Joint Baltic Sea Region Report for Sustainable Public Procurement and Catering Services

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i. List of Acronyms and Definitions

General terms

Food and Catering Services (FCS) – the term emphasises the manifold forms in which nutrition comes, as this continuum ranges from (unit) packaged food items such as chocolate bars, potato chips, beverages or water to meals consisting of multiple dishes and drinks. Moreover, the terms *meal* and *food* are also used interchangeably and served by FCS.

Green Public Procurement (GPP) – a process whereby public authorities seek to procure goods, services and works with a reduced environmental impact throughout their lifecycle when compared to goods, services and works with the same primary function that would otherwise be procured (EC 2008).

Public Procurement (PP) – acquisition of works, supplies or services for consideration by means of a public contract (Directive 2014/247/EU of the European Parliament and of the Council of 26 February 2014 on public procurement and repealing Directive 2004/18/EC, (4)). PP is carried out by a public servant according to the national laws devised on the basis of the above directive.

Public Procurement and Catering Services (PPCS) – a term where Public Procurement (PP) serves the function of buying food (by a public servant), and Catering Services (CS) serve the function of preparing meals in mass scale and serving these to customers. While CS can run maximal service of cooking and serving proper meals, it can also run minimal service of handing out food items (in unit packaging). These two functions form an operational entity. While PP is by nature public, CS can be public or commercial.

Sustainable Public Procurement (SPP) – a process by which public authorities seek to achieve an 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.[1] The three pillars of sustainability are also displayed as an entity by the United Nations Environment Programme, 2017, and Sustainability Goals, 2015. A view of sustainable development is also mentioned as a basis for the imposition of measures in the public procurement directive (Directive 2014/24/EU, etc.).

Specific terms

Catering Service (CS) – provision of meals, sandwiches, snacks, and drinks for consumption on a site, typically on a large scale. While public CS is adjusted to customers' regular needs-based activities at institutional settings such as hospitals or schools, commercial CS can also serve meals in these environments. Thus, CS can be organised by public and private (commercial) organisations. Often in the United States, the term used is food service (FS) as catering is understood more like rather small-scale event service. StratKIT deploys the term CS due to its usage in European everyday speech.

[1] ec.europa.eu/environment/gpp/versus_en.htm

Centralised catering service – the notion usually refers to a central kitchen or manufacturing kitchen which prepares meals to be delivered to a number of catering service sites (also called satellites).

Centralised procurement/catering services – a situation whereby one body (within an organisation) performs the tendering process and contract award for others, for instance, one procurement office procures food for a number of kitchens and/or a central kitchen.

Cost aspects of the public meal – refers to the responsible payer of the meal, which can be fully subsidised by tax assets or partially subsidised, whereby citizens pay their share of the costs, usually as decided by the public entities such as municipalities, or individual catering sites such as schools or hospitals. In StratKIT, the meals are seen as public if the public actor provides material, financial or organisational support for the meal provision.

Customer segment of the public meal – combines the customer type such as an age group with their role and activity in an institutional environment. Illustrative segments are pupils or students in educational settings, patients in hospital care, public-sector employees in employee canteens, soldiers and staff at army bases and convicts in prisons.

Decentralised procurement and catering services – a situation whereby each catering site takes care of its procurement and catering services, allowing increased independence of the service to those running the site.

Mixed model – a situation whereby both centralised and decentralised activities run parallel, often organised to take place on different administration levels. Typically, a procurement office can serve a number of large kitchens, while, e.g. in small or distant schools the kitchen personnel buy their food directly from a retailer (e.g. supermarket), cook and serve the meals on-site.

Public meal – meals (or food) which is available or served in a public space (typically a school or a hospital) and governed by public decisions such as legislation and decrees about these products or meals, prescribed by bodies such as parliaments and ministries, public research and expert institutes, municipal councils, or public servants such as procurement and catering managers or rectors at school. The public meal also benefits from public money, including financial, technical, personnel or food procurement support.

Satellite kitchen – a term used for a catering site that receives fully prepared dishes from another location and serves these to customers.

Service kitchen – a term used for a kitchen that receives some dishes, such as the main course, from the central kitchen while cooking and serving other parts of the meal such as side dishes, salads, bread, spread and drinks.

Vending machine – machines that are available at all times with snacks, fruit, drinks and/or sandwiches, etc. that are ready to eat/drink or that can be reheated.

ii. Executive Summary

StratKIT (**Innovative Strategies for Public Catering: Sustainability Toolkit across Baltic Sea Region**, 2019–2021) is a Northern European project, developed under Interreg BSR Programme, financed from European Regional Development Fund, and receiving financial support from the Russian Federation. It seeks the ways about how to implement increasingly sustainable meal provision by public procurement and catering services (PPCS). The partners collaborating in the project represent **Denmark, Estonia, Finland, Germany (Brandenburg), Poland and Russia (Saint Petersburg)**. The partners aim to develop increasingly sustainable public meals by sharing, co-learning and co-innovating feasible and locally adaptable working methods across their PPCS. However, public meal provision is a complex phenomenon, and due to historical reasons, each country has its own ways to prescribe laws for and organise their PPCS. To share the working methods of PPCS means understanding how the provision of the public meal is implemented across societal levels, from the background of prescribed laws and policies to the organisational models to operational implementation. This report outlines how PPCS in StratKIT countries cater to their customers' mundane needs and societal aspirations for increased sustainability.

Writing this report has involved the adoption of specific conceptual and pragmatic notions to be deployed in collaboration across StratKIT countries (The list of acronyms on page 4). This procedure has enabled the description and analysis of PPCS and their working methods in different societal contexts. The focus of the project is the **public meal**, as it is provided by **public procurement and catering services (PPCS)**. Thus, public procurement (PP) means the deployment of legally valid procedures to buy food by the public actor; typically, this food needs to be catered for customers by catering services (CS). The food can be served as such by CS – which makes their role rather minimal while buttressing the importance of PP buying specific products. The procured food can also be cooked into dishes in mass scale and served to customers in a dining hall, canteen or by patient dining, which underlines the work by CS and collaboration with PP. In general, it is also the task of CS to take care of the menu design, on-site cleaning and waste management as well as to engage in customer communication. Thus, PP and CS can be understood as complementary activities run backstage and on stage, respectively; it is also clear that different kinds of special knowledge and skills are needed in these operations.

The **finances** around PPCS can be very differently organised. On the one hand, PPCS can operate under the same public employer; on the other, the PP can tender the CS whereby the CS can be a commercial company or a commercial company owned by a public body. In all these cases, the combination of PP and CS activities represents the provision of a public meal since the public authority is in a position to characterise the service. Furthermore, in StratKIT, the meal is considered public if the public actor is in some way involved in the provision of the service. The options range from a small subsidy for the meal or offering kitchen premises and equipment to the commercial CS to a wholesale subsidy of all the material, energy and personnel needs for the meal provision. This deviates from the EU public procurement directive (2014), which sees the procurement as public if the public value share exceeds 50% of the trade sum. The consideration of the public meal in StratKIT is due to our aim to identify opportunities public authorities have in influencing on and developing the provision of the public meal.

Eventually, the **notion of a meal** is also flexible and reflective of the food culture. In StratKIT, the emphasis is on the meal as nutritional support for customers by the public authorities and as an embodiment of their views on socio-economic as well as environmental considerations, depicted as a meal model in Sweden (Swedish Food Agency 2019). Therefore, a meal can be hot and include a combination of dishes including bread, spread and drink; it can be cold and consist of a sandwich or salad with a drink (and possibly a fruit or piece of vegetable). Both proper hot meals, as well as cold sandwiches and salad meals, are meals in the nutritional sense, while an assembly of items such as beverages, energy snacks and candy bars are not considered meals. While these food items may represent socio-economic and environmental considerations, they do not comply with nutritional requirements and therefore are disqualified as meals, albeit PPCS could provide them.

First, the **importance** of the public meal has come across through its lateral support for citizens' activities in significant institutional environments such as child and elderly care, education, health care, governmental or municipal offices, armed forces, and prisons.

Second, the public meal reflects the stand the state has assumed on public health entailing nutrition; moreover, the public meal envisages the state's responsibility for public health and wellbeing through public authorities. Typically, wholesome nutrition and balanced meals are the standards for PPCS.

Third, the public meal is an embodiment of socio-economic and environmental considerations marking the three dimensions of sustainable development. This approach aims for sustainable public procurement (SPP).

Fourth, the public meal reflects environmental considerations that can be implemented in the market and are crystallised as green public procurement (GPP). Furthermore, several communications by the European Commission emphasise environmentally friendly procurement in line with policies such as the circular economy and decreasing the plastics, carbon-neutral economy, and biodiversity. Organic food and agriculture have been one of the mainstays to promote both greener and more sustainable food system.

The green public procurement (GPP) approach usually relies on competitive trade based on environmentally superior performance, which narrows down the challenging and difficult-to-define criteria for sustainability into more technical and empirically feasible criteria. However, the EU Directive on public procurement (2014) includes socio-economic sustainability aspects, such as the possibility for economic operators to form groups and the role assigned for sheltered workshops or social businesses in tendering. Even sustainable development is included as a grand notion, to be used by public authorities as to the basis for enforcement of their specific measures. Thus, more detailed inclusion of social, environmental and innovative aspects can be applied in tendering. The Directive sees innovations as drivers that contribute to achieving the best value for public money as well as wider economic, environmental and societal benefits' which promote sustainable economic growth (section 47 of the Directive). The notions of **'sustainable'** and **'green'** have generally been used interchangeably in the literature indicates their overlapping and entangled nature; importantly, the notions do not exclude one another. However, as public procurement is a notion which operates in the

market, this report deploys the notion of green public procurement generically and deploys the notion of sustainable public procurement when made explicit by the reference or context. Obviously, the societal character of the public meal has expanded from mere nutritional concerns to those pertaining to the food system as a whole and even wider to the biosphere. The public meal is seen to reflect the relation between the human population and its environment at large; hence the justification for the notion of increasingly sustainable public meals and the focus on their development by PPCS.

This report presents the results of the StratKIT mapping of PPCS which discloses the national legal framework and innovative approaches, organisational and business structures and operational 'shop floor' performance regarding the provision of the public meal. As the current practices of PPCS are closely related to the supranational policy framework, this is also briefly reflected with the best practices both from within and outside the EU. The information enables the analysis of the green or sustainable features as performed by country-specific PPCS. These results help the project partners to understand and identify the opportunities for sustainable developments by PPCS.

The report presents information from legal, governmental, municipal and statistical sources, collected through desktop research as well as individual communications of public authorities. While the authors' responsibility of the content of the report lies on the partners working in research and developmental organisations, the report has considerably benefitted from the knowledge and language introduced by the partners representing PPCS as well as associated organisations of StratKIT.

1 Introduction

The generic development in PPCS seems like a pool of **economic, nutritional, food-cultural, technological, environmental and sustainability-related trends**. Moreover, these developmental pathways are implemented under different legal frameworks and differently structured PPCS. Starting with the obvious, PPCS have nearly without exception displayed economizing tendencies. These are implemented by procuring **large volumes of food**, choosing very **basic criteria** for food to be tendered, decreasing the amount of **animal-based food** and particularly, by focusing on minimising **food and plate waste**. Some value chains are becoming shorter in geographical terms, due to the **increased demand for local and fresh produce**. But the increased use of 'fresh' products may also result in more food waste and rising costs.

There are different ways to address the challenge of **food waste** in business models. Common for most of the solutions is that they require a high level of skills at almost all levels of the supply chain, especially at the cooking stage. For example, the rise in food waste due to inaccuracies and shorter shelf life call for new ideas for reusing leftovers. Regarding the supply chains for catering companies, although most caterers buy food products through wholesalers, a trend is seen towards direct supply through 'buy-direct' routes, especially for fresh and local products with a short shelf life. Another solution to address the rise in food waste is to rethink the supply-demand structure and work on innovative solutions, such as personalized 'printed' meals according to different consumers' needs, such as poor appetite patients (Sjögren et al. 2015).

Nutritional trends show a limited change in principles; rather, the change is taking place in the recommended shift **from animal to plant-based and fish protein sources**. Here, both overweight and climate concerns are mentioned as specific health challenges to be targeted by new nutrition approaches. In many European countries, health and nutrition regulations have been strengthened (cutting sugar, salt, and meat), and complying with these requirements will become even more important for private caterers. With a greater focus on food quality in general, there is a rising demand for healthier and plant-based ingredients.

New food cultural trends often drive changes in the menus with **ethnic meals and ingredients** such as tortillas, hummus, tofu, and new protein products made, e.g. from oats and beans. Also, the trend of growing **regionally produced food** is expected to continue. This is partly a response to transportation-related pollution, but also due to some regions protecting their identity and local jobs.

New catering technologies are also spreading; the developments of new catering equipment and methods include such as **cook and chill**, **cook cold,** as well as **energy and water saving methods**. Furthermore, convenience food, in general, is expected to increase market share, with almost all European countries seeing a rise in **convenience catering and vending machines**.

Another business trend is that private caterers have started to offer **more comprehensive service agreements** entailing, e.g. cleaning, maintenance, or delivery to the door in addition to meal production. By offering a broader range of services and signing longer contracts, the

catering companies become more as ‘partners' rather than solely suppliers to the public authorities (Sjögren et al. 2015).

Furthermore, in many European countries, there is a **trend towards larger catering companies** taking over their smaller competitors to increase market share. As of 2012, in Germany, Sweden, Finland, Denmark and Poland, public expenditure on in-house food and catering services accounted for over 70%. But private contractors are also achieving a greater foothold in Scandinavia, especially Denmark, and also in Germany where private enterprises generally are making a strong push towards larger market shares (Sjögren et al. 2015). This trend has been confirmed by the decrease in the number of companies in the contract catering sector from 2012 to 2016 in 12 countries out of 24 (Eurofound 2018). In the Baltic Sea Region, these countries were Denmark (-4.9%), Finland (-4%), Latvia (-3.1%) and Lithuania (-2.1%). It is worth noting that in Latvia, Denmark and Lithuania, the number of companies dropped, while the employment in the contract catering sector increased by 24.5%, 15% and 2.5% respectively. This again indicates a trend towards company concentration.

Increasing demand for organic food

Procurement of organic food has been a long-time priority for PPCS and is expanding continuously, albeit slowly; thence, the novelty value of organic food stays there. While organic food has had the benefit of promoting water conservation and preventing groundwater pollution, the plant-based food is preferred for curbing climate change, in particular after the land-use report by IPCC (2019).

According to Eurostat, the EU-28 had a total area of 12.6 million hectares of **organic farming** in 2017, and it is expected to grow further in the coming years. The increase in the organic area between 2012 and 2017 was 25%. However, the organic area still uses only 7% of the total EU agricultural land. The countries with the highest shares of organic land in 2017 were Austria, Sweden and Estonia (above 19% of the total agricultural land, see Table 1). Between 2012 and 2017, the highest growth in the total organic area was recorded in Bulgaria and Croatia (over 100%).

The EU's **organic market** has continuously expanded and was worth 34.3 billion euros in 2017 (FiBL 2019). The largest organic food markets were Germany (10 billion euros), France (7.9 billion euros) and Italy (3.1 billion euros). The consumption of organic food per capita was highest in Switzerland (288 euros), Denmark (278 euros) and Sweden (237 euros). The figures regarding the status of organic farming and market in the StratKIT countries (Table 1) show the disparities between countries and suggest their growth potential in detail.

Table 1. Organic farming and market in the StratKIT countries

	Denmark	Estonia	Finland	Germany, Brandenburg	Poland	Russia, St Petersburg
Total organic area, incl. area in conversion (ha)	279,299	210,033	296,645	155,431	484,676.16	<100
Share of organic area of total agricultural area (%)	10.5	21	13.1	n.a.	3.4	<1
Number of organic farms	3,794	1,948	5,039	712	19,297	n.a.
Share of organic farms of total number of farms (%)	9.8	12	10.6	n.a.	1.46	<1
Average organic farm size (ha)	75.1	107	58.9	218.3	25.23	n.a.
Organic food market (million euros)	1,500	54.6	336	n.a.	240	n.a.
Share of organic market of total food market (%)	13.3	3.4	2.4	n.a.	0.3	n.a.

n.a. – no data available

Source: StratKIT national mapping reports 2019

The most important sectors of Europe in terms of purchase volume and value that procure food and catering services are **health and welfare** (42.7% of the total meals served), **education** (31.4% of the total meals served) and **business and industry** (17.8% of the total meals served) (Boyano et al. 2019).

