are often and initially more expensive when compared to similar fossil-based products and services, and some even require a new method for their application or working, the involvement of all stakeholders and actors in the procurement process and purchasing or acquisition decision-making is imperative.

Politicians may want to set an ambition, so procurement of BBPS fits within the policy and implementation framework for public service delivery. Project leaders and specialists need to be aware of the possibilities, technical capacity and specifications of bio-based products and services. Finally, the involvement and engagement of the market is crucial to get a complete overview of the possibilities and challenges in BBPS public procurement.

By making use of existing networks, such as InnProBio, and available learning and knowledge, the uptake of bio-based products and services in public procurement can be advanced.

In order to create a knowledge base, meaningful and constructive market engagement is crucial. Market intelligence about potential bio-based products and services available is essential for any public sector procurement strategy and implementation of public service delivery.⁷

Budget holders in public authorities need to develop revenue models based on assumptions which are underpinned by 'lower costs' instead of 'lower price'.

Another challenge for the public authorities is to give bio-based products and services a fair and equitable treatment during the procurement process. The evaluation of bio-based products and services is a major challenge alongside the determination of their specifications, being either technical or functional. Finally, the award criteria for public contracts related to the provision of public services which are based on or contain bio-based products and services is the most significant challenge.



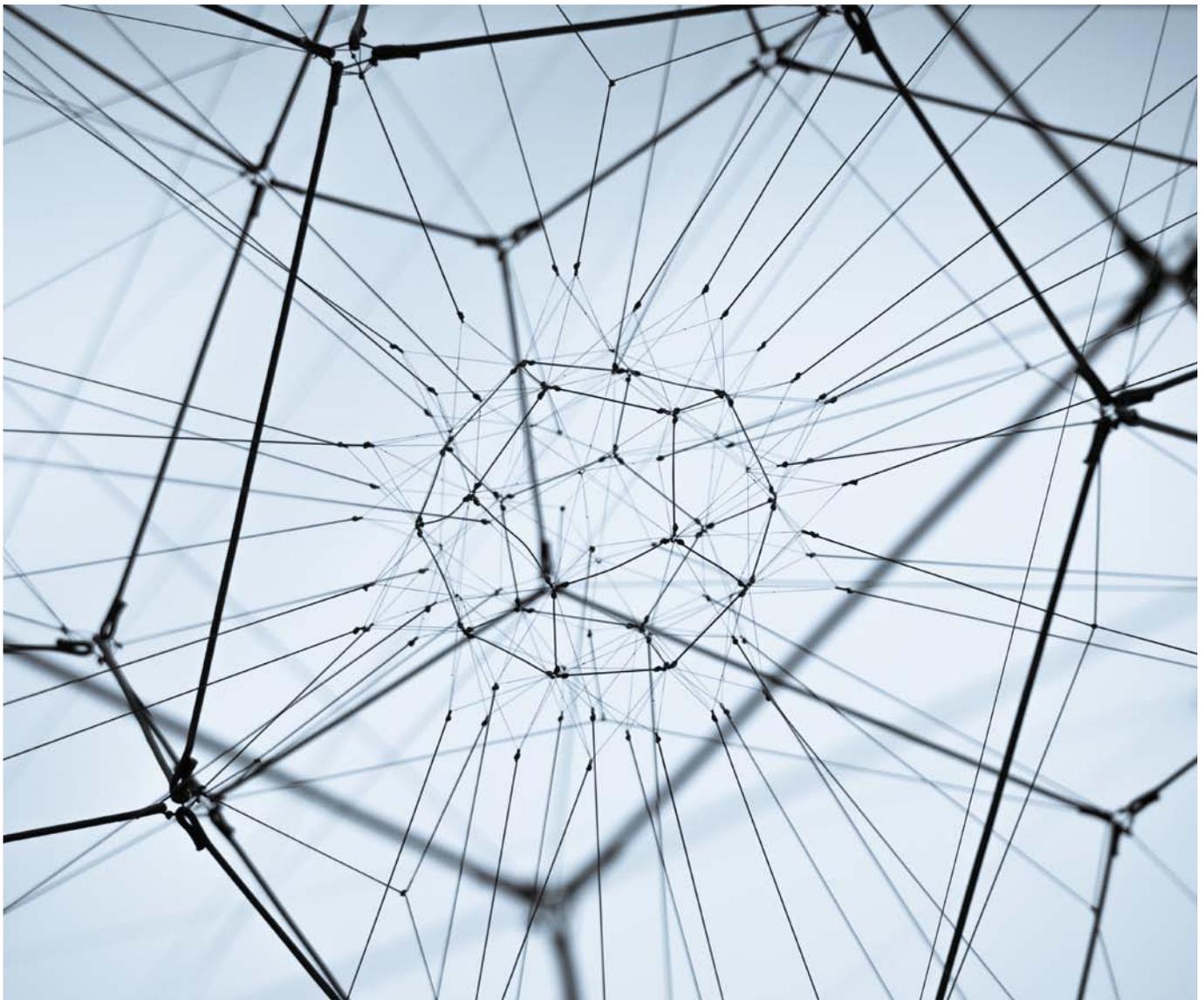
⁷ A guidance on bio-based products in procurement, <http://www.biobasedinprocurement.eu/>

These challenges require the right procurement strategy for a public authority. In a mature and competitive market, public authorities may clearly determine in the subject matter of the contract their willingness to use bio-based products and services. In a market with limited competition a functional determination of the needs of the public authority could be an optimal plan to overcome such challenges.

In order to increase the capacity of public procurers and decision makers in the procurement of innovative bio-based products and services, regional workshops have been held within the InnProBio project. The sessions were open to participants from all EU Member States and primarily targeted to leaders in public procurement to ensure the development of knowledge cascade and build up a European network.

To improve the market knowledge of public procurers and in order to improve the understanding of public needs by suppliers of BBPS, regional market dialogues were planned and held in the framework of the InnProBio project in the Netherlands, Germany and Poland. In these market dialogues, suppliers of valuable innovative BBPS and public procurers participated in order to strengthen the dialogue between public procurers and suppliers of BBPS, identify barriers to the procurement of BBPS and gather valuable information for future PPIs on BBPS.

The relevant information from these meetings has been published on the InnProBio website, which is available at <http://innprobio.innovation-procurement.org/bio-based-products-services/workshops-and-market-dialogues/>.



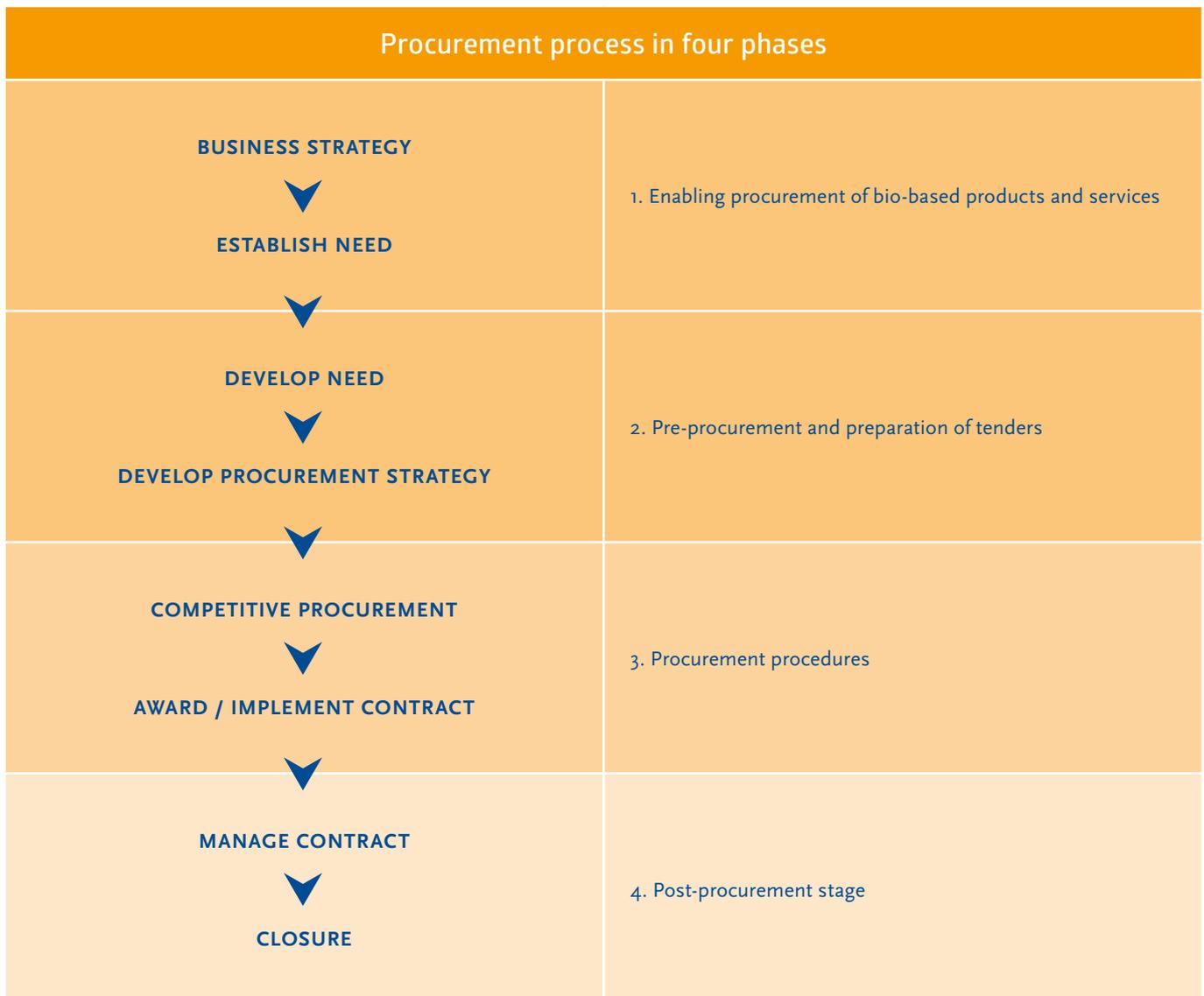
Part 2: How to Procure Bio-Based Products and Services