2 International Framework for Public Procurement and Catering Services

With the food sector having an enormous footprint on the environment and climate, the EU has a strong interest in ensuring CO_2-reductions due to its international commitments to the Paris Agreement and the Sustainable Development Goals. Moreover, the EU action plan on circular economy is already showing an impact in circular procurement in the several Member States.

2.1 UN Sustainable Development Goals and the Paris Agreement

The 17 Sustainable Development Goals (SDGs), which are part of the **2030 Agenda for Sustainable Development**, adopted by the United Nations in 2015, recognise that solving poverty and environmental degradation are interlinked with strategies that improve health and education, reduce inequality, and create economic growth. The SDGs call for urgent actions by developed and developing countries – in global partnerships – to address these critical issues. Among the 17 SDGs several are of interest for PPCS, including **no. 2 Zero Hunger, no. 12 Sustainable Consumption and Production and no. 14 Life below Sea**. Promoting sustainable public procurement according to national priorities, is a concrete target under SDG no. 12.7.

The agreement adopted by **the 21st Conference of the Parties of the United Nations Framework Convention on Climate Change** (UNFCCC) in Paris, December 2015, is worth mentioning from a public procurement perspective. The central aim of the Paris Agreement is to keep global warming below 2°C and to limit the rise to no more than 1.5 °C in the 21st century. In this context, green public procurement can have a significant impact on emission-intensive sectors by offering a tool for the Parties to push demand for climate-neutral goods and services.

A global food system's transformation towards diets that improve people's health, while reducing agriculture's impact on planetary systems could generate significant contributions to achieving multiple SDGs and the objective of the Paris Agreement on climate change. Accordingly, the '**planetary diet**', which compounds the human health, price, climate and menus into a manageable whole, was published in 2019 by the EAT-Lancet Commission. The planetary health diet provides the first science-based global guidelines for an optimal diet that is healthy for both people and the planet (Willett et al. 2019). The diet recommends consuming more plant-based foods but fewer animal source foods and informs ranges of different food groups that will promote health and well-being by reducing the risk of overweight, obesity and noncommunicable diseases. The diet is applicable worldwide as it allows flexibility and can be adapted to local geography, culinary traditions and personal preferences. The EAT-Lancet Commission (2019) has also published a brief for foodservice professionals about the actions they can take to contribute to shifting to the planetary health diet and more sustainable food consumption. While the notion of the planetary diet entails a number of rather challenging assumptions regarding agriculture, it can be seen as an effort to supply a more sustainable diet across the global population.

The EU's international commitments to the SDGs and the Paris Agreement are deeply dependent on the Union's ability to reach its own climate and energy framework for 2030**.**

The climate targets are binding and aim to cut at least 40% greenhouse gas emissions by 2030 compared to 1990 levels. As a large majority of EU Member States have agreed on the objective of achieving **carbon-neutrality by 2050**, and several Member States have already set national targets contributing to this goal, the EU aims at adopting and submitting its updated strategy to the UNFCCC in early 2020.

2.2 The European Green Deal

The European Green Deal is the European Commission's roadmap for making the EU's economy sustainable by turning climate and environmental challenges into opportunities across all policy areas and making the transition just and inclusive for all. In order to achieve the overarching aim of the European Green Deal to make **Europe the world's first climate-neutral continent by 2050**, the roadmap brings forward actions in key policy areas. Among these policy areas are **sustainable food systems embedded in the "Farm to Fork Strategy"**.

The vision of the food policy area in the Green Deal is that European food must remain safe, nutritious and of high quality. It must be produced with minimum impact on nature. The Commission aims to present the **Farm to Fork Strategy in spring 2020** which will specify the measures in the following directions: to make sure Europeans get affordable and sustainable food; to tackle climate change; to protect the environment; to **preserve biodiversity** and to increase organic farming. The common agricultural and common fisheries policies will remain key tools to support these efforts. The Commission's proposals for the common agricultural policy for 2021 to 2027 stipulate that at least 40% of the overall budget of common agricultural policy and at least 30% of the Maritime Fisheries Fund would contribute to climate action. Imported food products from third countries must also comply with the EU's environmental standards.

Furthermore, the Farm to Fork Strategy will help to achieve a **circular economy** – from production to consumption: by more efficient food production systems, better storage and packaging, reducing food loss and waste, more sustainable processing and farm transport as well as more awareness-raising among citizens (EC 2019a).

2.3 The EU Action Plan for the Circular Economy

The EU Circular Economy Package (2015) includes revised legislative proposals on waste, as well as a comprehensive Circular Economy Action Plan with 54 actions. The objectives are to stimulate Europe's transition towards a circular economy and generate jobs. Since **extended producer responsibility** will become an important focus in the future, the new legislation on waste, packaging, and plastics is relevant for contract caterers especially, but also for public authorities regarding disposal.

The Circular Economy Action Plan sets out measures to "close the loop" in the European economy and tackle all phases in the lifecycle of products: from production and consumption to waste management. It includes actions that will target market barriers and boost circularity in specific sectors, such as plastics, critical raw materials, construction, biomass, food waste, and bio-based products, as well as horizontal measures in areas such as innovation and investment.

The Plan recognises public procurement as a key driver in the transition towards the circular economy. Circular procurement can be defined as the process by which public authorities purchase works, goods or services that contribute to closed energy and material loops within supply chains (EC, ICLEI 2017). Circular procurement encourages public authorities to consider:

- Buying a service (renting/leasing) instead of buying a product;
- Supplier take-back systems;
- Focus on product design (easy to disassemble or easy to repair);
- Engaging with suppliers and the wider market to identify circular solutions.

The new EU waste directives (2018)

The revised directive on waste (EU) 2018/851 entered into force in July 2018 and could have a widespread impact on local and regional authorities' possibility to include waste management aspects into public procurement. The new directive sets out legally binding targets for the reduction of waste, better waste management, and recycling. According to the municipal waste directives the following recycling targets for municipal waste need to be implemented in the municipalities of all Member States:

- By 2025 55%;
- By 2030 60%;
- By 2035 65%;
- By 31 December 2023, bio-waste is collected separately or recycled (e.g. home composting). This is in addition to the separate collection which already exists for paper, cardboard, glass, metals, and plastic.

According to the directive, Member States shall take measures not only to develop proper waste management schemes but also to establish better re-use and repair infrastructures in general.

Sustainable public procurement is mentioned in the directive, as one of the instruments, that the Member States can apply to encourage better circular waste management and the use of recycled materials. The new waste directive also establishes minimum requirements for extended producer responsibility regarding the waste stage of their products, including all types of packaging. Producers will be required to pay a financial contribution for that purpose.

In addition to the general waste directive, new targets are set out in the revised Directive on packaging and packaging waste (EU) 2018/852. The recycling target for all types of packaging is now 65% by 2025, and 70% by 2030. For plastics packaging alone the recycling target is 50% by 2025 and 55% by 2030.

EU Strategy for Plastics in a Circular Economy

The European Strategy for Plastics in a Circular Economy adopted in January 2018, aims to transform the way plastic products are designed, used and recycled in the EU. The target of the strategy is to make all plastic packaging on the EU market reusable or recyclable by 2030 (EC 2018a). Although plastic packaging helps ensure food safety and prevents food waste, the way most plastics are produced, used and discarded today fails to include the environmental and economic benefits of a circular approach.

The strategy aims to improve the quality and economics of plastic recycling and put an end to plastic waste. At the same time, the transition to a sustainable plastics economy is expected to boost innovation and new businesses, due to growing competition on providing circular solutions, such as reverse logistics for packaging or alternatives to disposable plastics.

The Commission will implement the plastics strategy by reinforcing the above-mentioned revised Directive on Packaging and Packaging Waste, the EU Green Public Procurement criteria and the Ecodesign Directive that currently sets minimum energy efficiency standards for products. In 2019, the European Parliament agreed on the measures proposed by the Commission to tackle marine litter coming from the ten single-use plastic products most often found on European beaches (The Single-Use Plastics Directive 2019/904).

Research and innovation funds from European programmes already encourage the development of alternative types of packaging, such as bio-based plastics or plastics produced from carbon dioxide or methane. Although biodegradable plastics have made a strong market push, they still represent a very small share of the market. The strategy also emphasises the important role of taxation and public procurement in the Member States, and furthermore, local and regional authorities are expected to play a vital role in steering investments into more circular procurement (EC 2018a).

2.4 EU strategies on nutrition and food

Although nutrition is not, strictly speaking, part of the environmental aspects in Green Public Procurement, health, and nutritional aspects are often an integrated part of broader public procurement strategies. In 2007, the European Commission initiated a **strategy on nutrition, overweight and obesity-related health issues** (EC 2007). The strategy encourages partnerships between local, regional and national authorities, the private sector, the EU, and WHO in order to improve healthier food products, responsible marketing and promotion of the physical activity. The strategy has been encompassed in various initiatives and led to the formation of:

- The EU platform for action on diet, physical activity and health, led by the European Commission, in which food operators, NGOs, and academia can address relevant issues (e.g. reduction of salt intake and saturated fats).
- A high-level group on nutrition and physical activity, led by the European Commission, in which the Member States can exchange best practices, identify research gaps, explore policy ideas and develop common approaches.

In continuation of the EU strategy on nutrition above, the European Commission launched in 2016 a broader strategy to tackle the challenge of food and nutrition through its **Food 2030 research and innovation policy framework** (EC 2016). It aims to future-proof European food systems, so they become more sustainable, resilient, responsible and competitive. Food 2030 is the EU research and innovation policy response to international developments, among others, the Sustainable Development Goals and COP21 commitments. The four key food and nutrition security priorities in Food 2030 are the following:

- NUTRITION for sustainable and healthy diets;
- CLIMATE smart and environmentally sustainable food systems;

- CIRCULARITY and resource efficiency of food systems;
- INNOVATION and empowerment of communities.

2.5 EU green public procurement

Within the wider framework of the policies and strategies mentioned above, the EU's green public procurement policy plays an essential role in greening PPCS. With an EU-average of 85 million catered meals per day in the EU (over 50% through contract catering), sustainable food procurement in public institutions provides an enormous potential to push market demand for greener products (ICLEI 2019). The European Commission has developed comprehensive guidelines to help public authorities buy goods and services with lower environmental impacts. An important tool for food and catering services made available by the EU is the set of GPP criteria. The GPP criteria aim to strike an optimal balance between environmental performance, cost considerations, ease of verification, and spurring innovation in the single market.

EU public procurement directive (2014)

The EU public procurement directive (2014) provides the overall legal framework for all purchasing done by local and regional authorities within the EU. The 'softer' strategies supplement this legislative act in the form of EU Public Procurement Strategy (2017) and the EU GPP criteria (2008, revised in 2019). EU directives on public procurement are designed to achieve a procurement market that is competitive, harmonised, open, and well-regulated. When the procurement directives were updated in February 2014, they made it easier to include more green requirements as criteria for public procurement, rather than only awarding contracts based on the lowest price. The updated directive 2014/24/EU strengthens the legal basis for greater inclusion of common societal goals in the procurement process, such as environmental protection, social responsibility, innovation, climate, etc.

In terms of GPP, the following sections of the directive are noteworthy:

- Awarding public contracts based on the most economically advantageous tender (Article 67) allows contracting authorities to evaluate the best mix between price and quality, and the quality criterion allows for more assessment of life-cycle costs (Article 68);
- A greater possibility to include eco-innovation (Article 42), and more use of eco-labels (Article 43);
- Innovation partnerships: If a contracting authority wishes to purchase goods or services which are not currently available on the market, it may establish an innovation partnership with one or more partners (Article 31);
- More widespread use of e-procurement;
- Fairer participation for small and medium-sized enterprises (SMEs) in public tenders;
- Inclusion of tenders considering social responsibility and social businesses.

EU public procurement strategy (2017)

Even though the directive from 2014 made it easier to include green criteria, there is much room for improvement. As of 2017, 55% of public procurement in the EU still used the lowest price as the only award criterion (EC 2017). This indicates that public buyers are probably not paying enough attention to quality, sustainability, and innovation. In addition, it has been found that contracting authorities in the EU have carried out only 11% of procedures through cooperative procurement (ibid.). This is a missed opportunity as buying in bulk can result in better prices and higher quality goods and services.

To address this issue, the European Commission presented in 2017 the Public Procurement Strategy, centred around six priority areas to promote sustainability and innovation:

1. Ensuring broader inclusion of innovative, green and social procurement.
2. Strengthening the exchange of good practice and advice, especially in the health sector, IT and construction.
3. Professionalisation and training of public buyers.
4. Improvement of transparency, integrity, and data.
5. Boosting the digital transformation of procurement, including the e-Certis procurement tool.
6. Encouragement of more cooperation among public authorities so that they can procure together to gain lower costs and higher quality.

An important aspect of GPP in Europe is the great divergence in the focus and capacities of Member States. In Northern Europe, public digitalisation is advanced, which has enabled the faster uptake of e-procurement practices and the ability to handle large amounts of data. In other parts of Europe, public authorities are still catching up with the digitalisation of procurement. Moreover, the level of political will to implement GPP or the economic possibilities to do so differ across the Member States. The EU is therefore not expected to make the legislation in this area, but instead, act as a catalyst for faster and smarter uptake of green public procurement (EC 2017).

The EU has also encouraged the Member States to adopt **National Action Plans (NAPs)** for greening their public procurement. The NAPs should contain information about the existing state of green procurement in the Member State and targets for the next three years. The action plans should then be made available on DG Environment's website. While the NAPs are not legally binding, they should inspire across the Member States and help raise awareness.

In addition, a **GPP Advisory Group** has been created. This group is composed of representatives from the Member States and key stakeholders, such as Business Europe, UEAPME (small and medium enterprises association), European Environment Bureau, BEUC (European Consumer Organisation) and ICLEI (Local Governments for Sustainability). The main objective of this group, which meets twice a year, is to provide advice to the European Commission on the development and implementation of GPP policies.

EU Green Public Procurement criteria

As part of the package of measures in the Sustainable Production and Consumption and Sustainable Industrial Policy Action Plan, the European Commission issued in 2008 its **Communication on public procurement for a better environment** (EC 2008). The main objectives of the Communication were to guide on reducing the environmental impact of public sector consumption, and secondly, to implement common European GPP criteria. The idea of introducing a common set of GPP criteria served various purposes: (i) safeguarding the single market, while at the same time spurring EU-wide competition, and (ii) minimizing the administrative burden for public administrations and companies operating in more than one Member State.

Since 2008, the Commission has developed more than 20 GPP criteria for priority sectors. The sectors were selected based on their scope for environmental improvement and the size of public expenditure devoted to them. The sectors include, for instance, construction, transport, office machinery, food and catering services (EC 2008).

While the EU public procurement directive and a large number of food safety standards are mandatory by law in the EU, the GPP criteria are **voluntary** and serve a guiding instrument for the Member States. The GPP criteria are split into Selection Criteria (SC), Technical Specifications (TS), Award Criteria (AC) and Contract performance clauses (C). For each set of criteria, there is a choice between two levels of environmental ambition:

- The **core criteria** are designed to (i) allow for easy application of GPP by any contracting authority, and (ii) address basic environmental requirements. They are designed to be used with minimum additional verification effort or cost increases. Compliance with the core criteria is used as a basis for target setting and benchmarking to promote their EU-wide uptake.
- The **comprehensive criteria** are for those who wish to purchase the best environmental products available on the market and encourage innovation. These comprehensive criteria may require additional verification effort or a slight increase in cost compared to other products. Compliance with the comprehensive criteria is carried out in the best performing Member States in order to set new benchmarks for the future.

The two sets of criteria allow the contracting authorities in all Member States to: (i) gradually improve levels of GPP, and (ii) give clear signals to the market to continuously improve the environmental performance of products and services (EC 2008).

The GPP criteria are designed to be implemented through national GPP strategies. To speed up the process, the European Commission has since 2008 initiated several activities to facilitate faster uptake of the criteria. These activities have included various EU funding mechanisms and projects; legal guidance; the GPP Training Toolkit[2]; the Buying Green Handbook[3]; and the comprehensive GPP website[4].

[2] ec.europa.eu/environment/gpp/toolkit_en.htm
[3] ec.europa.eu/environment/gpp/pdf/Buying-Green-Handbook-3rd-Edition.pdf
[4] ec.europa.eu/environment/gpp/index_en.htm

EU green public procurement criteria in food and catering services

The key environmental impacts of food are mostly linked to the primary production stage of the food. They include the combustion of fossil fuels, energy use, land use, water use and water pollution. More specifically, these impacts come from:

- The use of pesticides and chemical fertilisers associated with meat; milk and cheese; eggs; fruit and vegetables; bread and cereals; oils and fats; and hot and cold drinks;
- The soil degradation and biodiversity loss associated with product groups such as fruit and vegetables; bread and cereals; and oils and fats;
- Emissions of methane and nitrates due to livestock farming and fertiliser use;
- The depletion of fish stocks or the production of feed for fish, and the use of antifouling treatments in fish cages used to produce fish and seafood.

For catering services, energy and water use are big sources of environmental impacts, as are waste generation and waste management (EC 2019b).

The set of EU GPP criteria for food is split into three sections: **food procurement, catering services, and vending machines**. It was updated in September 2019 (EC 2019b), amending the first criteria from 2008 (EC, ICLEI 2008). The revision of the GPP criteria, which included stakeholder consultations from 2015 to 2019, was led by the European Commission Joint Research Centre (JRC) and DG Environment. Accompanying the GPP criteria is the final technical report from the JRC (2019), which summarises the discussions held during the revision process of the GPP criteria for food procurement and catering services (Boyano et al. 2019). The most significant proposed changes in the new GPP criteria are displayed in Table 2 below.

Table 2. Changes in the new GPP criteria

EU GPP CRITERIA FOR FOOD PROCUREMENT (2008)	NEW EU GPP CRITERIA FOR FOOD PROCUREMENT (2019)
ORGANIC FOOD	Organic food products (more ambitious)
INTEGRATED PRODUCTION[5]	Removed (however, contracting authorities may decide to include the criterion in their tender on an individual basis).
PACKAGING	Removed
SEASONAL PRODUCE	Removed (however, contracting authorities may decide to include the criterion in their tender on an individual basis)
AQUACULTURE AND MARINE PRODUCTS	Marine and aquaculture food products (slight modification)
ANIMAL WELFARE STANDARDS	Animal welfare (slight improvement)
	Fair and ethical trade products (new)
	More environmentally responsible vegetable fats (new)

[5] In environmental terms, the requirements for Integrated Production are not as strict as those for organic farming. However, in many parts of Europe the quantity of certified products on the market is significant, and price differences compared with conventional products are much lower than for organic products. This means that Integrated Production can be a useful steppingstone towards encouraging more environmentally sound agricultural practices where public authorities are put off by the price (and availability) of organic products.

	Procurement management practices

EU GPP CRITERIA FOR CATERING SERVICES (2008)	NEW EU GPP CRITERIA FOR CATERING SERVICES (2019)
STAFF TRAINING	Competences of the tenderer
ENVIRONMENTAL MANAGEMENT MEASURES AND PRACTICES	Environmental management measures and practices
ORGANIC PRODUCTION	Organic food products
MENU PLANNING	Described in Food and beverage waste prevention and Plant-based menus
PAPER PRODUCTS	Described in Other waste: prevention, sorting, and disposal
PACKAGING	Removed
AQUACULTURE AND MARINE PRODUCTS	Described above
ANIMAL WELFARE STANDARDS	Described above
EQUIPMENT (ENERGY EFFICIENT KITCHEN MACHINES, ETC.)	Energy and water consumption in kitchens (more comprehensive)
CLEANING PRODUCTS	Chemical products and consumable goods (ecolabels)
WASTE GENERATION	Food and beverage waste prevention (and food and beverage redistribution) Other waste: prevention, sorting, and disposal
TRANSPORT	Food transportation
	Plant-based menus (new)
	Provision of low impact drinking water (new)
	VENDING MACHINES (2019) (new)
	The new category contains criteria for certified organic products and environmentally responsible vegetable fats. It also includes a criterion on Smart controls for machines to minimise energy consumption, sleep-mode, etc. (provided they do not contain perishable food subject to degradation)

3 Overview of Public Procurement and Catering Services in the Baltic Sea Region

The overview on public procurement and catering services (PPCS) in the Baltic Sea Region is based on the mapping reports of the partner countries and regions in the StratKIT project: **Denmark; Estonia; Finland; Germany, Brandenburg; Poland and Russia, St Petersburg** (further referred to as **StratKIT countries**).

To understand the overall background and functioning of the public meal systems in the StratKIT countries, Section 3.1 describes the national frameworks for the public, including green and sustainable procurement. Green and sustainable public procurement in catering services is addressed in more detail in Section 3.2. The diverse models for catering services used in the StratKIT countries are summarised in Section 3.3, and finally, the most used green and sustainable public procurement criteria are presented in Section 3.4.

3.1 National frameworks for green and sustainable public procurement

All StratKIT countries in the European Union have adopted their procurement legislation based on the EU public procurement directive. Similarly, Russia has harmonised legal requirements for public procurement and the law "About the contract system in the field of procurement of goods, works and services for state and municipal needs" provides a possibility for GPP implementation.

For moving towards green and sustainable public procurement, a well-developed strategy and clear targets provide a basis on which to build a coherent, well-coordinated and structured developmental approach. Three StratKIT countries have so far integrated green or sustainable public procurement into their strategic documents at the national or federal level: **Denmark, Finland and Germany (Brandenburg)**. Poland has developed a national action plan for GPP, focusing on awareness-raising and training issues. GPP national action plans (NAPs) also exist in other EU StratKIT countries, except in Estonia. Legally binding requirements for GPP have set Finland only. Furthermore, Finland and Germany have established a helpdesk specifically for implementing green and sustainable public procurement in their countries. In Denmark, there is a Partnership for Green Public Procurement (POGI) – a network focusing on supporting the procurers towards more green procurement[6] (Table 3).

[6] ansvarligeindkob.dk/

Table 3. National frameworks for green and sustainable public procurement

	Denmark	Estonia	Finland	Germany, Brandenburg	Poland	Russia, St Petersburg
Public procurement regulation	Act on Tenders	Public Procurement Act	Act on Public Procurement and Concession Contracts	National Public Procurement Law, Federal Public Procurement Law	Public Procurement Law	Law on the Contract System for State and Municipal Procurement of Goods, Work and Services
Responsible ministry for green and sustainable public procurement	Ministry for Environment and Food	Ministry of the Environment	Ministry of the Environment	Federal State Ministry for Economic Affairs and Energy	Public Procurement Office, Ministry of Development	Ministry of Finance – responsible for public procurement in general
Existence of strategic document for GPP and SPP	Several strategic documents at more governance levels include GPP	No	GPP is integrated into several strategies	GPP is integrated into Sustainability Strategy	National action plan on GPP	No
Existence of help desk, competence or support body for GPP and SPP	Partnership for Green Public Procurement (POGI)	No	Motiva Ltd & KEINO Competence Centre	Competence Centre for Sustainable Procurement	No	No

Green public procurement in **Denmark** is based on a voluntary approach – several initiatives on sustainable public procurement exist, but no official strategy. GPP principles are integrated into several strategic documents at more governance levels. The municipalities who have joined the Partnership for Green Public Procurement (POGI), follow the network's green procurement approach.

In **Finland**, GPP is integrated into several strategies, for example, into the strategy on climate change and the roadmap for innovative procurement. The national government has drawn up a resolution based on the Programme to Promote Sustainable Consumption and Production "More from Less – Wisely", which aims to reduce the environmental impacts and greenhouse gas emissions of households and the public sector. The **government's decision-in-principle** on the promotion of environmental and energy solutions in public procurement (2013)[7] is binding for central government bodies. Motiva Ltd. is a state-owned sustainable development company that provides public administrations, businesses, municipalities and consumers with information, solutions and services that enable them to make resource-efficient, effective and sustainable choices. KEINO Competence Centre (a network of 7 organisations) supports and

[7] ym.fi/en-US/The_environment/Sustainable_consumption_and_production

helps Finnish public contracting authorities with the development of sustainable and innovative public procurement (see the example of Finnish competence centre in Chapter 5.2).

In **Germany**, several laws and strategies foster sustainable procurement. The German Sustainability Strategy, as well as the **Sustainability Strategy of the Federal State of Brandenburg** (updated in 2019), ask for more sustainable public procurement. Tenders shall consider environmental and social criteria and fair products, amongst others. Still, the criteria are not explained further; the implementation is voluntary and depends on the interests of the contracting authority and the knowledge of the procurer. At the national level, there is the Competence Centre for Sustainable Procurement, providing advice to administrative bodies and linking to Federal States contact points.

Poland has adopted the **National Action Plan on Sustainable Public Procurement** (updated in 2017). However, the action plan is solely a planning document, addressing mainly the educational needs of public buyers, without imposing any obligations upon the contracting authorities. GPP in Poland remains purely voluntary. Certain reference policies which include social clauses (guaranteeing proper working conditions, employment of disabled persons) can be used for GPP. The ministries and central institutions shall include social clauses in their procurement whenever it is possible. In case they do not include, they shall explain why it is impossible ("comply or explain"). Certain cities (Warsaw, Częstochowa) apply similar policies.

In **Estonia** and **Russia (St Petersburg)**, no national or regional strategic documents concerning green or sustainable public procurement have been developed yet.

3.2 Green and sustainable public procurement of catering services

In Finland and Germany, where green and sustainable public procurement have been integrated into national or federal strategies, these plans include directly or indirectly catering services among other areas (Table 4). In **Finland**, green and sustainable public procurement and catering have developed in varying ways across municipalities; there is hardly a municipality without some measures and targets towards these aims. In Espoo and Helsinki (and typically elsewhere as well), the nutrition and meal type recommendations are aligned with while buying more local and organic; also local organic food, increasing the share of vegetables such as legumes in procurement and decreasing the share of red meat and milk. Often local undervalued fish species such as bream and Baltic herring are used by caterers. Moreover, several projects have dealt with decreasing process, food and plate waste. Communication efforts are also underway both at schools and shopping centres.

While in **Germany**, **Brandenburg,** catering services are not mentioned in the sustainability strategy of the Federal State, some aspects mentioned apply for this sector: public procurement is asked to consider social-ecological criteria, as well as fair trade products; lifecycle assessment should support procurement decisions. Some cities and municipalities amplified green or sustainable public procurement in catering services by becoming "Fairtrade town" or "Sustainable municipality" or "Organic city" or signing the Milan Urban Food Policy Pact. At the German level, the Competence Centre for Sustainable Procurement provides guidance on sustainable procurement criteria for food and catering. Moreover, some

segments defined their own sustainable procurement criteria (e.g. the German Student Service for university canteens), and the German Nutrition Society includes sustainability criteria to their canteen certification schemes (none of them are obligatory for the certification).

In **Denmark**, there is no strategic document for GPP and food. But, for many years, Denmark has had a strategy for more organic products in public meals. At the state and regional level, an emerging trend is to integrate the policy for sustainable food systems into a comprehensive **climate strategy**. For example, in Denmark, several regions and municipalities have adopted their own green procurement policies which include climate targets. These strategies motivate procurement actions that reduce the climate impact of food production and consumption. For instance, Copenhagen Municipality adopted a strategy in 2019 for improving public meals and reducing climate impact through public procurement. Another example is the Capital Region's strategy of 2011 for reducing CO_2 emissions through public procurement. These targets have been incorporated into climate-oriented regional strategies that cover catering services besides other issues (see the examples of Copenhagen's strategy for food and public meals and Berlin's initiative in Chapter 5.2).

All EU StratKIT countries have made the EU **GPP criteria** available in their national languages. **Finland** has developed these criteria for food and catering services further to fit them better into local conditions. In 2016, the Finnish Government issued a decision in principle[8] on the basis for evaluating catering service procurement in the public sector that is binding for central government bodies. The decision-in-principle requires public purchasers and catering services to strive for high quality and overall economic sustainability by demanding food that has been produced using environmentally friendly methods that also promote animal welfare and food safety. For supporting the implementation of the decision in principle, national guidelines with responsibility criteria including animal health and welfare, food safety, environmental impacts and social responsibility for all food product groups have been developed by the Sustainable Development Company Motiva Ltd (Motivan hankintapalvelu 2017). Additionally, in 2013, the Finnish Government adopted a Resolution entitled More organic! The government development programme for the organic product sector and objectives to 2020[9]. One aim of the programme is to improve access to organic food through public catering services. Also, the Local Food Programme[10] was adopted as a Government Resolution in 2013, aiming *inter alia* to increase the share of local food in public procurement through better procurement skills and quality criteria. Nutritional criteria for food and public meals are set by the national nutrition and meal recommendations[11], and Heart Symbol criteria[12] for meals may be deployed as well.

[8] mmm.fi/documents/1410837/1880296/periaatep%C3%A4%C3%A4t%C3%B6s+julkisista+ruokahankinnoista_su.pdf/7115f133-a4d9-4e2d-a729-2486f76df2ce/periaatep%C3%A4%C3%A4t%C3%B6s+julkisista+ruokahankinnoista_su.pdf

[9] mmm.fi/documents/1410837/1890227/Luomualan_kehittamisohjelmaEN.pdf/1badaefc-bc12-4952-a58a-37753f8c24ad/Luomualan_kehittamisohjelmaEN.pdf

[10] mmm.fi/documents/1410837/1890227/LocalFood_ButOfCourse.pdf/ef43072b-6700-47ad-af7e-5972e7fe046f/LocalFood_ButOfCourse.pdf

[11] ruokavirasto.fi/teemat/terveytta-edistava-ruokavalio/kuluttaja--ja-ammattilaismateriaali/julkaisut/

[12] sydanmerkki.fi/en/criteria-for-healthy-lunch/

In **Estonia, Poland** and **Russia,** there is no systematic implementation of GPP principles in the public food or catering services yet (see Chapter 3.4). In St Petersburg, the public procurement law allows local authorities and other contractors to add their own criteria for procuring catering services; however, examples of environmental criteria are not available yet.

Table 4. Frameworks for green and sustainable public procurement in catering services

	Denmark	Estonia	Finland	Germany, Brandenburg	Poland	Russia, St Petersburg
Is there any strategic document for GPP or SPP in catering services?	No	No	Yes	Yes, indirectly as part of the sustainability strategy of Brandenburg	No	No
Do you have national or federal criteria for GPP or SPP in catering services?	No, only EU GPP criteria are available	No, only EU GPP criteria are available	Yes	No, only EU GPP criteria are available	No, only EU GPP criteria are available	No
Is GPP mandatory or voluntary for catering services?	Voluntary	Voluntary	Binding for central government bodies	Voluntary	Voluntary	Voluntary
Are there any GPP guidelines for catering services?	No	No	Guide for Responsible Procurement of Food (2017)	Yes, at the national level	No	No

3.3 Public procurement and catering services in customer segments

Cost models of catering services

Various cost models exist in the customer segments of the public meal (Table 5). By comparing the practices of the StratKIT countries, the share of public subsidy is dominating in meals of armed forces and prisons, as well as in schools and hospitals. Universities and canteens of governmental buildings have the lowest share of subsidised meals.

All the StratKIT countries offer at least partially subsidised meals in their **pre-school institutions and schools**. It can also depend on the municipality whether the subsidy is provided for daycare (e.g. Estonia). In **Denmark**, the municipal council may decide that a lunch meal is included as part of the day-offer service, or that the parents must pay for the lunch on top of the general childcare fee.

In **Finland and Estonia**, all school levels can offer a fully subsidised (free) daily meal. For example, in primary and secondary schools of Estonia, the subsidy is paid both by the state and local government (see a cost model example of Estonian school meal in Chapter 5.2).

In **Poland**, the meals in kindergartens and primary schools are partially subsidised – parents pay for the food and local government in most cases covers all other costs (labour, facilities, etc.). In secondary schools and universities, there is no obligation to provide meals – if meals are provided, then usually by a private operator which is not subsidised. In **Russia**, St Petersburg, school meals are fully or partly subsidised, but the menu of the free choice is not subsidised.

In **Germany**, Brandenburg[13], many public canteens are indirectly subsidised: caterers pay no rent, and sometimes the public administration provides the necessary equipment. Most canteens are required to offer at least two meals, one of these "affordable", sometimes defining a maximum price (e.g. 3.50 euros). In some schools, the school provider subsidises the meals. Moreover, financially disadvantaged families can apply for financial support.