2.1 INTRODUCTION

Certain instruments that exist in the context of public procurement of innovation are especially helpful when it comes to procuring bio-based products and services. An inventory was made of the available instruments, and they were grouped on the basis of four different phases of the procurement process.

Figure 1 shows a procedural roadmap of the procurement process. This chapter discusses what instruments are the most relevant at each phase, and shows how they are relevant to foster the procurement of bio-based products and services.

Figure 1: Scheme of a Procedural Roadmap of the procurement process



2.2 PHASE 1: ENABLING BBPS PROCUREMENT

What is important in this phase is the mapping of existing procurement needs and other related purchasing instruments in order to assess if and how they can be relied upon to enable the inclusion of bio-based products and services during the procurement procedures. Below we discuss the most relevant instruments for this phase and show how pertinent they are to foster the procurement of bio-based products and services.

- Procurement Policy and Agenda
- Trial phase
- Financing strategy
- Risk Management
- Intellectual Property Rights (IPR)

Procurement Policy and Agenda

Procurement policy or a procurement agenda (or plan) describes the purchasing needs that have priority for the foreseeable future on the part of a public authority or a public organisation. The agenda helps the public authority or organisation identify the internal process in engaging with the private sector in delivering public services by projecting the status and operation of the external market. The agenda reveals the dynamics of the external market, parties such as suppliers, current and new concepts in public service delivery, specific products and services that could be needed in the future. It is an open invitation to participate in the innovation process. A procurement agenda must always be representative of the mission, vision and goals of an organisation.

It is in the procurement policy and agenda that clear targets and future needs with regard to bio-based procurements can be addressed. Added value of bio-based procurement compared to traditional solutions are e.g. regional values (forestry and agricultural), regional economic values, CO₂ and other greenhouse gas emission reduction potential, resource saving and waste prevention. A procurement plan will give procurers the necessary political and legal backing to specify for BBPS in procurements.

Trial phase

A trial phase is a demonstration used for testing innovative solutions for a public authority or organisation. A trial phase could be at a physical location, such as a street or building, but it could also be within a laboratory or a digital environment. As the contracting authority, the organisation should decide the product or service requirements that the tenderers must observe during the procurement process.

A trial phase is useful where a demonstration is the only way to determine the working or appropriateness of a solution. This may be the case if the real-life situation is so complex that it cannot be replicated in laboratory conditions. A trial phase gives suppliers the opportunity to prove the effectiveness of their innovations in a real-life situation. Trial phases are very important for bio-based and other innovative products, because new products need to establish a track record of demonstration, workability and effectiveness.

Financing strategy

A financing strategy helps the public authority or organisation decide on the best opportunities and instruments to deploy for an innovation project and what type of risks should be assessed in the event of financing innovation through public procurement. Based on the budget available for

such a purchase, the choice for the contracting authority / public organisation varies from existing financing options and instruments to innovative choices of private finance through concessions for the delivery of a particular public service. Financing strategy is related to the price for the product and services and not to the specific product in question. Therefore, as long as the procurement of bio-based products and services is financially comparable to the procurement of traditional products, the financing strategy should not eliminate such products and services from future procurement exercises.

Risk management

The aim of risk management is to identify and manage all potential risks involved in public procurement on the part of public authorities / organisations. It helps to quantify risks and to take measures to prevent negative consequences by monitoring risks. One method of conducting risk management that is frequently used is by drawing up and keeping up-to-date a 'risk register'.

Innovation in public procurement involves various risks, especially if there is to be a tendering process. There are risks attached, for example, to technical, commercial, contractual

and performance-related issues. The risks involved in the procurement of innovative products and services are greater, because innovation is often associated with unknown and untested products or solutions and as a result it attracts a greater risk of failure. Risk management attempts to manage these risks and reduce the chance and implications of failure.

Intellectual Property Rights (IPR)

IPR refers to the creation of the mind such as inventions, literary and artistic works, design and symbols, names and images used in commerce. Outcomes of new technical solutions and innovative knowledge can be protected by IPR (e.g. copyrights and neighbouring rights, patents, trade secrets incl. know-how, design related rights). The parties of the public procurement contract shall define in the beginning of the process who will own and commercially exploit the IPR.

IPR are typically the matter of concern when procuring innovative products. When it comes to the agreement between the parties the most important issue is to govern the allocation (by licensing and royalties) or the shared ownership of these rights. These issues have no specific implications in terms of the application of BBPS.



2.3 PHASE 2: PRE-PROCUREMENT AND TENDERING

This is the stage before the formal tendering phase where procurers have the possibility to engage with the market. Below we discuss the most relevant instruments for this phase and show how relevant they are to foster the procurement of bio-based products and services.

- Needs analysis
- Market survey
- Market consultation
- Functional specifications
- SPP/GPP criteria documents
- Best Price Quality Ratio
- Total Cost of Ownership
- Life cycle costs

Needs analysis

A need analysis is an investigation into a business case which contains the specific requirements of a public organisation. It ensures that any tendering process will focus on a solution to the exact problem.

Before the procurement of a product or service, it is important to determine the precise need of a public organisation and also the recipient of the product or service envisaged to be procured.

The need analysis constitutes the basis of the procurement decision. This is a crucial step that could encourage innovation and the application of BBPS. Awareness raising and the dissemination of good practices are important to provide information on the available bio-based substitutes, legal possibilities and budget relevance.

Market survey

A market survey is a process where a public organisation acquires knowledge of what the market can offer and gathers a critical understanding of the potential supply chains. A market survey can help answer a range of questions when preparing for a procurement exercise, such as: is the solution

the public organisation seeks already in the market, or is it still under development? What are the available solutions? Who are the potential tenderers? And what is the unit/price ratio? Is it possible to combine existing solutions? What do tenderers claim to be the advantages and disadvantages of their solutions? Is Innovation Procurement an attractive option, or would it be better to choose a currently-used solution?

The introduction of bio-based products and services will often involve new market actors/suppliers. Therefore it is important to get more information on this market so that more realistic tender requirements can be formulated/applied. A general market survey template could be fine-tuned for the purposes of the application of bio-based products and services in procurements.

Market consultation

This is a way of consulting market parties about a proposed tender. With the gained knowledge you are able to better formulate your need. As desktop research cannot answer all questions about the knowledge and opportunities offered by the market it is wise to put additional questions to

market parties. What, for example, would be a good way of formulating the request? Is the request ambitious enough and at the same time feasible for the market? What should be included in, or left out of, the Schedule of Requirements? A market consultation can answer these questions. You could also further research how you could work with the market and what the benefits of purchasing an innovative solution may be.

The market consultation should discuss the possibilities of existing and innovative bio-based products and services under development that can fulfil your need.

Functional specifications

A functional specification is a method of determining the performance of a product or a service by reference to its functions and features in cases where reference to standards is not possible.

Functional specifications are useful instruments if a procurer anticipates that a supplier could offer added value to the procurement process by means of, for example, providing innovative or new products, services or solutions. They are also useful in procurement procedures where public authorities or organisations wish to encourage innovation.

Functional specifications provide a wide spectrum of action for the tenderers during the procurement process to determine the best possible solution for an organisation, which is often a solution not previously considered.

SPP/GPP criteria documents

Green Public Procurement (GPP) means that public authorities seek to purchase goods, services and works with a reduced environmental impact throughout their life-cycle compared to goods, services and works with the same primary function which would otherwise be procured.

Sustainable Public Procurement (SPP) is a process by which public authorities seek to achieve the appropriate balance between the three pillars of sustainable development – economic, social and environmental – when procuring goods, services or works at all stages of the project.

The EU GPP criteria are developed to facilitate the inclusion of green/sustainable requirements in public procurement tenders. The basic concept of GPP relies on having clear, verifiable, justifiable and ambitious environmental criteria for products and services, based on a life-cycle approach and a scientific evidence base.

When it comes to the application of bio-based products and services in public procurements it is crucial to address the issue of environmental sustainability first at policy level and later in the practical implementation of the procurement. Special attention has to be made to the upcoming CEN standard. It is important to show a clear link to the procurers that the bio-based products and services that they purchase comply with established GPP criteria. To this end further LCAs have to be made.

Best price - quality ratio

According to the New Public Procurement Directives 2014/24/EU and 2014/25/EU public contracts must be awarded on the basis of the MEAT (most economically advantageous tender). There are two options for awarding the contract on the basis of MEAT: either the best quality-price ratio or the price only. The best quality-price ratio means that the award criteria are determined and designed by the contracting authority so that they include both quality and costs elements.

The assessment whether this instrument is important for the procurement of BBPS depends on the specific contract in question. Qualitative award criteria however could allow the contracting authorities to target those areas that are important to them and their needs. One of the requirements related to the award criteria is that it has to be linked to the subject matter of the contract. Due to this legal requirement, inclusion of bio-based products in the procurement process must be determined at the drafting of the technical specifications.

Total Cost of Ownership

Total Cost of Ownership (TCO) refers to the cost contracting authorities are expected to incur throughout the entire life cycle of the purchase. Having regard to the TCO, alongside the financial aspects of the purchase, contracting authorities can also weigh up the related environmental aspects.

Contracting authorities should consider the TCO to determine a smarter purchase by looking at the total life cycle costs (LCC) of a product or service. In Sustainable Public Procurement (SPP) the initial costs may be higher, for example, because other materials are used or because a maintenance-free or low-energy design is used. However, these higher initial costs can be compensated for over time by lower running costs and maintenance costs, for example, by lower energy consumption or extended life of a product or work. Also the end-of-life costs may be lower.

By considering the costs for purchase, maintenance and disposal, "price" will be seen different when comparing several tenders. By applying the TCO, an innovation requiring a higher initial investment gets a fair chance in the procurement process.

Life cycle costs

Life-cycle costing (LCC) indicates a methodology which considers all the costs that will be incurred during the lifetime of the product, work or service:

- Purchase price and all associated costs (delivery, installation, insurance, etc.)
- Operating costs, including energy, fuel and water use, spares, and maintenance
- End-of-life costs, such as decommissioning or disposal

LCC makes good sense regardless of a public authority's environmental objectives. By applying LCC public purchasers take into account the costs of resource use, maintenance and disposal which are not reflected in the purchase price. Often this will lead to 'win-win' situations whereby a greener (bio-based) product, work or service is also cheaper overall. The main potential for savings over the life-cycle of a good, work or service are:

- Savings on use of energy, water and fuel
- Savings on maintenance and replacement
- Savings on disposal costs



2.4 PHASE 3: PROCUREMENT PROCEDURES

Choosing the adequate contract award procedure is a key stage in every procurement process. Below we discuss different procedures and procurement instruments with their relevance to the procurement of bio-based products and services.

- Allow for variants
- Pre-commercial procurement
- Competitive dialogue
- Competitive procedure with negotiation (CPN)
- Innovation Partnership
- Design contest
- One-on-one contracting

Variants

The contracting authority may allow the submission of offers which deviate from the contract specifications but can still be regarded as fulfilling the subject matter of the contract. The contracting authority must declare in the invitation to tender whether bidders may submit variant offers or alternative specifications. Variants allow for value engineering and recognize the importance of innovation in public procurement.

Pre-Commercial Procurement (PCP)

If contracting authorities need something that doesn't yet exist, they can engage businesses to develop a prototype by awarding contracts for research & development (R&D) services. This gives them greater freedom than in the case of a usual tender.

Pre-commercial procurement (PCP, developed by the European Commission) is a method to take advantage of such freedom, the basis for each of which is the same: you award several parties a contract to develop an innovative solution in competition with each other. There are various rounds which each involve the elimination of parties. After the final phase at least two prototypes are developed and tested. PCP is relevant if a bio-based solution you want to purchase is not yet available on the market.

Competitive dialogue

A competitive dialogue is a way of tendering whereby contracting authorities enter into a structured dialogue with a number of selected and prequalified candidates to identify a common solution and its financing before that solution is put out to tender amongst the relevant candidates. Competition-sensitive information will remain confidential. After the structured dialogue process that usually requires significant investment from the participating parties, the contract is awarded to the preferred bidder.

Competitive dialogue is relevant if a bio-based solution is required by contracting authorities.

Competitive procedure with negotiation (CPN)

The Competitive procedure with negotiation (CPN) has been introduced into Directives 2014/24/EU and 2014/25/EU to replace the previous instrument of negotiated procedure with the publication of the prior information notice. CPN allows the contracting authorities to refine their requirements and purchase the products, services, works that are tailored to both their needs and budget.

CPN is relevant if contracting authorities need to negotiate the procurement and delivery of a bio-based solution.



Innovation Partnership

A new procedure is introduced by the Directives 2014/24/EU and 2014/25/EU. It is aiming at the development and purchase of new and innovative products, services and works provided that such innovative product or service or innovative works can be delivered to agreed performance levels and costs. The procedure applies elements of the competitive procedure with negotiation with the aim to establish a partnership with one or more suppliers. This instrument enables the contracting authority to procure from the beginning of R&D activities as well as it allows the acquisition of commercial scale.

Innovation Partnership offers the public buyers the chance to take advantage of new technologies and to apply the benefits of research and development activities. However the instrument is in its early days having been adopted only recently. Thus the possible relevance of Innovation Partnership on the procurement of BBPS would be seen at a later stage of the application of the new procurement rules.

Design contest

A design contest is a way of bringing new ideas or concepts onto the market. Contracting authorities formulate a challenge and award a prize to the parties that submit the best solutions. The ideas are assessed by an independent jury. A design contest is a form of tendering that offers a wide scope for creativity.

The submitted designs can actually be implemented or can serve as inspiration (even if they are not actually implemented). A design contest is also a good way of generating a relatively large amount of publicity about a theme with modest expense.

Although design contests are most used for architectural purposes the Directives 2014/24/EU and 2014/25/EU make it possible to use them to engineering and data processing purposes as well.

One-on-One Contracting

Single tender procurement is exceptionally allowed under negotiated procedures without prior notification. Negotiated procedures without prior notification may be conducted in one single round. Contracting authorities are allowed to choose whichever contractor they want, begin negotiations directly with this contractor and award the contract to him. The Directive provides for only a few rules with which this procedure must comply. A prior notice in the Official Journal is not required. Grounds for using negotiated procedure without prior advertisement include:

- Research and development;
- Technical or artistic reasons;
- Reasons connected with the protection of exclusive rights;
- Extreme urgency brought by unforeseeable events not attributable to the contracting authorities;
- Additional deliveries and supplies or works which would cause disproportionate technical operational and maintenance difficulties, if tendered.

2.5 PHASE 4: POST-PROCUREMENT STAGE

The stage starts when the procurement contract has been signed. The goal is to encompass ongoing innovation into the procurement contract and to foster the continuous uptake of the most innovative bio-based products and services.

Continuous improvement

'Continuous improvement' is designed to encourage a supplier to come up with better solutions during the term of a contract. Opportunities and incentives to do so must be included at the outset in the contract. In addition, it is necessary to agree terms how to collaborate in order to allow room for improvements. In doing so, contracting authorities increase the mutual trust between the procurer and the supplier and lower the threshold for innovative proposals.

The goal of continuous improvement is to make optimum use of the new opportunities for your suppliers so that the

supplier continuously can improve its supply or service.

This is especially appropriate for long-term contracts in which you expect new solutions to become available during the term of the contract.