Table 5. Cost-sharing models of catering services in customer segments

A. Fully subsidised, B. Partially subsidised, C. No public subsidies, D. Other

	Denmark	Estonia	Finland	Germany, Brandenburg	Poland	Russia, St Petersburg
Daycare and kinder-gartens	B	B (A, C)	A, B	B	B	A, B, C
Primary schools	B	A	A	B	B	A, B, C
Secondary schools		A	A	B	C	A, B, C
Universities		C	B	B	C	C
Hospitals	A	B	B	?	A	A
Residential and care homes, elderly	C	B (C)	B	?	B, C	A
Armed forces	B	A	A	B?	A	A
Prisons	D	A	A	A?	A	A
Canteens in public workplaces	B	C (B)	B	B	B, C	C

[13] There is almost no statistical data on public canteens available in Brandenburg. Only for school canteens, there has been a survey in 2016/17, with 167 participants and a bachelor thesis on kindergartens with 338 participants.

Other	B (meals on wheels)		B (day activity centres for adults)			
Other			B, C (elderly receiving care at home)			

Organisational models of catering services

The public meals in Europe are often divided into two main organisational categories: **(1) in-house** – meals procured and catered by the public bodies themselves, and **(2) contract catering** – meals procured and catered by private companies. Public institutions can be responsible for food procurement and catering, involving several or all levels of the supply chain, whereas contract catering covers solutions, where parts of, or the whole process of preparing the public meal have been outsourced to private companies.

In the StratKIT countries (Table 6), there is a tendency to use a **contract catering** model where usually a private catering company is responsible for providing the catering services, e.g. in **Estonia**. In this case, the service covers the supply of goods and food products, cooking, recruitment and quality control. The contract catering model is increasingly used in two main customer segments: in education and in health and welfare. For example, in **Russia**, St Petersburg, it is the only main model in the customer segments mentioned above, and in **Germany**, it is also widely applied in canteens of the employees of the Federal State (see the examples on contract catering in St Petersburg schools and Brandenburg canteens in Chapter 5.2).

However, the **in-house** model has a long tradition, especially in educational institutions, and therefore, many regions and countries still use it. For instance, in **Finland**, catering service can be produced by the provider of education, such as the municipality or the school itself, or procured from a company, either municipally owned or private (see the example on organisational and business models in Finland in Chapter 5.2).

In **Denmark**, the common organisational model for catering services in university canteens is to contract private caterers. In kindergartens, some institutions also use the in-house model. Kindergartens and primary schools in **Poland** traditionally use the in-house model for providing meals – schools have own kitchens and cooking staff (usually hired by the municipality), they buy food and prepare meals individually (see the example of the in-house model in Polish schools in Chapter 5.2).

Table 6. Organisational models of catering services in customer segments

A. In-house by public bodies (food procured and catered by the public bodies themselves), B. Contract catering (private service procured by public authorities, considered as a public service), C. Contract catering by publicly-owned catering company, D. Below threshold level, E. Other

	Denmark	Estonia	Finland	Germany, Brandenburg	Poland	Russia, St Petersburg
Daycare and kinder-gartens	A, B, C, D	A (B)	A, B, C	A, B	A (B, D)	B
Primary schools	C, E (private company)	B (A)	A, B, C	B	A (B, D)	B
Secondary schools		B (A)	A, B, C	B	B	B
Universities	B	B	B	A	B	B
Hospitals	A	A, B	A, B, C	A, B?	A, B	B
Residential and care homes, elderly	A, E (private company)	A, B	A, B, C	A, B?	A, B, D	B
Armed forces		A	C	A, B?	A, B	B
Prisons	D, E (own cooking)	A	C	A, B?	A, B	B
Canteens in public workplaces	A, B, E (private company)	B	B, C	B, (A)	B	B
Other	B, D, E (private company) (meals on wheels)		A, B, C (day activity centres for adults)			
Other			A, B, C (elderly receiving care at home)			

Procurement models of catering services

The available data indicate that the StratKIT countries organise procurement in very different ways (Table 7). In **Poland** and **Russia**, St Petersburg, mostly decentralised procurement model dominates, while in other countries several models are used in different segments. For example, pre-schools and schools in Poland mainly prepare and serve the meal by themselves, and therefore only food is procured. In Russia, St Petersburg, a federal law "On the Contract System for State and Municipal Procurement of Goods, Work and Services" regulates procurement in all spheres. Criteria are relevant for all institutions; for example, criteria for food and catering procurement are the same for all schools. Each school still has to undergo a tendering procedure and conclude a contract with a catering company. Some schools in one city district cooperate in choosing a winning company and prepare the procurement documentation together (see the example on the Russian decentralised procurement model in Chapter 5.2).

In **Denmark**, the procurement can be organised in very different ways. In the case of **Estonian** educational institutions, the catering procurement is organised either centrally by the local government for several educational institutions or by schools and kindergartens themselves. In **Finland**, the provider of education, such as the municipality or the school itself, can produce catering service or procure it from a company, either municipally owned or private. Mostly municipalities as local authorities do service procurement of school feeding (see the example on various procurement models in Finland in Chapter 5.2).

In **Germany,** Brandenburg, the procurement of the catering service is organised depending on the segment and the size of the canteen. E.g. the procurement for the canteen services for the employees of different ministries is centrally organised by a specific entity, while schools have to take care for the procurement themselves. The caterers organise the procurement of food and detergents.

Table 7. Procurement models of catering services in customer segments

A. Centralised, B. Decentralised, C. Mixed, D. Other

	Denmark	Estonia	Finland	Germany, Brandenburg	Poland	Russia, St Petersburg
Daycare and kinder-gartens	C	B (A)	A (B, C)	B	B	B
Primary schools	C	B (A)	A, B, C	B	B	B
Secondary schools		B (A)	A, B, C	B	O	B
Universities		B	A, B, C	B	O	B
Hospitals	A	B	A, B, C	B?	B	B
Residential and care homes, elderly	A	B	A, B, C	B?	B	B

Armed forces		A	A	?	B	B
Prisons	A	A	A	?	B	B
Canteens in public workplaces	A	B	A, B, C	A, B	O	
Other	A (meals on wheels)		A, B, C (day activity centres for adults)			
Other			A, B, C (elderly receiving care at home)			

Manufacturing models for preparing and distributing public meals

In all the StratKIT countries, public meals are at least partly prepared in on-site kitchens (Table 8). Traditionally, educational, health and welfare institutions have been built with their own kitchens, and therefore meals are prepared on the spot ("On-site" model) and delivered ready to eat ("Cook and serve"). This model is commonly used, e.g. in **Estonia**, **Poland, Russia** and in social institutions and hospitals of **Denmark**. In Poland and Russia, in some rare cases, meals are cooked in central kitchens of big canteens and are delivered to other schools in accordance with sanitary rules. In some Danish kindergartens, hot meals are also distributed from centralised kitchens.

The central kitchen system where food is prepared, either partially or fully, and then transported to kindergartens, schools and other institutions, is an emerging trend. In **Finland**, public catering sites have their own kitchens, mostly operating the Cook and Serve mode. Part of these kitchens has become old and unpractical. This leads to a continuous and slow increase in very modern central or manufacturing kitchens, which distribute meals to satellites or service kitchens. These old kitchens then work as satellites or service kitchens, if they are reconstructed or drop out of the kitchen network. Typically, the kitchen networks are changing across municipalities. The decision for a central manufacturing kitchen is often made when old premises need reconstructions. The municipalities make considerable long-term investments in the new premises, equipment, and even cooking methods, which effect installations. These new professional kitchens run most energy-efficient operations, and some deploy solar energy. Furthermore, some very popular single food items such as meatballs, fish fingers or tortillas may come from the food industry with even more developed installations.

In **Estonia, Finland, Germany, Poland and Russia**, ordinary lunch is a hot meal if the canteen is available. This is especially relevant for kindergartens, schools and for health and welfare segment. Some schools, universities and hospitals also have a cafeteria or kiosk where one can buy cold snacks. However, in some countries (e.g. in **Denmark**) cold food (such as sandwiches) is also common (see the example of preparing public meals for the elderly in Denmark in Chapter 5.2).

Table 8. Manufacturing models and types of meal delivery in customer segments

A. On-site kitchen, B. Central kitchen (with the distribution of meals)
1. Cook and serve (hot meal), 2. Cook and chill (meal chilled down and served later as a hot meal), 3. Cook cold (cold delivery of foodstuff and cooking the hot meal on-site), 4. Industrial meals (pre-prepared food, heated up on-site and served), 5. Other – cold food (e.g. sandwiches, snacks)

	Denmark	Estonia	Finland	Germany, Brandenburg	Poland	Russia, St Petersburg
Daycare and kinder-gartens	A, B 1	A (B) 1	B (A) 1, 2, 3, 4	A, B 1, 2, 3?, 4?	A (B) 1	A (B) 1, 2, 3, 5
Primary schools	B 1	A (B) 1, (5 in case of additional service)	B (A) 1, 2, 3, 4	A, B 1, 2, 3?, 4?	A (B) 1	A (B) 1, 2, 3, 5
Secondary schools		A (B) 1, (5 in case of additional service)	B (A) 1, 2, 3, 4	A, B 1, 2, 3?, 4?, 5	A (B) 1, (5 in the case of additional service)	A (B) 1, 2, 3, 5
Universities	A 1, 5	A (B) 1, 5	B (A) 1, 2, 4	A 1, 5	A (B) 1, 5	A (B) 1, 2, 3, 4, 5
Hospitals	A, B, (depends on meal/snack and type of food)	B (A) 1, (5 in case of additional service)	B (A) 1, 2, 3, 4	A? 1, 5 (there is usually also a cafeteria or snack bar)	A (B) 1, (5 in the case of additional service)	A (B) 1, 2, 3, 5
Residential and care homes, elderly	A, B	A 1	B (A) 1, 2, 3, 4	A, B?	A (B) 1	A (B) 1, 2, 3, 5
Armed forces	A 1, 5	A 1	A 1, 2, 4	A, B?	A (B) 1	A (B) 1, 2, 3, 5
Prisons	A	A 1	A 1, 2, 4	A?	A (B) 1	A (B) 1, 2, 3, 5
Canteens in public workplaces	A, (delivered hot and cold meals)	A 1, (5 in case of additional service)	B (A) 1, 2, 3, 4	A, B 1, 2, 4, 5	A (B) 1, 5	A (B) 1, 2, 3, 5
Other	B (delivered meals) (Meals on wheels)		B (A) 1, 2, 3, 4 (day activity centres for adults)			
Other			B (A) 1, 2, 4 (elderly			

			receiving care home)			

3.4 Green and sustainable public procurement criteria for catering services

As it was described above (see Chapter 3.2), the principles and criteria of green and sustainable public procurement are more widely used in Denmark, Finland and Germany. Considering the volume and growth of public meals in analysed segments as well as demand by the society, it can be concluded that educational as well as health and elderly care segments are the most perspective ones for wider application of GPP and SPP.

Examples of green criteria in **Denmark** are the following: increase procurement of organic food, reduce meat consumption, reduce the climate-impact from food, reduce CO_2 emissions by considering food waste management, food packaging, cutlery and cups, and motivate procurement of seasonal produce. Water and energy consumption are also high on the agenda for public procurement in Denmark, and this is also relevant for public meal production.

In **Finland**, public catering services most commonly apply nutrition criteria in public meal procurement (Ministry of Agriculture and Forestry of Finland 2018). Additionally, criteria for animal welfare are applied more often than criteria for environmental or social responsibility.

In **Germany**, Brandenburg, green public procurement in catering services is still mainly voluntary; thus the existing criteria are suggestions or not strictly applied. For Germany, the Centre for Sustainable Procurement provides a short flyer on the topic and a link to a tender guideline for canteen services from Bavaria. Similarly, there is the best practice example of a newly developed tender for canteens of the environmental State Office of North Rhine-Westphalia (see Chapter 5.2). Other sources for GGP criteria are the certification documents of the German Society for Nutrition (DGE) and the procurement guidelines of the university canteen providers. Common criteria are:

- Water- and energy-efficient devices;
- Re-useable, refund, recycling packaging;
- Reuse of organic waste for energy or other production;
- Vegetarian meals or smaller meat portions;
- Organic, fair trade, appropriate animal husbandry, sustainable fishery, products;
- Short supply chains, regional, seasonal products;
- Qualification of employees;
- Communication and integration of customers' demands.

The canteens of the public employees in Brandenburg have to use energy and water economically; their food quality has to comply with the DGE standards and the communication between caterers and customers is organised in canteen commissions. The research showed that there is always a vegetarian meal, some products are organic, and there are sometimes “wish meals” or “fitness meals” or traditional seasonal meals, like asparagus in spring. Organic waste is collected by an enterprise producing energy and fodder, following waste regulations.

In other countries – **Estonia, Poland, Russia**, the planning of the menu is based on the national nutrition requirements and recommendations as well as directed by price and by customer wishes. The procured food must meet the requirements for a healthy meal as well as comply with the standards of hygiene. GPP criteria are not systematically used in public meal procurements. Therefore, often the main criterion for selecting a catering service provider is the price. Additional criteria can be related to the menu, the number of options and other services, etc. First attempts have been made in some of the Estonian municipalities to include GPP criteria in evaluating catering services for schools. The focus has been on organic food so far (see the example of Tartu City, Estonia, in Chapter 5.2).

4 Public Procurement and Catering Services in the StratKIT Countries

This chapter summarises the national mapping results of the public meals in the selected customer segments. As a test segment for developing the sustainability procurement toolkit, educational institutions were chosen by five StratKIT countries and canteens in governmental buildings by one StratKIT country:

- Denmark – daycare institutions and kindergartens
- Estonia – schools and kindergartens
- Finland – schools
- Germany, Brandenburg – Federal State departments
- Poland – schools
- Russia, St Petersburg – schools

The public meals in these segments are characterised below according to their strategic framework and legal basis, financing, organisation, procurement and criteria as well as their manufacturing models.

4.1 Denmark – lunch in daycare institutions and kindergartens

The segment chosen is the public meal in the daycare institutions and kindergartens. Children from 0–6 years old often spend much of their waking time in day-care institutions and eat at least half of their meals there. For this reason, it is necessary to care for their well-being and basic needs during these hours, including in terms of food. Healthy, tasty food and positive meal experiences help give children an appetite and energy for a day full of play and learning.

Strategic context

In addition to the regulatory framework, municipalities also have their own policy objectives and guidelines. For example, in public meals, Copenhagen Municipality has a target of 90% organic food, and Aarhus Municipality, Denmark's second-largest city, has a target of 60% of organic food. In addition, there is a growing focus on **climate-friendly meals**, as well as on sustainable waste management, reduction of food waste, minimization of disposable service, etc. There are many different conditions around meals that need to be incorporated if meals are to become fully sustainable.

Legal context

The main meal in this segment is lunch, which is regulated by law. Other meals are less frequently served and not as relevant as lunch. There are large differences in how the individual Danish municipalities and individual institutions handle meals during the day, as the law regulates lunch meal offer only. **The Day-Offer Act** states that municipal, self-owned and outsourced day-care institutions and private institutions should offer a common healthy lunch meal for children every weekday. A child may be exempted from this scheme if the child has a physician-documented allergy or other illness requiring a special diet. In each institution, parents can opt-out of the lunch meal offer collectively by a simple majority vote at least every two years.

There are official guidelines for the healthy common lunch meal to be followed. The guide is the **food agency's official recommendations** for healthier food in daycare institutions. The

guide builds on the official dietary advice and is adapted to the needs of food and drink for children between 1–6 years of age. The guidelines also include recommendations on creating good settings for the communal lunch meal. Hygiene requirements are described in the Hygiene Regulation.

Financing

The municipal council may decide that a healthy lunch meal is included as part of the day-offer service in municipal, self-owned and outsourced daycare establishments, or that the parents must pay for the lunch on top of the general childcare fee. This additional charge may only be made for expenses around the shared lunch meal.

Each municipality decides on the price for the lunch meal, and there are big differences across municipalities. Discounts can be granted to siblings, and free lunch can be provided particularly to economically needy families. There is no government grant for the lunch meal.

Main organisational models

Typically, the municipal council provides several opportunities for the institutions that they can then choose between, so it best suits the individual institution. It may also be agreed that all institutions providing a common lunch meal should have it shipped out from a private supplier, in which case only one option is presented.

Main procurement models and criteria

There are very different procurement models used in municipalities. There is no overview of the models at the national level. When purchasing ready-made food from a catering company, the most frequently used criterion is that the food must meet the recommendations for a healthy lunch meal and that the supplier must comply with the standards of hygiene regulations.

GPP criteria

The organic food percentage can be a typical GPP criterion or competitive parameter.