Contracting authorities can ask suppliers to gradually change from non-bio-based products to bio-based products when they become available and can fulfil the same needs. This gradually introducing bio-based products lowers the risks for both parties and gives them the opportunity to get familiar with the new products.



Part 3: Tools

InnProBio has created several tools to support the procurement of bio-based products and services (BBPS). These tools are integrated into an Internet-platform, known as the Decision Support Tool (DST) where the comprehensive content of each tool can be accessed. In the current chapter we present a selection of the tools included in the DST i.e. Glossary, Product Database, Certification & Labels, Frequently Asked Questions (FAQs), Text blocks for tenders and Good Practice examples.

3.1 PRODUCT DATABASE

A database of BBPS, initiated by the earlier FP7 project 'Open-Bio' and streamlined and expanded in the InnProBio project, presents various bio-based products which are relevant for public procurers, sorted by application area, product type and Common Procurement Vocabulary Code (CPV). Products are grouped into 9 different categories and include e.g. office supplies, gardening equipment, lubricants or plastics plates and cutlery. In the database

(<https://www.biobasedconsultancy.com/en/database>), users find information about the bio-based content of products, sustainability, functionality and end-of-life aspects, such as biodegradability. Where available, claims are supported by references to standards, technical sheets and labels. The database can be used as an entrance portal for market research in order to widen the public procurement product portfolio beyond conventional fossil-based products.



3.2 CERTIFICATION AND LABELS

Sustainability certifications and labels can help public procurers to define their requirements regarding bio-based products in their public tenders. Under the new EU Public Procurement Directives (2014)⁸ contracting authorities have the possibility of using labels as a source of information for defining technical specifications, to check compliance with the technical specifications/ requirements or in assessing award criteria. In checking compliance the requirements set in a tendering process, by accepting a label as one means of proof of compliance with the technical specifications can help a procurer save time while ensuring that high environmental standards have been applied in the procurement process.

Conditions for the use of labels

The label requirements:

- Must be proportionate. All requirements must relate to the subject of the contract;
- Must be based on objectively verifiable and non-discriminatory criteria;
- Are set by a third party over whom the economic operator applying for the label, does not exercise decisive influence.

The label is:

- Established in an open and transparent process open to all stakeholders;
- Accessible to all interested parties.

Contracting authorities should consider:

- If prescribing a label is proportional. Obtaining a certification mark provides administrative burden for entrepreneurs and sometimes brings considerable costs involved;
- If prescribing a label does not hinder innovation.

Contracting authorities are obliged:

- To accept similar labels;

- To accept other appropriate means of proof (such as a technical dossier proving that a tenderer meets the requirements), if an entrepreneur:
 - a. Shows that he or she has not had the opportunity to acquire the specific label or a similar mark within the time limits specified by the contracting authority for reasons that cannot be imputed to him or her, and
 - b. Shows that the works, deliveries or services to be provided meet the specific label or the specific requirements specified by the contracting authority.

As stated above, there are strict conditions attached to the demands of a label. A label that demands on issues that are not relevant to a task, such as requirements on general company policy, contracting authorities may not require. In that case, contracting authorities can still define technical specifications by reference to the detailed specifications of that label or parts that do relate to the subject of the contract. The label can then be used as evidence to establish that the tender meets the required specifications.

Important labels

A non-exhaustive list of different labels, certification schemes⁹ and standards that may be considered when purchasing bio-based products or services is provided below.



⁸ Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on public procurement and repealing Directive 2004/18/EC, http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2014.094.01.0065.01.ENG

⁹ A certification scheme describes the 'rules' for certification including the tasks and responsibilities of the applicant, testing laboratory and certification body as well as the rules for the use of the bio-based content label and logo.

Multi-issue ecolabels specifying bio-based products

In Europe three multi-issue ecolabels exist of ISO 14024 type I. The EU Ecolabel, the Nordic Ecolabel, and the Blue Angel ecolabel. Specific product categories that include bio-based products under these labels are lubricants, sanitary products, food disposables, and office materials. ISO differentiates between Type I, II and III ecolabels, of which Type I are the strongest ones. More information on the ecolabel types can be found in InnProBio's Decision Support Tool, accessible at <http://dst.biobasedconsultancy.com/certification-and-eco-labels>. The EU Ecolabel, the Nordic Ecolabel, and the Blue Angel ecolabel are all voluntary, multiple-criteria based, third-party ecolabel programmes awarding licenses authorising the use of environmental labels on products. These indicate overall environmental preferability of a product within a particular product category based on life cycle considerations. Examples of the requirements that apply to bio-based products such as lubricants, sanitary products, food disposables, and office materials are given below.



EU Ecolabel ("the Flower")

Lubricants: Lubricants receiving the EU Ecolabel need to prove a minimum content of bio-based carbon between >45% and >70% (depending on the type of lubricant).¹⁰



Nordic Ecolabel ("Nordic Swan")

Sanitary products: Diapers and incontinence products must have ≥ 50 weight-% of renewable material in the product and additional component. Other products must have ≥ 60 weight-% of renewable material in the product and additional component. Or the primary packaging contains ≥ 20 weight-% of renewable and/or recycled material in relation to the total weight of the primary packaging. The amount of renewable/recycled material can be documented on an annual basis. Or ≥ 7 weight-% of the polymers in relation to the total weight of polymers in the product and additional component (including SAP) must be bio-based and/or recycled.¹¹

Disposables for food: At least 90% by weight of the disposable article must be bio-based or made from recycled plastic. The recycled plastic must fulfill Regulation (EC) No 282/2008 on recycled plastic materials and articles intended to come into contact with foods. The recycling process must be approved and published on EU's official list over approved recycling processes, see article 9 in the regulation 282/2008. A maximum of 10% by weight of the disposable article may comprise non-renewable materials. Coatings and adhesives are to be included in the material composition calculation. Other chemicals, such as printing inks and additives, should not be included. Metal and recycled pulp/paper/paperboard/cardboard are not permitted. Individual packaging, cores and other parts as described in O1 must be included in the material composition.¹²



Blue Angel ("Der Blaue Engel")

Office materials (writing utensils and stamps): The 2016 revision of the criteria for these products has included the provision that they need to be produced either from 60% renewable raw materials or from 80% recycled materials.¹³

¹⁰ The European Ecolabel for Lubricants "The official EU mark for Greener Products": <http://ec.europa.eu/environment/ecolabel/documents/lubricants.pdf>

¹¹ Nordic ecolabel sanitary products: <http://www.nordic-ecolabel.org/criteria/product-groups/?p=1>

¹² Nordic ecolabel disposables for food: <http://www.nordic-ecolabel.org/criteria/product-groups/?p=2>

¹³ Blue Angel: <https://www.blauer-engel.de/en/products/home-living/schreibgeraete-stempel>

Private, third party certifications for different aspects (single issue labels)

Certification refers to the conformity of an object, person or organisation to a certain standard or requirements. With certification, organisations and/or persons can demonstrate their conformity and use the label that shows the claim.

For example, procurers can apply standards in the field of bio-based products, to specify the required characteristics of bio-based products. Suppliers can use certificates and labels to demonstrate that they comply with these requirements. In this respect, procurers can also require that the claim of bio-based content is assessed by a third party (i.e. certification body). Third-party certification involves an independent assessment declaring that specified requirements pertaining to a product, person, process, or management system have been met.

The cultivation of renewable resources (usually from forestry and agriculture, sometimes from marine aquaculture) has a huge impact on the sustainability of the final bio-based products. Due to the EU's renewable energy policy, several certifiers have developed certification schemes for agricultural biomass that adhere to the conditions laid down in the EU's 2009 Renewable Energy Directive (RED). Some of them have by now adapted their schemes in a way that they can be applicable also to materials, not only to energy. For wood, sustainability certification schemes were developed before the renewable energy policy due was put into place to address concerns about unsustainable forestry practices in many parts of the world.

WorldWide Fund for Nature (WWF) assessed the different certification systems, comparing strictness, etc. The assessment is available in its 2013 report "Searching for sustainability. Comparative analysis of certification schemes for biomass used for the production of biofuels".¹⁴ Since then, the certification systems have developed. At the time of the 2013 assessment, RSB was rated the best certification system for all kinds of biomass and RSPO and RTRS were

the highest rated for single biomass types (soy and palm oil respectively) with Bonsucro following closely behind.

Certifications for wood

- Forest Stewardship Council (FSC)
- Programme for the Endorsement of Forest Certification (PEFC)

Certification for agricultural biomass

- International System for Carbon Certification (ISCC) – all biomass
- Roundtable on Sustainable biomaterials (RSB) – all biomass
- REDcert – all agricultural biomass
- Better Biomass – all biomass
- Roundtable on Sustainable Palm Oil (RSPO) – only palm oil
- Bonsucro – only sugar
- Roundtable Responsible Soy (RTRS) – only soy

Bio-based content

Bio-based content is a certification scheme based on the European Standard EN 16785-1 "Bio-based products – Bio-based content – Part 1: Determination of the bio-based content using the radiocarbon analysis and elemental analysis". Organizations can use the bio-based content certification scheme to demonstrate the (minimum share of) bio-based content in their products and label them with this claim. This certification scheme has been developed and validated by a broadly composed group of European stakeholders (e.g. companies active in biopolymers, bio-based chemicals, bio-based plastics, natural rubbers, paints/coatings, certification bodies, procurers).

The European certification scheme contains provisions for the determination, verification and monitoring of the bio-based content of products or product families and is applicable to all kinds of products containing carbon.

¹⁴ WWF report "Searching for sustainability. Comparative analysis of certification schemes for biomass used for the production of biofuels" (2013): http://awsassets.panda.org/downloads/wwf_searching_for_sustainability_2013_2.pdf



Another existing certification scheme for bio-based content that refers to bio-based carbon content, is based on the American standard ASTM 6866 “Standard Test Methods for Determining the Bio-based Content of Solid, Liquid, and Gaseous Samples Using Radiocarbon Analysis”, but also refers to CEN TS 16137 “Plastics – Determination of bio-based carbon content”.

European Certification Schemes

The following are certification schemes used in Europe to prove the bio-based content:

- Biobased content (owned by NEN and awarded by Vinçotte or DIN CERTCO)
- OK biobased (owned and awarded by Vinçotte)
- DIN-Geprüft Biobased (owned and awarded by DIN CERTCO)

End-of-life options

There is a number of certifications and labels that highlight the special end-of-life options of bio-based products such as compostability, biodegradability in soil and biodegradability in sea water. (For clarification on these terms, please refer to the InnProBio Factsheet #3 on Biodegradability which can

be accessed at <http://innprobio.innovation-procurement.org/bio-based-products-services/factsheets/>.) The following are the most widely used certifications used in Europe to prove compliance with the compostability norm EN 13432:

Industrial compostability

- The Seedling (owned by European bioplastics, awarded by DIN CERTCO and Vinçotte)
- DIN-Geprüft Industrial Compostable (owned and awarded by DIN CERTCO)
- OK compostable (owned and awarded by Vinçotte)

Home compostability

- OK home compostable (owned and awarded by Vinçotte)
- DIN-Geprüft Home Compostable (owned and awarded by DIN CERTCO)

Biodegradability in soil

- OK biodegradable soil (owned and awarded by Vinçotte)
- DIN-Geprüft biodegradable soil (owned and awarded by DIN CERTCO)

Biodegradability in sea water

- OK biodegradable marine (owned and awarded by Vinçotte)

3.3 FREQUENTLY ASKED QUESTIONS

This list of Frequently Asked Questions (FAQs) is intended to give an overview on the most pressing questions a public procurer, a decision maker or even a provider of BBPS may have regarding the public procurement of bio-based products and services. With these questions and their answers, the InnProBio consortium aims at taking away the fear of the unknown of procuring innovative, environmentally friendly and sustainable products.



Q1: What are bio-based products and services?

Bio-based products are made – completely or partially – from biogenic material, which means they are made from renewable resources (also called “biomass”). The most frequently used types of biomass are sugar, starch, plant oils, wood and natural fibres. Partially bio-based products may also contain non-bio-based materials.

Today, a wide range of products exists that are used daily in households, which are at least partly made from renewable resources, even though most consumers are not aware that these products are bio-based. This is for example often the case with construction materials, packaging, detergents, cosmetics and textiles. One of the most common types of bio-based products is paper, although bio-based products can also include pens, inks, furniture, and gardening tools, amongst others.

A bio-based service would comprise of the hiring of a service that uses bio-based products. This could be a contractor or a cleaning service that uses bio-based paints or cleaning products, for example.

Q2: Why are we specifically targeting "innovative" bio-based products and services?

Until the mid of the 19th century we had an agricultural society. Since then we have been introducing new products from fossil sources, like oil, coal and natural gas. For several reasons we need to move to a new agricultural society: the bio-based economy. But we need to do this much smarter, without exhausting the earth and aim at closing cycles. We need to extract valuable components from biological raw materials, without consequences for the food supply. Agricultural by-products from e.g. sugar beet, potatoes and grass become new sources to make valuable bio-based materials.

These new, innovative materials will undergo rigorous testing and have to adhere to the same quality and safety regulations as any other product in Europe. But they don't have a track record of 50-100 years yet, like oil-based alternatives.



Factsheet #1: “What are bio-based products?”

For more information on what bio-based products are, what they are made from, etc., please refer to the InnProBio Factsheet #1 “What are bio-based products?” which can be accessed at: <http://innprobio.innovation-procurement.org/bio-based-products-services/factsheets/>

They don't have the economies of scale in their production process yet and they often may require conformance testing. On the other hand they may have added value you didn't know about.

So when innovative bio-based products and services may be interesting to procure, be aware that you need to create room in the procurement process and tender documents, since these products may cost more initially and may need some time to prove themselves, but may also be better for your health and for the environment. Procurement of innovation can be a suitable approach to create such room. A good contact with the market is recommended to understand what is available, how these new products can fulfil your needs and how to organise your tender to give these alternatives a chance.

The difference between a regular procurement process and a Public Procurement of Innovation procedure lies mainly in the formulation of the requirement and the way you interact with the market. The term public procurement of innovation is used for 'procurement where contracting authorities act as a launching customer of innovative goods or services which are not yet available on a large-scale commercial basis, and may include conformance testing'.¹⁵

Q3: Why should I promote or prefer bio-based products through public procurement?

If sustainably produced, by choosing bio-based products over conventional alternatives, you can make several positive contributions to your office, your hospital, your community and to our society and environment as a whole.

By buying these products, you can promote innovative solutions and increase their market uptake. Many of these innovative products are not well known – by giving them visibility, your decision can have a positive impact on overall market developments towards more efficient and more sustainable products.

There are many bio-based alternatives that can be relevant for your procurement needs (for more details, see Question #4 below). There is sufficient market availability and their functionalities are the same or even better than conventional products. Why not give them a chance?

If our society wants to take climate change seriously, we need to reduce the amount of fossil carbon used and the amount of fossil CO₂ released into the atmosphere. A study from 2015 (McGlade & Ekins)¹⁶ has shown that we need to leave substantial amounts of fossil resources in the ground if we want to achieve the 2°C climate goal. Sustainably produced bio-based products can contribute to achieving this goal!

Here are some more benefits that bio-based products can offer you and your community:

- Reduced negative health effects caused by airborne petrochemical toner particles;
- The application of natural fibres offers better thermal insulation. Their application e.g. in building construction materials can also help to reduce health problems during installation;
- Better environmental performance, including a lower CO₂ footprint during production and/or use. For example, bio-based car parts are lighter than conventional parts, resulting in lower fuel consumption during car use;
- Biodegradability in environments where collection and separation of certain waste products for recycling is not viable or practical. This is particularly relevant in catering and outdoor events, along with gardening and landscaping. Biodegradability is also a characteristic of biosurfactants (used in detergents);
- Lower consumption of detergents, energy, water, etc. and lower wear in the case of bio-based clothes and textiles like Lyocell or Tencel®, resulting in improved longevity and reduced maintenance costs;
- Reduced total costs of ownership (TCO) i.e. potential lower total costs when considering all costs associated with a product over its lifetime.

¹⁵ Art.2(18), Horizon 2020 Rules for Participation Regulation No 1290/2013.

¹⁶ McGlade & Ekins (2015), The geographical distribution of fossil fuels unused when limiting global warming to 2°C



Q4: Are there any bio-based products on the market that have any relevance to my procurement needs? Is there sufficient availability of bio-based alternatives?

Yes. InnProBio has identified a number of important procurement categories in which bio-based products can provide a good alternative to conventionally produced products. The identified categories and corresponding bio-based products are:

- Construction and infrastructure: construction structure materials such as insulation, sheet, façade panels and other temporary construction materials (pipes and plastics) and (indoor) coatings;
- Gardening and landscaping: geotextiles, erosion mats, shielding, plastic binders, plant containers and tree anchoring;
- Nursery and medical equipment: textiles;
- Cleaning, hygiene and sanitary: cleaning detergents, cleaning of company clothing, domestic services, household waste management;
- Vehicles and mobility: company cars, lubricants;
- ICT, offices supplies and paper: office supplies and toner cartridges;
- Furniture and indoor interiors: office upholstery, especially carpeting, furniture;
- Food, catering and events: disposable cups, packaging materials and utensils.