Main manufacturing models

There may be self-production in the individual institutions with hot meals made from scratch or cold rye bread-based meals or a combination. The food can be produced in coordination with another institution and transported between them. The food can also come from a central communal kitchen, cold, hot or frozen. Finally, it can be provided by a private supplier every day or a number of days per week, and be ready for serving, or the institutions can buy part of the items to be prepared in the local kitchens. In this way, several models can be used in individual municipalities.

4.2 Estonia – school and kindergarten meals

In terms of volume, educational institutions are one of the most dominant customer segments in Estonia. The state has made a political decision to provide free hot meals to all schoolchildren. Therefore, the public procurement of school meals is an increasingly

important issue in Estonia. In addition to health and socio-economic issues, environmental aspects are gaining more attention in both pre-school and school food, as well as in catering. For these reasons, this segment has been chosen as a priority in the StratKIT project.

Strategic context

The school and kindergarten meals are mainly based on the principles of the national **health and well-being policy**. The school food policy has focused on the objectives of improving child nutrition, reducing and preventing obesity and malnutrition as well as tackling health inequalities. Nutrition education is part of the national curriculum in kindergartens since 1999 and in primary and secondary schools since 2002.

In addition to the initial interest in children's health, other social aspects, such as **socio-economic equity**, have been considered as an important basis for providing kindergarten and school meals. The aim of the state support for school meals is to help local governments to provide a healthy and free hot meal at all school levels in order to reduce socio-economic inequalities and increases social sustainability. Environmental sustainability aspects of school meals have so far not been prominent in the nationwide strategic framework. However, the **Estonian Agriculture and Fisheries Strategy 2030** foresees the development of pilot programmes on organic food in kindergartens and plans for school meals.

Legal context

The owner of a kindergarten and school (state, local government or private owner) is responsible for organising catering for children in accordance with the health protection requirements established on the basis of the **Public Health Act**. The sub-regulation of the Act "Health protection requirements applicable to catering in preschool childcare institutions and schools" identifies the requirements applicable to:

- the organisation of catering;
- energy and nutrient content of food;
- preparation of menus,
- documentation;
- the presentation of nutritional information, and
- dining rooms.

Every school canteen (caterer) should meet the following conditions concerning food and menus:

- menus for at least ten days ahead;
- correct recipes (calculation cards) for all the dishes in the menu;
- requirements for energy and nutrient content of school lunch as of a ten days' average (30–35% of recommended daily calories and nutrients);
- fulfilling the criteria for school meals: varied, balanced, healthy and tasty:
    - to prohibit high-fat fried meals,
    - bread must be available daily,
    - to serve vegetables every day,
    - to serve fruits at least three times a week,
    - to serve meals from fresh fish or fish products at least once a week,

- to serve frankfurters, cooked sausages and sauces made from them is limited to once a month,
- to avoid products containing hydrogenated vegetable fats, and
- to prohibit water-based flavoured drinks, including energy and sports drinks which contain food colourants E 102, E 110, E 122, E 123, E 124, E 129, E 151, E 154, E 155, E 180.

Based on these requirements for school meals, the National Institute for Health Development has prepared nutritional guidelines and several guidance materials for caterers of educational institutions.

Financing

The Basic Schools and Upper Secondary Schools Act enacts that support for organising the meals in municipal and private schools is allocated in the **state budget**. The school lunch support has been allocated in the state budget since 2002 for basic school pupils in grades 1–4; since 2006 for basic school pupils in grades 1–9, and since 2015 for secondary school pupils in grades 1–12.

The state support does not cover the total catering cost, and **local governments** pay for the missing part from their budget. There are also municipalities where parents pay for a part of the school lunch costs, e.g. in the city of Tartu. In this case, municipalities pay support for economically disadvantaged families. In Tallinn municipal schools, the meal is free of charge to all pupils. In addition to the lunch subsidy, schools and kindergartens can receive support for milk, fruits and vegetables via the EU School Fruit, Vegetables and Milk scheme. Some school canteens also provide breakfast porridge which may be subsidised by the local government or paid by the parents.

There is no state support for meals in **kindergartens**. A local government may cover meal costs fully or partly for children from low-income families or for all children. Tallinn kindergartens offer free meals from 2017, covered by the city government's budget.

Main organisational models

Most generally (mainly in larger cities and municipalities), the services are procured from private catering companies (**contract catering** model). However, some (especially small and rural) municipalities procure food and cater meals in kindergartens and schools by themselves (**in-house** model).

Main procurement models and criteria

The procurement of kindergarten and school meals is mostly organised by the **educational institution** itself. In this case, the local government can assist with preparing the procurement documentation. The growing trend is to organise procurement **centrally** by the local government for all or a group of kindergartens and schools. Estonian experiences indicate that if kindergartens and schools organise procurement themselves, then the procurers may lack in-depth knowledge and competence – this can lead to tenders that are neither successful nor satisfying either of the procurement parties.

The procurement criteria are largely dependent on whether the local government has established a set price for the school lunch or not. If it is not set, then the main criterion for selection is the price – making up around 40–100% of the total evaluation score. If the local government has already set the price and thus the selection is not dependent on the cheapest offer, then the selection criteria are mostly based on the menu, the number of options and added services, sampling options, etc.

GPP criteria

Green or sustainable public procurement criteria have not systematically been used in kindergarten and school meal procurement in Estonia. However, some municipalities have started to apply **organic food** criteria. For example, the City of Tartu has given additional points for providing at least 25% of meat, grains, fruits and vegetables from organic origin. The City of Tallinn has carried out a pilot project in five kindergartens where the menu contained at least 25% of organic food.

Main manufacturing models

In Estonia, two manufacturing models for school and kindergarten meals are used: 1) cooking the food in an **on-site kitchen** and 2) cooking in **a central kitchen** and distributing the food to multiple schools or kindergartens.

In many schools and kindergartens, the meals are prepared in the on-site kitchen. On-site manufacturing is largely based on the earlier system where schools and kindergartens cooked and served the meals on their own (most of the schools and kindergartens have their own kitchens). At present, on-site cooking is preferred because it allows for a more flexible menu. In addition, the experience with this type of model shows that less food waste is generated. The personnel can react flexibly and quickly to the changing demand in food. A disadvantage of this model is the amount of investment it requires to purchase kitchen appliances and higher labour costs. Central kitchens are mainly used if the caterer has multiple small kindergartens or schools in one region to cater for or if schools or kindergartens have no space for their own kitchen.

4.3 Finland – school meals

Finland chose the school meal as a case in StratKIT because this public meal has become a kind of a Finnish icon – it was the first to be implemented on a large scale across the entitled cohorts, which grew continuously in terms of age as legislation was passed. This meal has also been one of the earliest benefits of the universal welfare state and extensively prescribed by educational laws since the mid-20th century. The school meal has also impacted school construction to include a kitchen, and moreover, it has been part of the development of the public catering industry with its tenures and continuous developmental trends and efforts. The Finnish school meal shows the 'passionately' healthy side of evolving Finnish food culture. A comprehensive overview of the school food in Finland has been published in the School Meals for All brochure[14].

[14] oph.fi/en/statistics-and-publications/publications/school-meals-all

Strategic context

For primary (lower and upper primary) school and comprehensive school (age 7–16 years) it has been the first strategy to offer free-of-charge equitable school meals since 1948 when the practice became legally binding for municipalities. The official nutrition recommendations for school meals[15] have been in place since the 1980s and are taken very seriously in a law-like manner.

In addition to the initial interest in young people's (consumer) **health and equity**, broader food system aspects, such as the **socio-economic and environmental** ones, became very prominent later. The core intent of various programmes, government decisions in principle, promotional organisations and a very large number of projects emphasised procurement of local food and (local) organic food, environmentally friendly food, fair trade food, the participation of SME suppliers, and lately, decreasing the volume of food waste and carbon footprint of meals, aiming at climate-friendly food system. The trend has also logically promoted replacements for red meat such as consumption of domestic fish, vegetarian ('vegetable meals') and vegan meals, which are systematically served in schools once a week as the only options or even every day as one option. While practices vary between schools, the claim can be made that in every school some links with GPP or rather sustainable development as it is understood in Finland are included in operational activities of school meal provision, from procurement to catering services.

Legal context

The legal context for public food and catering in the segment of comprehensive schools includes the 1948 and subsequent educational laws making the school meal provision an **official nutritional and educational event**. The laws pertaining to early education (<7 years), upper secondary school and vocational education (ages 16–19 years) all include necessary nutritional provisions. All these customer segments also have their age-specific nutrition recommendations developed, and the emphasis on sustainable development has been continuously on the rise until it has become legally coded in nutrition recommendations since 2014. Regarding food safety, an in-house control system (HACCP) implemented by all food businesses (incl. catering) offers hygienic standard by the operator to customers; a reflection of the level of compliance with this hygienic standard is displayed for customers by the 'Oiva' labelling, visible in the dining halls. While school meals are free-of-charge, student meals are not. However, they are subsidised by KELA by circa one half of their value and conditioned for criteria compliance. Finally, the procurement directive, through its detailed regulations for tendering methods, covers all public economic transactions and their planning, publishing and awarding.

Financing for public food and catering

Financing for public food and catering in the segment is organised as **part of the general funding of education**. This responsibility falls on the municipalities for their population, and the provision of school meals is thus included. However, there is a statutory government transfer system covering circa 25% of the costs of this meal provision, in support of the municipal budget. While there are no-cost limits for the meal, its nutritional content, its form

[15] urn.fi/URN:ISBN:978-952-302-844-9

as a balanced hot meal and its purposeful service are rather strictly defined by the nutrition recommendations as part of the national curriculum. Municipalities offer the premises, equipment and personnel for the service. In large municipalities the cost per meal is typically lower than in small ones; in 2017, the average cost was 2.80 euros, of which materials consume 30% and labour 43%. Additionally, EU funded school milk, as well as fruit and vegetable schemes, support the municipalities' financial burden. In 2018–2019 the national sums of subsidy money were 3,824,689 euros and 1,599,047 euros respectively.

Main organisational models

Particularly small municipalities have in-house procurement and meal provision 'in the hands' of public servants. Medium-sized municipalities may deploy an internal client-provider model so that one municipal sector acts as a client to another sector, whereby the service will be internally defined in terms of required content and respective costs. Large municipalities may follow the external client-provider model so that public servants act as tenderers for catering companies, which organise their own procurement. This model can be further divided into publicly owned catering companies and independent, commercial companies. However, there are many exceptions, and the field is scattered.

Main procurement models and criteria

The main procurement models and criteria used in the segment translate to the procurement, which is organised by the municipalities and respective operational criteria for food products. The basic procurement criteria align with nutrition recommendations dictating important nutrition aspects such as protein, energy, fat, salt, sugar, vitamin and fibre content as well as the culturally important meal forms (such as soups, casseroles, single-piece foods and salads) and the necessary food items. Several additional criteria such as organic, freshness (aiming for local food) and animal well-being criteria for responsibly produced food are used.

GPP criteria

GPP criteria used in the segment run from recent **nutrition recommendations** which include not just the mixed diet but also the (milk/egg/fish) vegetarian and vegan diets, a generic thrust to increase vegetable and fish consumption, as well as to decrease the consumption of red meat. Many municipalities deploy particular criteria to align with further strategic recommendations for organic and local food, entailing animal wellbeing interests. This includes seasonality as well as extensive efforts to avoid food and plate waste in municipalities. Waste management is progressive by avoiding packaging in some food products, making efforts to recycle plastics and biowaste (municipal technical services) and to improve energy efficiency, particularly in new kitchen designs and construction.

Main manufacturing models

The main manufacturing model in the segment is a system of **central kitchens** from which the meals are transported to distribution kitchens. Alternatively, just the main course is transported, whereby cooking and serving the energy dishes and salads is taken care of by service kitchens. Individual production/preparation kitchens work on the site for their customers.

In the case of Cook and Chill and Cook Cold meal delivery types, there can be heating kitchens (corresponding to service/distribution kitchens) responsible for serving the meals on the line. The main types of meal delivery for the segment in 2018 were still **Cook and Serve** (>80%) the hot meal, Cook and Chill (9%), Cook Cold (8%) and Hot Fill. While the emphasis is still on the Cook and Serve, Cook and Chill and particularly Cook Cold are growing.

4.4 Germany, Brandenburg – Federal-State departments

The government and administration of the Federal State of Brandenburg employ several hundred people who are all offered the possibility to have lunch provided by their employer in public canteens. The sustainability of these canteens is explored in StratKIT. It is especially interesting, as the government of Brandenburg aims at being a sustainability role model according to its sustainability strategy.

Strategic context

In general, the public procurement in Brandenburg is conducted via the virtual "procurement marketplace" (*Vergabeportal*) of the awarding authority (*Vergabestelle*), a specific department of the Ministry of Finance. The ministry is also responsible for the specific directive addressing the setup of the canteens of the departments of the Federal State of Brandenburg (*Richtlinien für Kantinen bei Dienststellen des Landes Brandenburg* (*Kantinenrichtlinien*)) since 2013. For canteens shared by several departments, the Property and Building State Office (*BLB*) procures the canteens catering services.

Legal context

The German Public Procurement law (*Vergaberecht*) transfers EU legislation to the national scale. At the regional scale, the Brandenburg Public Procurement Law (BbgVergG – *Brandenburgisches Vergabegesetz*) applies. This law includes the possibility to add social, environmental, or innovative procurement criteria.

German restaurants and canteens have to comply with statutory law about hygiene, workers' safety, food labelling and food waste disposal. Environmental and ethical aspects are followed voluntarily. The German Nutrition Society (DGE) provides guidelines for nutritious and healthy food targeting different customer groups (e.g. children). Tenders often refer to DGE standards and some canteens have DGE certificates of compliance. Other laws impact on the economic and social side of sustainability, e.g. by enabling the support of SMEs (BbgMFG – *Brandenburgisches Mittelstandsförderungsgesetz,* § 5) and promotion of women (FrauFÖV – *Frauenförderverordnung*, FrauFöV – *Bekanntmachung der Berufszweige,* § 7).

Financing

Private enterprises run all canteens for the Federal State departments. However, often the managers pay no rent. In some cases, Federal States provide the managers with the necessary equipment and reimburse their maintenance costs. Still, some of the canteens are not economically viable due to scale issues: less than 200 meals per day.

Main organisational model

The canteens of the federal state have all **contracts** with catering enterprises.

Main procurement models and criteria

The procurement criteria for managing public canteens of the states' employees are derived from the Canteen Directive (*Kantinenrichtlinien*) of 2013. It is part of the normative regulation at the federal state level. The directive stipulates that (among others):

- There have to be at least two meals, one of which is “affordable/cheap”, and the food quality has to comply with the DGE standards and DGE standards also include suggestions for sustainability criteria);
- The federal state might provide the infrastructure/equipment and may cover the operating costs, depending on the agreement;
- The consumption of water and energy has to be environmentally and cost-conscious, and
- A canteen commission (*Kantinenkommission*) including representatives from the departments and the caterers will make sure that the customers´ needs are met.

The Property and Building State Office (BLB) organises shared canteen services for several departments. If one department has its own canteen, the procurement is managed independently. All use the virtual procurement market.

The procurement of food for the canteens is not bound to any procurement regulation, as caterers are private companies. Usually, the food is purchased from wholesalers. This may grant the caterers a bonus at the end of the year, proportional to the turnover. Thus, it is less profitable to purchase foodstuff from different local suppliers. There is a lack of network and agreements between caterers and farmers or farmers´ associations.

GPP criteria

At the national level, the Competence Centre for Sustainable Procurement provides advice to administrative bodies and links to the federal contact points. Moreover, in the federal state of Brandenburg, a participatory process has enforced a sustainability strategy since 2014, which has been updated in 2019 to include the SDGs. It is a comprehensive strategy, including the aims of the government to be a role model of sustainability. This includes environmental and social criteria for the States' tenders, including fair trade products, EMAS registration, and energy management system ISO 50001 certification. The outputs of the strategy are the creation of the action plan “CO_2-neutral Federal State Government” and a “Sustainability Masterplan”.

The BLB recently developed a criteria catalogue for new canteen service procurement, which is adapted from a catalogue developed by the environmental State Office in North Rhine-Westphalia. It comprises aspects like vegetarian meals; two portion sizes to reduce food waste; fresh, regional, seasonal, organic, fair trade products; the reduction and monitoring of food waste, etc.

Main manufacturing model(s)

Data on manufacturing models is limited. One of the caterers for the canteens of the ministries in Potsdam stated that he cooks in most of the canteens and only delivers food from one of his "cooking" canteens to one additional canteen.