For more detailed information about bio-based products that are relevant for public procurement, please see the good practice case studies, the tender text blocks, and the database of bio-based products on the DST which can be accessed at <https://www.biobasedconsultancy.com/en/database>.

We have also identified a sufficient number of suppliers of bio-based products to ensure you that including the bio-based criterion in the tender does not create any restriction on the market.



Q5: Do bio-based products provide any benefits to society as a whole?

Bio-based products cover a wide variety of applications and are made from a multitude of different raw materials. Therefore, the benefits provided by them need to be assessed on a case by case basis and can vary, depending on the application and the intended use.

However, it is possible to make some general statements about bio-based products and why promoting them can be good for society as a whole. If we change our industry from being petroleum-based towards using more bio-based feedstocks, we reduce Europe’s dependency on fossil fuels imports, making us less vulnerable to abrupt changes on the world market or possible conflicts. By using more

domestic biomass for more applications, we create outlets for farmers, thus increasing their income and improving rural development with more added value and jobs. Thinking more long-term, our society will need to find alternative ways to produce its many consumables and materials, since the supply of petroleum is ultimately finite. What’s more, we need to leave substantial amounts of fossil resources in the ground if we want to achieve the 2°C climate goal, see above (Q.3)

Bio-based products can make significant contributions to mitigating climate change. The specifics of each product’s impacts can vary, and not all bio-based products perform better in environmental terms, but there is strong evidence which suggests that many products can have a reduced impact on the environment, if biomass is produced sustainably and production processes are environmentally efficient. For more details, see below (Q.7) or the InnProBio Factsheet #2 on “Sustainability of bio-based products”.

Some examples of benefits provided by bio-based products are:

- Saving up to 30% of the electricity used in laundry by getting clothes cleaned at 30°C using bio-based surfactants and enzymes;
- Agricultural mulch films that are biodegradable in soil improve agricultural productivity and reduce costs of collecting plastic waste from the field, while at the same time avoiding the uptake of plastic particles in soils;
- Bio-based lubricants are biodegradable in soil and water and can be used in environmentally sensitive areas;
- Natural cosmetics like rinse-off cosmetics (toilet soaps, shower preparations, shampoos) are biodegradable in water.



Factsheet #2:
“Sustainability of bio-based products”

For more information on the sustainability of bio-based products, please refer to the InnProBio Factsheet #2 “Sustainability of bio-based products” which can be accessed at: <http://innprobio.innovation-procurement.org/bio-based-products-services/factsheets/>

Q6: What are the benefits of bio-based products for users/consumers compared to traditional products?

Bio-based products cover a wide variety of applications and are made from a multitude of different raw materials. Therefore, the benefits provided by them need to be assessed case by case and can vary, depending on the application and the intended use. Specific examples can be found in the good practice case studies which can be accessed at <http://innprobio.innovation-procurement.org/tools-resources/good-practices/>.

In many cases, bio-based alternatives can offer added functionalities that offer direct or indirect benefits for consumers compared to conventional products. Some examples would be textiles made from natural fibres, especially novel cellulosic fibres, which offer great wearing comfort, or detergents and cosmetics that are skin friendlier and are made with fewer chemicals. Novel bio-based surfactants show improved functionalities in removing dirt and building materials or geotextiles from natural fibres or wood show superior properties in insulating or stabilizing. As mentioned before, all of that needs to be assessed based on the formulation of a specific product and its intended use.

Q7: Are bio-based products always more sustainable than petroleum-based products?

In certain cases yes, but not always.

Their benefits must be assessed on a case-by-case basis and can vary greatly depending on the application and the intended use. Products made from petroleum will at the end of their lifetimes add fossil carbon to the atmosphere, thus contributing to the greenhouse effect and climate change. Bio-based products only add the carbon to the atmosphere which the plants took from the atmosphere before, therefore keeping a balance. However, cultivation of biomass can also have strong impacts on the environment.

Life Cycle Assessment (LCA) is one tool to assess the environmental impacts of one product. LCAs are standardised and can help to decide whether a product is really better or not. Another tool is a sustainability certification



scheme, ensuring that agricultural practices are in line with basic sustainability requirements. This means, for example, not burning rain forest for agricultural land or endangering biodiversity. For more information on LCA and sustainability certifications, please check InnProBio Factsheet #2 on the sustainability of bio-based products.

Q8: How are bio-based products and services linked to the circular economy?

There is no general answer to that question. The circular economy aims at keeping resources in a use circle as long as possible, thus contributing to more resource efficiency. The bioeconomy is defined through its feedstock base (which is biomass) and through the processes used for the production of goods, if they use biological organisms or parts thereof ("biotechnology"), thus aiming to shifting the economy's resource base away from fossil and therefore finite feedstocks. Thus, there is no general connection between the two.

It is sometimes said that the bioeconomy is part of the circular economy, but this is also misleading. There are some overlaps between the two, and both can contribute to each other's goals, but to sort one under the other is not correct.

Here are some examples how bio-based products contribute to the concept and goals of the circular economy:



Factsheet #3:

“Biodegradability: exposing some of the myths and facts”

For more information on the biodegradability of bio-based products, please refer to the InnProBio Factsheet #3 “Biodegradability: Exposing some of the myths and facts” which can be accessed at:

<http://innprobio.innovation-procurement.org/bio-based-products-services/factsheets/>

- Many bio-based products can go to organic recycling, that is composting or biodegradation, after use (please see InnProBio Factsheet #3 on Biodegradability for more details), which will return the biomass to the soil and can let grow new feedstocks. Many bio-based products are made from side-streams of other production processes, thus increasing the resource efficiency. This is true both for traditional bio-based sectors, such as the pine chemicals industry using tall oil as a by-product of wood pulp production, or for the oleochemicals sector which makes for example paints and coating from animal processing by-products. It is also true for newer biorefinery concepts that aim to utilise all biomass fractions;
- Many bio-based products are recyclable. Paper and wood products are excellent examples where well-functioning recycling systems of bio-based products are in place. Certain bio-based plastics are recyclable as well, but not for all of them there are recycling facilities. However, research has shown very clearly that bio-based plastics do not hinder the recycling streams more than any other material for which there is no recycling facility. Note that in Europe, only the four big bulk plastic streams polyethylene, polyethylene terephthalate (used in PET bottles), polystyrene (PS) and PVC (Polyvinyl chloride) are being recycled. No other conventional plastic gets recycled, either, so this is not specific to bio-based plastics;
- Many bio-based products can go to organic recycling, that is composting or biodegradation, which will return the biomass to the soil and can let grow new feedstocks.

Q9: How can the bio-based content of a product be measured? Is there a standard and are there certificates to ensure the claims?

The European standardisation committee CEN/TC 411 bio-based products has developed several standards that define bio-based products and how to measure their bio-based content.

- The standard EN 16575 “Bio-based products – Vocabulary” (2014) defines what bio-based products are, what biomass is, etc.
- The European Standard “Bio-based products – Bio-based carbon content - Determination of the bio-based carbon content of products using the radiocarbon method” (EN 16640:2017) outlines how to measure the bio-based carbon content, which is possible because carbon from biomass can be differentiated from carbon stemming from petrol, due to the structure of the molecules.
- The European Standard “Bio-based products - Bio-based content - Part 1: Determination of the bio-based content using the radiocarbon analysis and elemental analysis” (EN 16785-1:2015)

To verify the claims of being bio-based, different certifications exist on the European market: the Belgian Vinçotte and two certification schemes; OK bio-based (based on ASTM 6866) and Bio-based content (this last certification scheme is based on the European Standard EN 16785-1¹⁷, and one from the German certifier DIN CERTCO (“DIN-geprüft”, based on multiple standards)¹⁸. These certifiers measure the bio-based carbon content of a product and express the results

in ranges of percentages (e.g. bio-based carbon content is between 50% and 70% of the total carbon content of the product). For more information on the certification schemes, please see InnProBio Factsheet #2 on Sustainability of bio-based products.

Q10: Is it okay to use food crops for materials or bio-based products?

Yes, it is, under some conditions. Here is why:

Using food crops for anything else than food and feed is a very controversial topic. During the 2007-2008 world food price crisis it was often stated that biofuels contributed to the political and economic instability and social unrest by creating competition to food and increasing prices. Therefore, it has become more or less consensus that using food crops for anything else than food and feed is not okay, and the focus has shifted more towards feedstocks from the so-called “second generation” which are supposedly not in any competition to food, which is mostly waste and lignocellulosic materials (that is wood and short rotation coppice such as miscanthus or poplar).

However, in reality, this is more complicated. There is increasing evidence that growing food crops, also for other outlets other than food and feed, offer several advantages. They increase the overall availability of food, offer a diversified income to farmers, are more land efficient than short rotation coppice and so on.

By now, several studies have convincingly shown that biofuels were not the main driver of the exorbitant food prices in 2008. Since bio-based materials have much lower market shares and feedstock needs than fuels and energy, their impacts is even lower than that.

Therefore, using food crops such as sugar or starch for bio-based materials are acceptable, if overall sustainability is ensured (e.g. through a certificate).

Q11: Are there any drawbacks and/or barriers to purchasing bio-based products and services?

In general, bio-based products that are on the market have undergone rigorous testing and have to adhere to the same quality and safety regulations as any other product in Europe. So in these terms, there should be no barrier to buying bio-based products. If you are unsure and would like to receive more information, please follow InnProBio and the market dialogues and trainings we will provide. From a public perspective, there might be questions related to sustainability or the competition to food, which we tried to address in the questions above. Using certificates and labels is a great possibility to show that the product chosen has positive impacts.

Of course, price is another very important factor. Often, bio-based products are more expensive than conventional products which are comparable in function. This is because production costs are higher, which is due to the relatively new developed processes, higher feedstock costs and small volumes being produced. However, the impact on the procurement is often lower than perceived, since the increased longevity or reduced needs for maintenance can significantly lower the total cost of ownership, and also because often only small volumes of bio-based products are procured.



¹⁷ Differences between OK Bioased and Biobased content certification are well explained at Vinçotte website: <http://www.okcompost.be/data/pdf-document/Doc%2036e-a%20-%20FAQ%20-%20OK%20biobased%20vs%20NEN%20bio-based%20content.pdf>

¹⁸ DIN-Geprüft: http://www.dincertco.de/en/dincertco/produkte_leistungen/zertifizierung_produkte/umwelt_1/biobasierte_produkte/biobasierte_produkte_mehr_nachhaltigkeit.html



3.4 TEXT BLOCKS FOR TENDERS

The drawing of technical specifications for the public procurement of bio-based products and services is necessary to determine the subject-matter of the contract and to allow contracting authorities to award the contract. Contracting authorities must set out the technical specifications in the contract documents, such as contract notices, contract documents or any additional documents. Technical specifications must afford equal access for tenderers and not have the effect of creating unjustified obstacles to the opening up of public procurement to competition.

For the declaration of the needs and formulation of the technical specifications it is of importance to specify the environmental criteria which the administration (the public procurer) is aiming for in its climate and resource protection targets. The text blocks are separated as per the product categories identified by InnProBio as the most likely product groups for bio-based procurement in Europe.

An informative selection of text for inclusion in the public procurement documents, such as contract notices, contract documents or any additional documents for the procurement of bio-based products and services is presented here. The text blocks are grouped per product category and can be found and copied from below.

Technical specifications in the selection and qualification process of public procurement must be formulated in the following manners:

- a. By reference to technical standards which are relevant to the subject matter of the contract and, in order of preference, to national standards transposing European standards, European technical approvals, common technical specifications, international standards, other technical reference systems established by the European standardization bodies, or when the above technical specifications do not exist, by reference to national standards, national technical approvals or national technical specifications relating to the design, calculation and execution of the works and use of the products. Each reference to technical standards must be accompanied by the words 'or equivalent';
- b. By reference to performance or functional requirements which may include environmental characteristics. Where contracting authorities lay down environmental characteristics in terms of performance or functional requirements they may use the detailed specifications, or, if necessary, parts thereof, as defined by European or (multi-) national eco-labels, or by any other eco-label, provided that those specifications are appropriate to define the characteristics of the supplies or services that are the object of the contract, that the requirements for the label are drawn up on the basis of scientific information, that the eco-labels are adopted using a procedure in which all stakeholders, such as government bodies, consumers, manufacturers, distributors and environmental organisations can participate, and finally they are accessible to all interested parties.
- c. By reference to test reports from a conformity assessment body that performs conformity assessment activities including calibration, testing, certification and inspection accredited in accordance with Regulation (EC) No 765/2008 as means of proof of specification compliance.
- d. By reference to certification by public or private law certification bodies as means of proof of specification compliance.



Construction and infrastructure products:

For example:

Construction structure materials such as insulation, sheet, façade panels and other temporary construction materials (pipes and plastics) and (indoor) coatings



Building materials including wood products

The wood to be used comes from certified and/or self-assessed sustainable forestry/silviculture.

The proportion of renewable materials or the bio-based content of the end product is at least 85%.

At least 50 % of the wood to be used consists demonstrably of secondary raw materials such as wood from industrial waste or other waste wood.

Insulation materials

In bio-based fibre insulating materials e.g. hemp, flax, wool, cork, coconut, in the form of sheets, felts, mats or bulk and blow-in goods) mandatory minimum requirement of bio-based content is 85 %.

Proof of origin of bio-based raw material required.

Bulk- or blow-in materials from wood chips and shavings: mandatory minimum requirement is at least 50 % of the used wood consisting demonstrably of secondary raw materials such as industrial residue wood or waste wood.

Wall colours

Mandatory minimum requirement of bio-based content is 80 %.

Proof of origin of all bio-based resources is required to obtain information about potential pesticide exposure.

Full declaration of ingredient content.

Advanced requirement/bonus points for resource cultivation: At the cultivation of the bio-based resources no synthetic pesticides with prohibited substances may be used.

Glues based on non-bio-based resources are permitted to be used as binders provided they comprise a maximum of 10 % of the volume within the final range of products.



Gardening and landscaping:

For example:

Geotextiles, erosion mats, shielding, plastic binders, plant containers and tree anchoring

Plastic products for landscaping

For bio-based plastics, the carbon content as defined by reference to EN 16575, must be at least 40%, between 40 % and 60 %, between 60 % and 80 % or about 80 % of the final product (EN 16640, ASTM D6866 or equivalent).

The product must demonstrate biodegradability properties in line with EN 14987 and/or compostability in line with EN 14995, ISO 17088 or equivalent).



Cleaning, hygiene and sanitary:

For example:

Cleaning detergents, cleaning of company clothing, domestic services, household waste management

Sanitary paper

The fibre raw material originates exclusively from recycled paper.

Hazardous chemical substances are excluded.



Vehicles and mobility:

For example:

Company cars, lubricants

Lubricants and oils

The product is made from at least 80 % renewable materials or its bio-based content is at least 80%.

The additives used to improve the technical properties contain no eco-toxic critical substances, in line with EN 16807.

The product has no adverse effects on the environment and on the ground during use.

The product has good biodegradability, in line with EN 16807 or equivalent.



ICT, office supplies and paper:

For example:

Office supplies and toner cartridges

Printing and copying paper

Content requirement of at least 70 % of total primary pulp must originate from sustainably managed forests.

The additives used to improve the technical properties contain no eco-toxical critical substances, in line with EN 16807.

Guarantee of origin of primary fibres used must be from recycled paper.

Content requirement of 100 % from recycled paper for writing paper for offices, computer paper "continuous paper" for impact printers, copy paper and paper for laser printers.

Paper products including envelopes

The pulp is made of 100 % recycled paper.

The pulp must have particularly low emissions and aging



Furniture and indoor interiors:

For example:

Office upholstery, especially carpeting, furniture

Wall colours

Mandatory minimum proportion of bio-based content must be 80 %.

Proof of origin of all bio-based resources is required to obtain information about potential pesticide exposure.

Product must have full declaration of ingredient content.

Advanced requirement/bonus points for resource cultivation: At the cultivation of the bio-based resources no synthetic pesticides with prohibited substances may be used.

Glues based on bio-based resources are permitted to be used as binders provided they comprise of 10 % of the volume within the final range of products.

Textile floor coverings

Mandatory minimum content of bio-based resources must be 95 %.

For the main components, proof of the origin of their resources is required.

Advanced requirement /bonus points:

The product must contain no plasticisers, formaldehyde and other volatile organic compounds.

The product must guarantee renunciation of the use of synthetic pesticides for resource production and provide for appropriate reviews of the production areas.