4.5 Poland – school meals

The school meal seems to be the most widespread form of a public meal in Poland, and the educational sector is a large part of the Polish public sector. During the school year 2018/19, there were 14,584 elementary schools in Poland (5,909 in cities, 8,675 in the countryside), with approximately 3 million pupils. On the other hand – there is a lack of awareness of how important the school meal is; there is no public discussion about the standards of meals which should be provided. Children spend up to 9 hours a day at school, so it is necessary to take care of their basic needs during the day, including food. This is why we decided to concentrate on school meals in StratKIT.

Strategic context

In terms of schools in Poland, there is only a feeding system in **elementary schools** (8 years, kids in age from 6...7 to 14...15). The school can organise a canteen, and the meals are payable. According to available studies, 73% of schools offer lunches. Approximately 60% of children in elementary schools eat lunches when these are provided.

Legal context

Starting in the school year 2022/2023 there will be a legal requirement for primary schools to provide hot meals for children. There are no state subsidy and a fixed price for the school meal in Poland. In most cases, the meals are indirectly subsidised by **local governments** who pay kitchen staff labour costs and maintain facilities. There are also large cities that have outsourced this service and do not subsidise the meal (do not pay the staff).

The fees paid by parents for the meals in the school canteen do not include the remuneration of employees and the additional costs related to maintaining the canteen. Parents pay a fee (in Polish "wkład do kotła") to cover the cost of foodstuff solely. Social services can cover the costs for children from economically disadvantaged families.

The EU food programme (diary and fruit) and financial support for the renovation of canteens are available for schools. The rules of the canteen – including the price of the meal – is determined by the headmaster after consultations with the public organ which runs the school (usually the city).

The procurement model is **decentralised** (with rare exceptions), and most schools run their **on-site kitchens** and purchase food. They **cook and serve**, or in some cases partially buy semi-ready food. Alternatively, the schools can appoint a private operator of an in-house canteen or use external catering.

Financing

Since 2018, the government introduced the financial support programme for school canteens.

- As part of the "Multiannual Government Meal Programme at school and home" for the period 2019–2023, the Government will allocate PLN 200 million (PLN 40 million per year) for school canteens and dining rooms. Support includes equipment, canteen or dining room renovation in public primary schools.
- National Agriculture Support Centre "Programme for schools" – the budget for the implementation of the Programme in Poland in the 2019/2020 school year is a total of PLN 238.15 million, including PLN 110.05 million from the EU budget and PLN 128.10 million from the national budget.

Main organisational model

The most widespread is an in-house model in Poland. In most cases, the school runs the kitchen. It is also possible that the school appoints an external company to operate the kitchen. The latter is a common model in Warsaw. Alternatively, the school can order catering.

The monitoring carried out by the Supreme Audit Office in 2015–2016 showed that while 60% of the school children eat lunch if the school's own kitchen provides it in the in-house models, this number drops to 40% in case of the external operator running the in-house kitchen, and 31% in case of catering.

Some data available indicate that 73% of schools give children access to a hot meal at school. From September 2022, it will be mandatory for elementary schools to provide a possibility for children to eat a hot meal.

Main procurement models and criteria

Public procurement in Poland is generally **decentralised**, and the same principle applies to schools as public buyers. Several models of procurement were identified:

1. Purchase of foodstuff for school below the threshold of 30,000 euros requires a request for proposals, which is a simplified competitive procedure outside public procurement law. Example of criteria: 100% = price, lowest price criteria.
2. Procurement of foodstuff for school above the threshold of 30,000 euros requires an open bid, following a fully competitive procedure along with public procurement law. Example of criteria: 60% = price; 40% = reacting time to deliver extra products on demand.
3. Request for proposals to run an in-house canteen – example of criteria: 80% = a daily price of the full meal; 10% = proven experience in providing similar services; 5% = letters of support proving good reputation in providing similar services to other clients; 5% = quality of the menu.
4. Open bid to provide catering services fully competitive procedure along with public procurement law – example of criteria: 50% = price; 34% = variety of menus; 10% = experience; 6% = conditions in which the food is prepared

GPP criteria

No green public procurement criteria in the area have been identified, and public buyers use solely economic criteria (price, delivery time).

The Ministry of Health issues the relevant regulations governing the requirements for collective caterers for children and young people and of food offered for sale in school and pre-schools. There is a list of nutritional product specifications regulating what school canteens and school shops can sell.

The nutritional standards are characterised generally. Child and adolescent nutrition must be based on specific principles and meet the standards and requirements developed by experts, which are not strictly executed and serve more like guidelines. The authorities of the State Sanitary Inspection control the fulfilment of the requirements in this field.

Main manufacturing model

The dominant type of meal delivery in on-site canteens is Cook and Serve. The entire technological process takes place in the school kitchen. Schools also purchase certain quantities of ready deep-frozen dishes or semi-prepared dishes, such as stuffed dumplings, pancakes, or meatballs in sauce.

In the case of catering, food is brought ready to be served. Catering companies use the school premises, which they often need to rent and pay the costs of running (water, electricity) as a part of the contract with the school.

4.6 Russia, St Petersburg – school meals

Educational institutions form a large part of the public sector, supervised by the Russian Ministry of Education and Saint Petersburg Educational Committee. St Petersburg is an exception in Russia's public catering and social nutrition sector since only this city which has a special authority responsible for implementing state policy in the field of social nutrition – the Department of Social Nutrition.

Strategic context

The Department of Social Nutrition is an executive authority of St Petersburg in the field of public food and social nutrition. They develop the school menus and are responsible for implementing the state policy in the field of social nutrition. Also, in accordance with the St Petersburg Government decree of 2 March 2004 № 296 “On the Department of Social Nutrition”, the Department of Social Nutrition of St Petersburg is responsible for the following: organisation of the guarantee food system in pre-schools, elementary, secondary and high schools, vocational schools, hospitals and other social institutions; implementing the unified technology policy at all food production facilities, canteens, development of the food industry; control under the sector of public food and social nutrition in St Petersburg; and coordinating the activities between all other executive bodies and authorities responsible for public food and social nutrition in St Petersburg. The Department of Social Nutrition develops cycled hot-meal menus for different city institutions under their guidance, including 12-days cycled menus for subsidised school meals. Also, the Department of Social Nutrition develops a

detailed 70-pages list of products and food supplies for consumption in schools, kindergartens and other institutions functioning under the Department's control with the following information: name, packing, unit of measurement, regulatory document (the State Standard, technical regulation).

Legal context

School meals are a part of the national health and well-being policy and are regulated by the following several legal acts:

1. Law “On Social Nutrition in St Petersburg” (last editions of 26 February 2019);
2. Social Code of St Petersburg (last editions of 4 July 2019). Social code identifies different categories of children, who are granted fully and partly subsidised school meals.
3. St Petersburg Government decree of 17 December 2018 № 953 “On the cost of public food in state educational institutions”. This decree identifies the cost of fully subsidised public meals in schools and educational institutions.
4. St Petersburg Government decree of 2 March 2004 № 296 “On the Department of Social Nutrition”. This decree identifies the work of the Department of Social Nutrition, its responsibility and powers.

Financing

There are two types of school meals in St Petersburg schools: **subsidised school meals** and **menus of free choice**. Subsidised school meals can be covered by the city government either partly or fully. Fully subsidised school meals are provided only for children from certain social categories: low-income families, families with three children and more, orphans, disabled children. The list of social categories of those who are granted fully and partly subsidised school meals is determined by the Social Code of St Petersburg. The cost of a school meal is regulated by the city government and department of social nutrition of St Petersburg and is approved by the St Petersburg Government decree of 17 December 2018 № 953 “On the cost of public food in state educational institutions”. The combined cost of subsidised school breakfast and lunch is 161 RUB (=2.20 EUR): breakfast costs 59 RUB (=0.8 EUR) and lunch 102 RUB (=1.4 EUR). Children who are not provided with partly or fully subsidised school meals can buy hot meals and buffet products from the menu of free choice.

Main organisational model

All schools use the **contract catering** model for providing meals for children.

Main procurement models and criteria

The tendering procedure is carried out based on the federal law "On the contract system in the procurement of goods, works, services for state and municipal needs" of 5 April 2013 № 44-FZ. Schools purchase all services via an online platform[16]. District administrations of St Petersburg act as distributors of budget funds and check the tender documentation. The choice of the supplier is carried out according to cost criteria if all bidders have met all

[16] zakupki.gov.ru

requirements. For instance, the bidders are obligated to have experience in a related field (in accordance with the federal law № 44-FZ).

After a tendering procedure is carried out, and the school selects a contract catering company, the company gets in their use the whole food production facility on the school's territory. The catering company is also responsible for the procurement and supply of goods and raw materials, product and meal preparation, recruitment and quality control.

GPP criteria

The federal law "On the Contract System for State and Municipal Procurement of Goods, Work, and Services" provides the possibility for the green public procurement, but there is no national strategy or any other strategic document regarding implementing GPP criteria in Russia.

Main manufacturing model(s)

Most schools in St Petersburg have their own cooking facilities so that the catering companies can prepare hot meals directly in schools. There is an ongoing City Government Programme on improving and upgrading already existing food production facilities in the schools with new equipment. New schools have spacious facilities, equipped with modern machines (dishwashers, stoves, ovens and other kitchen appliances). Before installation, all equipment is checked in accordance with sanitary rules. About 60 schools in the city (out of 683) have no own food production facilities. For such schools, all food is prepared at the central canteens and delivered to the schools in special boxes and thermoses following sanitary rules.

5 Illustrative Examples of Best Practices

This chapter presents illustrative examples of PPCS across Europe, including from the StratKIT countries, and beyond.

5.1 EU cases

Regardless of how the EU Member States choose to apply the EU GPP criteria, many local and regional authorities have (for decades) worked to green their procurement. This chapter seeks to identify best practices across Europe. National procurement laws need to reflect the transposition of the EU public procurement directive. But in some Member States national and regional procurement has even stricter rules and criteria than the EU level.

In **Portugal**, the Parliament adopted in 2017 that all public canteens in the country offer at least one **vegan meal** every day (Boyano et al. 2019). The law applied to canteens in all schools, universities, hospitals, prisons and other public institutions. The introduction of plant-based meals is not expected to involve any extra costs as vegetarian meals are usually cheaper than meat-based dishes. A similar proposal was put forward in the Danish Parliament in 2017.

In 2017, **Italy** introduced a national programme to fund school canteens that make use of organic products. To qualify as an '**organic school canteen**', the school needs to meet requirements regarding organic thresholds on specific products, seasonal calendars, and protected geographic origin schemes. So far, almost 700 schools in 13 regions have benefitted from the funds (ICLEI 2019).

In 2013, the **Dutch Government** established the **Circular Procurement Green Deal** to accelerate circularity in public tenders. This programme brought together 45 public and private parties and tasked each of them with carrying out a minimum of two circular procurement initiatives, in order to explore new insights and create a pool of good practices. Over three years, 80 circular procurement pilots were conducted, and their lessons shared. The success of the programme resulted in the Dutch Government placing special emphasis on circular procurement and life-cycle costs in its Roadmap to a Circular Economy (2016). The Government has a target to increase the proportion of circular procurement to 10% by 2020 (EC, ICLEI 2017).

Some frontrunner cities have (regionally) reached very high percentages of organic food in school meals: Mouans-Sartoux (France) 100%, Malmö (Sweden) 100%, Copenhagen (Denmark) 90%, Rome (Italy) 70%, Munich (Germany) 60%, East Ayrshire Council (Scotland) 30%, Ghent (Belgium) 23% (ICLEI 2019). Cities' showcases outlined below serve as inspiration on how to implement different GPP strategies regionally or locally.

Italy: GPP in school meals of Rome

In Italy, the national policies have over the last decade developed rapidly. Since a reform in 2013 enabled the local administration of Rome to turn its school catering progressively towards high-quality food. In Italy, municipalities are responsible for school meals, which are usually provided through the services of catering companies. Meal costs are covered by the municipality and family (Soldi 2018).

In the first phase (2002–2004), award criteria were introduced favouring environmental practices of kitchens and canteens, and high-quality food products. In the second phase (2004–2007) award criteria were given to quality requirements related to seasonality, variety, and nutritional content. Also, a food-miles criterion was introduced. In the third phase (2007–2012), additional requirements included organic certification for certain products and the introduction of the 'guaranteed freshness' criterion for fruit and vegetables.

In 2013, Italy updated its National Action Plan on GPP and set minimum percentages of organic food or food having other quality labels (60% for vegetables and fruits, 40% for meat, and 20% for fish). As a result, in the fourth phase (2013–2017), the quality approach was further consolidated, requiring a proportion of 70% of organic food and giving increasing importance to local food.

Some of the challenges faced by the public administration included the complexity of the evaluation process of bids, which requires specific expertise. Challenges identified by catering suppliers were related to the ability to provide enough quantities of locally sourced products. In this case, prolonging the contractual period of the services (from three to four or five years) allowed caterers to make investments and gradually adjust to the new requirements of the public.

To increase the participation of more suppliers, the public procurement contract was divided into several smaller lots. A permanent roundtable with the participation of public authorities and suppliers was set up to discuss problems and solutions regularly. Feedback from the consumption side was also ensured through the 'Canteen Commission', which includes representatives of caterers, public authorities, parents, and teachers.

Key takeaways from the Rome case is the acknowledgement that GPP takes time and develops gradually through many phases. In addition, good experiences were made by extending the contracts giving suppliers time to adjust. Lastly breaking down procurement contracts into smaller lots and establishing a platform for dialogue between suppliers and the public proved successful (Soldi 2018).

Denmark: Healthy, happy and sustainable food in the City of Copenhagen

In the 1990s, the first national policies on sustainable procurement and organic food developed in Denmark. In 2007, the Municipality of Copenhagen set the goal of providing 90% organic food in its public kitchens by 2015. In 2016, the goal was reached with an average share of 88% organic meals in public institutions, where some institutions were near to 100%. The municipality has developed a close collaboration with the Copenhagen House of Food, which is a non-commercial and independent organisation that aims to improve the quality of meals offered by the city to its citizens and to create a healthy, happy and sustainable food culture.

A two-year tender, awarded in 2014, was a contract for the provision of 100% organic produce, and seasonal fruit and vegetables. Technical specifications included environmental criteria related to packaging, use of recyclable material, and transport. The award criteria were price (40%), quality (35%) and range of offered goods (25%). Despite the more expensive

organic products, the city was able to keep the costs down through a reduction in the amount of meat in meals (Soldi 2018).

The municipality's approach was to create an inclusive tendering process, where suppliers were engaged at the kitchens' needs assessment stage before the tenders were written. Through these Innovation Partnerships, the tenderers were also included in supply and price approximations, commented on draft tender documents and after publication at specific supplier information days. On those days, suppliers could get advice and ask questions for clarification. This process also led to the development of a calendar that showed the seasonality of foods in different periods of the year. Based on market inputs, the timetable could be used in preparation for new tenders.

From Copenhagen, the following lessons can be highlighted: (1) The key importance of policy commitment, including setting quantitative targets, (2) Market engagement provides mutual benefits for all parties, and (3) A sufficient amount of time to implement the new requirements and not making criteria in tender documents over-complicated for suppliers.

Sweden: Achieving 100% organic food in the City of Malmö

The City of Malmö spends 24 million euros on providing approximately 21 million meals every year to kindergartens, schools, elderly homes, etc. The City's Policy for Sustainable Development and Food from 2010 follows the principles of SMART (The City of Malmö 2019):

- A smaller amount of meat;
- Minimise junk food and empty calories intake;
- An increase in organic products;
- Right sort of meat and vegetables;
- Transport efficiency.

Based on the SMART approach, Malmö has the objective of achieving 100% organic products and reducing greenhouse gases by 40% in 2020, compared to 2002 levels. In 2019, Malmö reached an organic food level of 65% and 75%, respectively, for the city, and for the schools. Furthermore, it has reduced GHG by 23% since 2002. The result has mainly been reached by: (1) Actively emphasising organic (when available in sufficient quality and quantity) in the tenders, (2) Reducing meat in the provided public menus.

Furthermore, environmentally friendly transport, including bicycles and hybrid-vehicles, are being used to transport the food from the distribution kitchens to the public institutions, where the meals will be consumed. The distribution kitchens are also connected to Malmö's biowaste facilities, and in the future, they will look into (high value) biowaste valorization.

In the future, the municipality of Malmö would like to develop further the food area in close cooperation with its citizens, which could include the development of a concept for urban food systems, food councils and looking at how food could be used as a mean for sustainable development in general (The City of Malmö 2019).

Slovenia: Self-sufficiency in collaboration with local suppliers of Podravja Region

The Podravje Food Self-Sufficiency Project (2015–2017) was implemented in the region of Podravje (Slovenia) and coordinated by the Maribor Development Agency and the Scientific Research Centre (SRC) Bistra Ptuj in Spodnje Podravje. The project's objectives were:

1. To increase the level of food self-sufficiency in the territory;
2. To provide safe and healthy food,
3. To increase the use of locally produced food in public institutions;
4. To create new jobs at the farm level.

Podravje, the second largest region in Slovenia, has the largest number of farms in the country. The project was financed by municipalities in the Podravje region. It aimed to develop a model for cooperation between public institutions and local providers to ensure the supply of local food up to 20% of the value of a contract. The intention was to maintain the current method of food preparation with freshly prepared food every day, for kindergartens, primary schools, homes for the elderly and hospitals (Kocuvan 2019).

Maribor Development Agency acted as a market facilitator, aiming to increase the availability of local food and facilitate the process of integration, verification, and trust between local public institutions and local food providers. The agency also helped public procurers implement quality criteria in tender contracts, making other criteria than the price a factor. This resulted in public procurement of 20% local food.

The institution for elderlies Dom Danice Vogrinec Maribor joined the partnership with public institutions and local providers and was later selected as the best home for the elderly in Europe. At the time of the preparation of the new public procurement, 19% were allocated for local food.

The project did not deal with the integration of organic food, as there is only a limited supply of organic produce in Slovenia. The project ended when the funding stopped in December 2017. The ambition now is to transfer results and lessons learned from the regional project into a bigger scale EU-project. One of the most important learnings from Podravje after testing the cooperation model between public institutions and local suppliers is that it takes patience and trust to develop a partnership. Another takeaway is that strengthening the bidding capacity of local suppliers only happens gradually and that long-term vision is important (Kocuvan 2019).

France: Purchasing with recovery in mind – Circular procurement in Nantes

As part of Nantes' Responsible Purchasing Promotion Scheme, the 24 cities composing the metropolitan area of Nantes initiated 11 different demonstration projects in public procurement, including one with a focus on the circular economy. The demonstration project for circular economy provides the strategic direction and operational targets for incorporating the circular economy into procurement before 2020. By supporting the circular economy as one out of 11 demonstration projects, the city started optimizing the collection of small technical equipment and biowaste and incorporating life-cycle assessments into procurement.

The circular economy project follows the EU waste prevention and management policies (e.g. the eco-design directive). Nantes will work with among other things 100% recycled paper and reduction in paper consumption; materials waste recovery in buildings and road construction (recovery of 70%: reuse, recovery or material recovery), and finally recovery and valorization of organic waste in the catering and central kitchens (EC, ICLEI 2017).

Latvia: Prevention of waste in Pļaviņu Gymnasium

In 2018, Plavinu, a town of 5,000 inhabitants in Latvia, decided to embark on the circular economy path and improve its school catering contract by including several requirements aimed at fostering circularity. Pļaviņu Municipality wanted to sustain good quality catering in its gymnasium at a reasonable price. As such, the procurement criteria were designed to include aspects, such as nutrition and health, organic products, seasonal fruit and vegetables, waste minimization and environmentally friendly transportation.

The new 3-year catering contract from summer 2018 now has technical specifications regarding seasonal vegetables, ban on single-use dishes, and includes requirements for the supplier to sort and minimise waste. Moreover, the new contract includes dialogue between service providers about the composition and size of food portions to prevent food waste actively. Plavinu is a partner in the Circular PP project outlined below. Read the technical specifications in the document linked in the footnotes on this page (EC 2018b).

Best practices from other EU projects

The Circular Public Procurement project

Circular Public Procurement (Circular PP) is a 3-year project supported by the Interreg Baltic Sea Region Programme (2017–2020).[17] Circular PP aims to provide capacity building and training to the involved BSR countries in the project, as well as helping public procurers prepare a call for tenders designed for circularity. Denmark, Finland, Poland, Sweden, The Netherlands, Latvia, and Russia all participate in the project, which is a pilot in implementing the EU Action Plan for the Circular Economy.

A circular economy approach to public procurement represents an alternative to the "produce, use, dispose" practice, and aims to expand the lifetime of products and materials. StratKIT partners can potentially be inspired when it comes to designing circular tenders, e.g. regarding circular food packaging, redistribution of food waste, collaboration with circular businesses, as Circular PP deals with mainly the technical cycle (school furniture, playgrounds, IT equipment, etc.), while StratKIT mainly deals with the biological cycle (food). However, StratKIT examines GPP in food more broadly and is not limited to circular procurement (Vinter 2019).

The European Sustainable Procurement Network: Procura+

The Procura+ network is run by ICLEI (Local Governments for Sustainability) with more than 40 participating public authorities across Europe. The network enables public authorities to connect, exchange ideas and act on sustainable procurement together. Members pay a membership fee, with a 50% discount for ICLEI members. The general services provided,

[17] projects.interreg-baltic.eu/projects/circular-pp-134.html

include sharing of experiences at the annual Procura+ Seminar and through regular webinars. They create links with other procurement professionals through the Procura+ Twinning program, which is targeting procurement staff at different levels. Members can receive support and expert advice on procurement through the Procura+ Helpdesk and showcase their best achievements in the yearly Procura+ Award. Finally, they receive the latest policy developments from the EU on GPP. The members collectively develop good practices and criteria in thematic Interest Groups focusing on different sectors. More recently, some focus areas of the Interest Groups included topics such as market engagement, circular procurement, organic school catering, and energy-efficient electronics equipment.

Examples of trends in three customer segments

Examples of the trends of public meals in three customer segments are briefly described based on the analysis by Sjögren et al. (2015).

Educational institutions (kindergartens, schools and universities)

Generally, in Europe contract catering is less used in schools and kindergartens. The UK outsources only one-third of schools' catering services. In the Netherlands, however, 50% of school canteens are run by small private contract caterers, whereas Germany has a strong reliance on independent non-profit actors. A fourth model is seen in Spain, where everything but the teaching functions, has been subcontracted to third-party actors. In some EU Member States, off-site meal production is widespread and has in many cases, led to cost reductions. Sweden is a special case, as it has only contracted 20% to private caterers. Instead, students and employees themselves prepare the food on-site in school kitchens. Finland again has a third model – based on long traditions – where each public entity is fully responsible for its in-house food service. At the level of higher education institutions, the Netherlands relies 100% on private caterers, while Germany again depends on non-profit organisations. Sweden has one country-wide cooperative supplying most of the catering for all universities (Sjögren et al. 2015).

Healthcare institutions

Healthcare is a special segment, as there are specific requirements regarding nutrition. In the UK and Germany, a few large private contractors are cooking the meals off-site in big kitchens. Whereas in the Netherlands, many private contract caterers have been excluded from the market, as hospitals argue that they are in a better position to address patients' nutritional needs with in-house catering (Sjögren et al. 2015).

Elderly care institutions

Due to the ageing population all over Europe, public elderly institutions are becoming attractive for contract caterers to enter. However, there has only been slow uptake of private catering, especially due to the philosophy (especially in Spain, Ireland, and the Netherlands) that older residents expect their food to be 'home-cooked' by care providers or that residents should be able to cook for themselves. Similarly, contract catering is limited in the UK social sector and done by in-house teams. In most Scandinavian countries, big central (public) kitchens prepare and deliver food to multiple residential homes. Despite this, at least one multinational contract caterer is trying to gain a foothold in Spain, France, and the UK. But some argue that the most likely role for contract caterers will be in the top-level of the supply chain where food might be purchased and delivered, but not at the frontline tasks of day-to-

day preparing and cooking meals. Another possible development in the future might be the extended use of brought-out meals, ordered online to senior citizens still living in their homes. In Denmark, a rise in contract catering is seen in this field (Sjögren et al. 2015).

5.2 Cases in StratKIT countries

National frameworks for green and sustainable public procurement in catering services

Denmark: Partnership for Public Green Procurement (POGI)

There is no national competence centre offering support for the application of the GPP, but there are a few alternative options in Denmark. The network organisation Partnership for Public Green Procurement (POGI) includes public administrations, municipalities and regions. The POGI network promotes green targets and works by building volume in green public procurement[18]. The initiative **Gate21**[19] is a public-private partnership involving regions, municipalities, companies and knowledge providers in the area of Greater Copenhagen. The Gate21 works to promote a green agenda by focusing on approaches to reduce the use of resources, including energy and water and, to promote the adaptation of a circular approach to the use of resources.

Finland: KEINO Competence Centre

As the Finnish Government aims to slow down climate change, to end the use of fossil fuels, to promote the circular economy and to increase resource efficiency, supporting public procurement that has an annual volume of about 35 billion euros in Finland is seen as an important means to advance these aims. Renewing procurement practices currently in use has been identified to be necessary to achieve these aims. Consequently, in March 2018, KEINO Competence Centre[20] was launched to support and help Finnish public procurement experts and authorities to develop sustainable and innovative public procurement targeting to improve the effectiveness and quality of public procurement and public services.

KEINO is a part of the implementation of the Finnish Government Programme steered and funded by the Ministry of Economic Affairs and Employment. KEINO is a network-based consortium, whose members responsible for the operation and co-development are Sustainable Development Company Motiva Ltd, the Association of Finnish Local and Regional Authorities, VTT Technical Research Centre of Finland Ltd, the Finnish Funding Agency for Innovation – Business Finland, the Finnish Environment Institute SYKE, the central and local governments' joint procurement body Hansel Ltd, and the Finnish Innovation Fund Sitra.

KEINO Competence Centre covers all fields of public procurement and offers a wide variety of services free of charge to its development-oriented customers and stakeholders that are municipalities, cities, counties and governmental units. The core services of KEINO are the implementation of innovative procurement strategies, piloting Green Deal, sustaining a national-level change agent network and creating pathways to international procurement and funding. KEINO's main objectives are that the number of innovative and sustainable procurements in Finland increases, public procurement is recognised and actively used as a

[18] ansvarligeindkob.dk
[19] gate21.dk
[20] hankintakeino.fi/en

management tool, and contracting entities disseminate information on their own experiences and learn from one another. Throughout the country, KEINO establishes regional buyer groups that help peers to learn from each other and transfer knowledge. In these peer groups, even mutual goal settings and buying strategies can be discussed. To found, run and coordinate these groups in each province KEINO is recruiting amongst procurement professionals change agents, who carry out duties of the change agent as a part-time basis along with their permanent job. In 2020, a monetary grant of a maximum of 30,000 euros is allowed for the change agent work in each province.

KEINO may have a positive impact on the renewal of the markets in general, as it supports developing a competitive advantage. KEINO brings the message for both the public and the private sector that public procurement can be a tool to test and validate innovative solutions, to promote new solutions and to gain references in the public sector. Via supporting public procurement practitioners KEINO promotes employment and the ideation and the adoption of innovations and the creation of demand for new products and services. One challenge is that KEINO can provide support and information of examples, but ultimately each public procurement organisation needs to build its procurement strategy and model to manage procurement. KEINO is still a new initiative that does not have yet full coverage in Finland but building the national-level change agent network is on-going.

Green and sustainable public procurement of catering services

Denmark: Strategy for food and public meals in the Municipality of Copenhagen

In 2019, the Municipality of Copenhagen adopted a new strategy for food and public meals. The strategy aimed to improve the nutrition of public food services and use food procurement to reduce the climate impact of food. For example, meals provided by the municipality of Copenhagen should be sustainable and climate friendly. The strategy explicitly mentions that meat consumption should be reduced in favour of higher consumption of plant proteins; that procurement of vegetables from greenhouse production should be reduced, and more seasonal and open-air produced vegetables should be sought, and fish should replace beef. The aim of reaching 90% organic food share is maintained in the strategy – the share in 2019 was 87%. Preserving biodiversity, keeping the groundwater free from pesticides and securing a high level of animal welfare are the main drivers for procuring organic food.[21]

Finland: The programme of the Finnish government and the strategy for food and public meals in the city of Helsinki

While the green and sustainable public procurement have several national 'layered' documents by the government, the 2019 program includes more specific aims than the previous ones (a programme of Prime Minister Sanna Marin's Government 10.12.2019)[22]. The program aims at improving the sustainability of the food system, increasing consumption of vegetable-rich ingredients, preferring domestic, local and organic meat, dairy and eggs as well as fish, halving the food loss and waste at every stage of the food chain by 2030, and using carbon footprints and environmental footprints as criteria in procurement, increasing procurement competence and the share of innovative procurement up till 10% of value by the end of governmental term.

[21] kk.dk/sites/default/files/edoc/Attachments/23293902-32499626-1.pdf
[22] urn.fi/URN:ISBN:978-952-287-811-3

In general, the criteria deployed by municipal public procurement vary considerably in terms of sustainability and green developments. For instance, in the capital region in Finland, several municipalities have strategies on the level of food items, their origin, their production mode, and on the level of environmentally friendly vehicles for distribution, and reconstructing manufacturing kitchens and changing meal preparation methods. Furthermore, tendering methods have developed based on extensive experience.

Carbon neutral Helsinki 2035 measures regard public meal provision and the procurement of food items, whereby the consumption of red meat and milk in meals is meant to be halved by 2025; the replacement is done, e.g. by domestic fava beans and their products instead of soybeans and by buying MSC certified of domestic fish products. Part of the cold cuts has been replaced for beetroot hummus. New fish and vegetable dishes have been developed, using Finnish bream, perch and roach, and broad beans as a soup a wok with noodles. In daycare, the milk and fruit procured are organic, as well as barley grits, yoghurt, and tofu. Not just procurement but also sales support carbon neutrality; Helsinki sells leftover meals by a mobile application.

Furthermore, the basic nutrition recommendation criteria apply (as generally in all municipalities in Finland) in public procurement. These can also be seen as sustainable as the aim is to sustain the human population through healthy nutrition. The basic criteria include facts such as a maximum of 1% fat and 10% sugar for milk products, maximum of 0.7% salt and minimum 6% fibre for fresh bread, lean meat and spread for bread with maximum 60% fat of which maximum is 30% of saturated fats.

Helsinki has also included particle emission, carbon monoxide and nitrogen oxides emissions of vehicles as criteria when tendering distribution of hot meals from the manufacturing kitchen to service and satellite kitchens[23]. As the old food factory needs upgrading Helsinki has decided to construct a new energy-efficient and ergonomically modern factory, now in the planning phase.

Germany: Regionally and organically produced meals in school canteens

An example from Germany is the so-called **"Regioweek"**, which took place in Berlin in 2018. The idea was to provide school canteens with one regionally and organically produced meal for one week, accompanied with an education programme. It was an initiative from the Berlin Food Policy Council, supported by the Berlin Senate and in cooperation with the school caterer association of Berlin and Brandenburg. The week was a huge success. Sixty thousand pupils participated, and the experiences were summarised in a report addressing the challenges of procurement procedures, supply chain, food education and networking.

The strength of this approach is that it provided a good insight into the situation of school canteens, procurement and regional organic agriculture. It also brought people together, and a network was built. Publicity for the topic was created, and a discussion on the possibility of organic regional school meals started. The challenge is now to build on this single event and create something permanent.

[23] hel.fi/static/liitteet-2019/Palvelukeskus%20Helsinki/Vastuullisuus/Palvelukeskus_Helsinki_Toiminta_ja_vastuullisuusraportti2018_web.pdf

Cost models of catering services

Estonia: Free school meals

The political decision has been made at the national level to provide a healthy and free hot meal in all school levels to reduce socio-economic inequalities and achieve greater social sustainability. The Basic Schools and Upper Secondary Schools Act enacts that support for organising the meals in municipal and private schools is allocated in the state budget. The school lunch support has been allocated in the state budget since:

- September 2002 for basic school pupils in grades 1–4;
- January 2006 for basic school pupils in grades 1–9;
- January 2015 for secondary school pupils in grades 1–12.

In 2002, the state support was 0,64 €, since 2011 – 0,78 € and since 2018 – 1 € per student/school day. Since this sum does not cover the total catering cost, local governments pay for the missing part from their budget. There are also municipalities in Estonia where parents pay part of the school lunch costs, e.g. the city of Tartu. In this case, municipalities pay support for economically disadvantaged families. In Tallinn municipal schools, the meal is free of charge to all pupils, and the price is fixed at 1.34 euros per child a day. The average cost for school lunch in Estonia is 1.34–1.66 euros.