The product must guarantee that cotton harvest is carried out without chemical defoliation.

The product must originate from irrigation of cotton fields without impairment of the local ecosystem.

Resilient floor coverings

Obligatory minimum amount of bio-based resources must be at 98 %.

Sustainable feedstock production and limits for pesticides and heavy metals must be adhered to in the production process.

Advanced requirement /bonus points:

The product must originate from sources where recultivation of cultivation areas is ensured.

Wooden floor coverings

The product must have at least 70 % minimum content requirement of solid wood which must demonstrably originate from sustainable forestry.

The product is required to have at least 40 % of wood material consisting of recycled materials.

The product must ensure exclusion of critical pollutants from its production, especially in coatings.

Office and upholstered furniture

Products must consist more than 50 % in volume of renewable resources wood, e.g. solid wood, saw dust and / or other wood materials (chip boards, core-boards, fibreboards etc., treated or untreated).

Surface coatings such as oils and glazes must originate from bio-based products.

There must be a mandatory minimum proportion of 50 % in renewable raw materials or recycled materials in all non-metal parts used.

Upholstered furniture

No synthetic fillers must be used in the final product.

The product is required to have at least 40 % of wood material consisting of recycled materials.

No bio-based fabric should be mixed with materials in a product.

Textiles

The product must contain organically produced cotton or other natural fibres

Bidders must indicate the proportion of cotton or other natural fibres used in the textiles by weight deriving from organic production. To be considered as such, the fibre must be produced according to Regulation (EC) No 834/2007.

Verification:

The supplier must provide evidence of the origin of the fibres used and the organic nature of their production, such as the EU organic logo or approved national logos for organic production.

Wood furniture

Mandatory minimum proportion of 90 % of total weight in solid wood or wood material.

The wood used must originate from sustainable forests and demonstrably legal sources.

Wood and wood-based materials

All wood and wood-based materials shall originate from legally sourced timber.

Verification:

Certificates of chain of custody for the wood certified as FSC, PEFC or any other equivalent means of proof will be accepted as proof of compliance.

The legal origin of wood can also be demonstrated with a tracing system being in place. These voluntary systems may be certified by third party, often as part of ISO 9000 and/or ISO 14000 or EMAS management system. If wood stems from a country that has signed a Voluntary Partnership Agreement (VPA) with the EU, the FLEGT licence may serve as proof of legality. For the non-certified wood bidders shall indicate the types (species), quantities and origins of the wood used in production, together with a declaration of their legality. As such the wood shall be able to be traced throughout the whole production chain from the forest to the product. In specific cases, where the evidence provided is not considered sufficient to prove compliance with the requested technical specifications, contracting authorities may ask suppliers for further clarifications of proof.

Packaging materials

Packaging must consist of readily recycled material, and/or materials originating from renewable resources, or be a multi-use system.

All packaging materials must be easily separable by hand into recyclable parts consisting of one material (e.g. cardboard, paper, plastic, textile).

Verification:

A description of the product packaging must be provided together with a corresponding declaration of compliance with the recycle criteria.



Food, catering and events:

For example:

Disposable cups, packaging materials and utensils

Plastic products for catering

For bio-based plastics, the carbon content as defined by reference to EN 16575, must be at least 40%, between 40 % and 60 %, between 60 % and 80 % or about 80 % of the final product (EN 16640, ASTM D6866 or equivalent).

The product must demonstrate good biodegradability / compostability.



3.5 GOOD PRACTICE EXAMPLES

A set of four good practice cases are available on the InnProBio website, to be accessed at <http://innprobio.innovation-procurement.org/tools-resources/good-practice/>. The good practice cases illustrate existing experience with the public procurement of innovation of bio-based products and services. These examples can serve as inspiration for the procurement of further bio-based products and services. Short versions of the good practice cases are described below, the full texts are available online.

Purchasing hot drinks in cups made from bio-based materials



The procurement in this good practice case was planned and carried out in cooperation with the Department for category management for vending machines, operating under the Ministry for Infrastructure and Environment (Rijkswaterstraat -RWS) in the Netherlands.

The procurement objective was the purchase of hot drink vending machines, serving an office building with approximately 2400 workplaces. Through the procurement, the national government sought to test how it could stimulate innovation in the bio-based product sector by requiring that the cups purchased be made of bio-based materials.

RWS selected the most economically advantageous tender (MEAT) using a combination of price and quality to determine which tender offered the best value for money. Price and quality were split to price being 60 % of the total score and quality being 40 % of the total score. The quality criterion was split into the following sub-criteria: 1) Quality management system: 40 %, 2) Handling failures, monitoring counters and invoicing process: 40 %, 3) Bio-based cups and innovation: 20 %.

The aim of the tender was to create space for innovation. The tenders received met expectations in terms of innovation, as the final product purchased was one which was not available on the mainstream market. The coating material of the procured bio-based cup was high-quality corn whereas the paper material was made from sugar cane. The bio-based cup was biodegradable and compostable according to the EN 13432 standard.

Road construction using bio-based materials

The Dutch Province of Zeeland is one of the frontrunners in Europe applying bio-based public procurement with a view to stimulate the transition to a circular economy. In 2016 Zeeland adopted an Action Plan for Sustainable Procurement (2017 – 2020) in which it formalised its intention to use public procurement to create social value and to encourage more sustainable procurement actions (in general), including also bio-based procurement.

This procurement sought to commission a works contract to widen the N62 road 'Tractaatweg' (100 km/h) in Zeeuws-Vlaanderen from one to two lanes in each direction, and to build four new viaducts. The N62 is a major road connecting the seaports and the industrial areas of Ghent (in Belgium) with Terneuzen and Vlissingen (in the Netherlands). The procedure was carried out using a Competitive Dialogue approach. The works contract was assigned in February 2017, and preparatory work took place between March and August 2017. Commissioning is scheduled for early 2019.



Disposable bio-based aprons for Skåne's healthcare sector



Following an analysis carried out in 2011 of the region of Skåne's impacts on climate change emissions, the regional council discovered that 40% of the Skåne's CO₂ emissions were generated through its healthcare sector. A large part of this impact was caused by single-use (or disposable) products, such as protective aprons. In 2014, Skåne's healthcare sector was responsible for using and disposing of 5.2 million single-use aprons, generating the equivalent of 300 tonnes of CO₂ emissions. The climate impact caused by these kinds of products can be reduced by limiting unnecessary consumption, finding new materials offering better performance and lower weight, as well as replacing fossil-based materials with fossil-free alternatives through, for example, innovation procurement.

As a climate-neutral disposable protective apron was not available on the market at that time, the Region of Skåne embarked on an innovation-oriented public procurement process to purchase aprons mostly made from renewable (bio-based) material. The process began in 2014 and concluded in May 2016 with the contract awarded to a company for the supply of disposable aprons consisting of 91% renewable material. The purchase/use of the bio-based aprons is expected to result in savings of 250 tonnes per year of CO₂ emissions.

For the Region of Skåne, the procurement exercise meant not only that it was possible to stimulate innovation, which led to the development of a more climate-neutral product, but that it was also possible to create a model for how a PPI can be implemented, with lessons - and newly developed materials - that can be implemented in future processes.

Purchase of bio-based cleaning services by the Wilanów District of the City of Warsaw (Poland)



The Wilanów District Office – one of 18 Districts of the City of Warsaw - carried out a procurement of environmentally-friendly cleaning and maintenance services for some of the city's water supply and treatment plants. The procurement was launched in November 2014 for services related to the local water extracting plant, extracting underground water through pumps, and for the local water treatment station. The Call for Tenders published included environmental considerations in the award phase. The contract was also awarded on the basis of the most economically advantageous tender (MEAT) model presented. Additional points were specifically awarded for the use of ecological cleaning products; use of bio-based detergents accounted for 20% of the evaluation criteria.

The winning company met the District's expectations in terms of the requests for bio-based detergents for several different surfaces (such as glass, terracotta and fittings). The procurement resulted not only in the purchase of sustainable products, but represented a chance to test out the inclusion of bio-based requirements and for the contracting public authority to gain valuable experience on how to purchase environmentally-friendly products through a public procurement process.

3.6 GLOSSARY

The glossary contains 142 terms connected to the public procurement of BBPS. This glossary will help you to understand each term that could be used while preparing a tender or dealing with the overall topic of BBPS and public procurement. Where necessary, data sources are cited and offer the possibility to check on certain terms and relevant EU Directives more precisely. The glossary exceeds the limits of this Handbook, please refer to its online version at:

<https://www.biobasedconsultancy.com/en/about-biobased/glossary1>

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