In addition to the lunch subsidy, schools can receive support for milk, fruits and vegetables via the EU school fruit, vegetables and milk scheme. The subsidy for school milk products is targeted for pupils in grades 1–12 and is fixed at 0.108 euros per child per school day. The target group of subsidised fruits and vegetables are pupils in grades 1–5 and the subsidy is set at 0.05 euros per child a day. The rest of the cost must be covered from the meal budget. Some school canteens also provide breakfast porridge. This may be subsidised by the local government or paid by the parents.

Organisational and business models of catering services

Finland: Different variations co-exist in the procurement of catering services

Due to historical reasons, most public procurers collaborate with catering services ‘under the same roof' – the same municipal employer – as in-house service providers. This means that public servants perform both tasks. To clarify the quality and financial aspects of public food, many municipalities today follow the internal client-provider model (internal service provider model). Here one sector within the municipal governance (such as the educational department) defines the food they want to serve to their customers and the other sector (such as the technical department) runs catering services and provides the meals for the internal client. This model may also work as an external client-provider model (external service provider model) whereby the public procurers outsource the catering services to a commercial company. To further elaborate on the model, some municipalities have created (publicly owned) commercial companies from their catering services that participate in the bidding for municipal tendering of catering services with other commercial companies. Thus, a (large) municipality may invite tenders for catering services, and the services are then provided by the company which the same municipality owns and by another company, which may be private or another publicly owned company. The division of services for sites such as schools

or nurseries is meant to develop the industry and have differentiation in service provision going on.

In Finland, in 2014, 74% of all municipalities had only in-house public procurement and catering services, 21% had less than 10% of their services outsourced, and 5% had 10–25% of their services outsourced. The results are approximate because the survey did not have very good coverage. The trend towards outsourcing catering services is evident in larger municipalities.

Germany: Contract catering model in canteens of the ministries

All canteens for the employees of the ministries of the Federal State of Brandenburg have been outsourced to external catering providers. Most of the contracts are already running for more than ten years. This makes it difficult to integrate new demands – regarding sustainability – to the existing contracts. Some caterers denounce their contracts, as many canteens seem economically not viable. For new canteen tenders, the responsible Federal State procurement authority is now discussing to integrate sustainability criteria. Their discussion is based on a best practice tender for the canteens of the environmental State Office in North Rhine-Westphalia.

Poland: In-house catering model in schools of Municipality of Rybnik

Schools organise the entire catering themselves, under the formal control of the municipality. The city employs the school kitchen personnel. All schools – with one exception – purchase food products. Only one school due to technical restraints organises procedure to choose an external catering company. The food purchasing of schools falls below the minimum threshold of public procurement, as the value of the contract(s) is below 30 000 euros. The purchase takes place in September or in January; it may cover 3, 10 or 12 months, depending on the school's needs and practice. The request for offers is announced along with the list of foodstuffs by the school principal. The request must be formally sent to at least three potential suppliers and announced on the school website (in Public Information Bulletin). The school shall receive at least two offers. From the formal point of view, the school could "go shopping" once in a while, which is a case in some smaller schools in rural areas.

The food products in the subject-matter are usually divided into four categories (meat products; vegetables, fruits, dairy and other fresh products; bread and pastry; deep-frozen products). This happens for two reasons: 1) it is unlikely that one potential supplier (warehouse) brings all the products; 2) this enables schools to avoid full public procurement. The best offer is chosen based on the lowest price criterion. Separate contracts with the supplier of each product category are signed. Theoretically, one supplier can apply for products from different categories. The schools pay their bills themselves. Typically, contractors submit the bills once a month. The accounting is done externally, by the specialised unit of the city – Centre for Joint Services.

Russia: Contract catering model in schools of St Petersburg

Contract catering is the only organisational model for catering services in schools of St Petersburg. Most schools have their own cooking facilities so that the catering companies can prepare hot meals directly in schools. There is an ongoing City Government Programme on improving and upgrading already existing food production facilities in the schools with new

equipment. New schools have spacious facilities, equipped with modern machines (dishwashers, stoves, ovens and other kitchen appliances). Before installing all equipment is checked in accordance with sanitary rules.

If a school has no facilities to prepare hot meals on-site, then a catering company is responsible for preparing food at central kitchens or canteens and then transporting already prepared food to schools. There are about 60 schools in the city that don't have their own food production facilities due to the lack of space or required capacity. Most of these schools are in the historical part of the city (Central, Admiralteysky and Petrogradsky districts) and even after renovations, food production facilities cannot be opened in these schools. For such schools, all food is prepared at the central kitchens or canteens and is later transported to schools in special boxes and thermoses.

There are different sanitary norms, conditions and requirements for delivery and consumption of already-prepared food. All meals are prepared in accordance with technological cards and menus developed by St Petersburg Department of Social Nutrition. Usually, catering companies hire food technologists, who are responsible for controlling the whole process of food preparation, contamination, quality of ingredients and monitors compliance with the rules and sanitary standards. For example, one of the catering companies – AO “KSP OHTA” has its own testing and analytical laboratory. Its staff monitors compliance with the sanitary rules, quality and documentation of the food commodities, self-produced goods, pastry, etc. If a catering company has no own staff, they can recruit experts working for the Department of Social Nutrition.

Procurement models for catering services

Finland: Various procurement models for organisations of different size and type

In Finland, there are several models for arranging procurement procedures among municipalities. One option is to join a pool of municipalities for which a publicly owned company procures food (and any other items) for a given four-year period. The aim is to benefit from lower prices by catching the economy of scale in tendering. This option is not yet very widely used among municipalities as they prefer specific food items and deploy more detailed sustainability criteria enabling local suppliers to participate in bidding. Large municipalities have procurement departments which already entail economy of scale and enable the specific needs to be satisfied. These procurement departments buy food for a manufacturing kitchen (large scale meal preparation) as well as tens of small-scale professional kitchens with Cook and Serve model of catering. For small municipalities and other institutional actors such as congregations, hospital districts and municipal educational companies, it is advantageous to form banded procurement units that offer competence and scale benefits for the parties of banded procurement. The centralisation of procurement is increasing, which emphasises the competence of procurers.

Awarding points for products complying with particular procurement criteria has been a very generic way of trying to make increasingly sustainable procurements; the experience has shown that specific points do often not yield higher quality in terms of environment or social considerations as expected. Therefore, a new way for procurement officers has been to define high-quality features as minimum requirements for the food item, and then let the price decide the winner. Also, the use of market dialogues, competitive dialogues and competitive

procedures with negotiations are increasingly used among procurers while eco- and social innovations are seen as future options, albeit rather rarely used so far.

Russia: Decentralised procurement model in schools

Tendering procedures are carried out in accordance with the federal law "On the Contract System in the Procurement of Goods, Works, Services for State and Municipal Needs" of 5 April 2013 № 44-FZ. Each governmental school has to purchase all services on a specially established online platform[24]. The district administrations of St Petersburg act as distributors of budget funds and checks tender documentations. The choice of the supplier is carried out according to cost criteria if all requirements are fulfilled. There are several main requirements for bidders, like experience in the field, business reputation (following the federal law № 44-FZ).

In this case, the service covers the supply of goods and food products, cooking, recruitment and quality control. After the tendering procedure is carried out and the contract with the catering company is signed, the company gets in their use the whole food production facility on the school's territory. The catering company is also responsible for the procurement and supply of goods and raw materials, products and meal preparation, recruitment and quality control.

Manufacturing models for preparing food

Denmark: Preparing public meals in on-site and central kitchens for elderly people

Food services for the elderly in Denmark are provided through several manufacturing models. Some nursing homes have on-site food preparation, offering a hot meal for lunch and cold meals in the morning and evening. There are also larger centralised public kitchens that produce cook-chill meals that are distributed to nursing homes and directly to the elderly living in their own homes. The latter is also known as “meals on wheels”. Several private businesses have developed serving the market for “meals on wheels”. Private contractors supplying meals on wheels must comply with the criteria set out by the public procurers about, e.g. share of organic food, use of meat and fish, and if the meals should be cook-chill or otherwise manufactured.

Finland: Various manufacturing models in use for preparing the public meal

In Finland, the public meal has traditionally been prepared on the site of consumption as a fresh meal. This cook and serve model is still the most common preparation model. As individual institutions got larger and needed more flexibility and efficiency for the meal provision, the cook and chill model became more common. The model requires suitable installations and helps in cases of unexpected absences of personnel, such as flu epidemics. A rather new manufacturing model is Cook Cold, which means combining the ingredients cold and cooking these later when needed. The model suits very well for manufacturing or central kitchens with special equipment as the cooking and serving phase is performed by the service or satellite kitchens. The cook and serve, cook and chill and cook cold preparation methods have circa 83%, 9% and 8% shares across public catering services. The hot fill model is rather rare and deployed to increase the variety of meal provision.

[24] zakupki.gov.ru

Finland: Using sustainability criteria in competitive bidding for food procurement in the city of Salo[25]

While the in-house public procurement and catering services are the most common way to organise the provision of the public meal in Finland, there are municipalities inviting tenders from catering companies. The same national strategies, initiatives and regulations apply for all public tendering while the individual municipality may deploy their own interpretations about sustainability as additional criteria in their tendering. This example comes from the city of Salo (circa 52 000 inhabitants) located in Southern Finland.

Salo has developed a procurement policy program for 2016–2019 with four strategic guidelines: a systematic and economical approach, business-friendliness and vitality, innovation and experimentation and responsibility. The procurers of food collaborated with catering service providers. The strategic guidelines were translated to procurement goals by which the town could procure sustainably produced high-quality food and enable small local producers to participate in competitive bidding. Salo organised a market dialogue to develop criteria for procurement. The guidance was also provided for local entrepreneurs about how to respond to the tenders. The concrete criteria for food of animal-based origin included facts such as limits for the use of antibiotics on production animals, tail docking of pigs and the monitoring of the food-pad index among chickens. The procurement process resulted in domestic meat products with no genetically modified materials, no monosodium glutamate and products with long shelf lives. In Finland, specific facts such as these, used to characterize food to be tendered, are also called responsibility criteria. In Salo, the criteria focused on animal wellbeing. However, criteria such as these often entail other sustainability aims; they promote socio-economic aspects benefitting producers and environmental considerations pertaining to domestic animal transportations. For all products complying with these same minimal criteria, the contract was awarded based on selection criteria of 70% for price and 30% for quality. However, this time no local entrepreneurs participated in the bidding.

Germany, North Rhine-Westphalia: Sustainability criteria in tenders for the Environmental State Offices canteens

In 2018, a new tender for the canteen services of the Environmental State Office of North Rhine-Westphalia was developed. The development was part of the larger pilot project “Sustainable administration of the future”, with the overall aim to create a sustainable and climate-neutral administration in North Rhine-Westphalia. The objectives were to implement best practice examples, to become a role model, to create a concept for EMAS certification and to co-design it all together with the employees of the administration. The whole project lasted 28 months – the development of the tender until the canteens started to work took 14 months. All relevant stakeholders participated in the process, and new cooperation forms were built.

The sustainability criteria of the canteen tender are as follows:

- As a rule: fresh, regional, seasonal products; variety of salads, fruit and also whole grain products; at least 20% organic products per month, can be increased in the following years; animal welfare meat and sustainable certified fish; fair trade products (coffee,

[25] hankintakeino.fi/en/city-of-salo-using-sustainability-criteria-in-competitive-bidding-for-food-procurement

tea, fruit), degree of convenience max. frozen products, no GMO products, no flavour enhancers;
- A vegetarian or vegan meal; a meatless day twice a month without mentioning it is possible; reduction of meat portion to enable organic meat without price increase also possible;
- Reduction of food waste by having two portion sizes; cooking according to strict quantity recipes; giving it away to, e.g. food banks, using leftovers the next day, and measuring the food waste twice a year and develop activities based on this.
- Use of refund and recycling material; use of large packages; use of sustainably certified materials;
- Use of environmentally friendly detergents and dosage devices
- Establishment of a canteen commission for communication between customers and caterers; customer surveys to detect the demands; feedback box;
- Three times per year thematic activities: action week with the Health management, cooking event, seasonal specialities, etc.
- Transparent and attractive menu plan.
- preference for catering service employing disabled persons; employment has to be according to social standards
- Monitoring of organic, fair trade, etc. food products compliance by the procurers: check the delivery notes and bills.

Estonia: Organic food in cities of Tartu and Tallinn

Some Estonian municipalities have started to apply organic food criteria in their school and kindergarten meal procurements. For example, **Tartu City Council** has decided to add the possibility of offering organic food into the public procurements. The addition is not compulsory, but rather a possibility and with ideas for increasing the share of organic from the current 25% to higher in the upcoming years. The following procurement criteria were developed to enable offering organic food: 100% criteria were based on the menu and sampling of the food, whereas additional points were given when the following aspects were applied:

- At least 25% of the meat used in cooking is from the organic origin (additional 5 points)
- At least 25% of the grains are from the organic origin (additional 5 points)
- At least 25% of the fruits and vegetables are from the organic origin (additional 10 points)

Since 2017, the Development Plan of the City of Tartu states that Tartu prefers offering organic and healthy food in municipal institutions and at events organised by the City.

The **City of Tallinn** has carried out a pilot project in five kindergartens. The project lasted six months, and the goal was that during this time, all kindergartens should have at least 20% organic food. The project was initiated by the former Deputy Mayor of Tallinn.

Firstly, a survey among the residents of Tallinn was conducted to find out if people were interested in providing their children organic food. The results were good, and even 87% were in favour of offering organic food at school or kindergarten. 51% of them were in favour of the organic food offering idea, even if they had to pay some extra money for it.

The aim of the project was not simply to replace conventional food products with organic ones, but to redesign the menu, taking into account, for example, the availability and prices of local organic food. Also, the children were explained where the food came from and about the difference between conventional and organic food. Children had field trips to organic farms where everyone had a chance to help with the farm work.

At the end of the second month, four kindergartens out of five had the first level organic caterer label, which means that 20–50% of the purchased raw materials are from organic farming.

One thing which probably helped achieve quick project results was close communication and connection between the kindergartens and the project manager. Meetings, where all participants exchanged experiences and recipes were organised twice a month meeting, and these inspired others to try something new. The first recommendations were to try new products, reduce the amount of meat and use different cuts of meat, experiment with different salads and soups, and pay attention to the appearance and names of the food, which is important to children.

The kindergartens used mainly similar organic products: cereals, including buckwheat, vegetables and berries, meat, dairy products and eggs. On average, the cost of food (per day a child) increased by 0.20 euros when using organic ingredients. Over six months, the average proportion of organic food in five kindergartens was 24.3%.

The main drawback of the project was the lack of money for training which had been requested by the kindergartens. For example, it would have been useful to have two or three training for chefs, as the selection of organic products can be more diverse than conventional ones. It is always easier to start cooking new meals once you have compiled the recipe with the supervisor.

Overall, the project went quite well, and a year later, all the kindergartens who participated in the project still used some primary goods from organic farming. Awareness-raising and training could certainly increase the percentage of organic food in kindergartens. But also, the tight budget for catering is highlighted in relation to organic food.

5.3 Global cases

The European Union, on behalf of its 28 Member States, is part of the plurilateral Government Procurement Agreement (GPA) within the World Trade Organization (WTO). The EU public procurement directive needs to apply with the GPA. To ensure global open trade and competition, contracting authorities in the EU Member States should therefore in theory (above certain thresholds) also include food suppliers and catering services from countries outside the EU.

The EU can also learn a lot from GPP cases outside of the EU. To position this Baltic Sea project in the widest possible context, this mapping report also highlights three global case studies on Canada, Japan and the Republic of Korea. Canada, which has a long history of green procurement, will be described first. Japan, a GPP frontrunner in Asia, will follow, and finally,

Korea, a leader when it comes to digital solutions in procurement, is showcased. Although the development of GPP criteria in food and catering is not as comprehensive in the three countries compared to the EU, there are still inspiring GPP practices, for instance when it comes to technology and transportation.

Green Public Procurement in Canada

The context for Green Public Procurement, Legal Framework, and Ecolabelling

The Canadian government has been committed to green procurement since 1992. Although, it was not judicially mandated until 2006 with the introduction of the Policy on Green Procurement (Attwater 2014). This policy was based on the integration of environmental performance, primarily using life-cycle costing (LCC) in public procurement (OECD 2014). Implementation of the policy focused on three areas: (i) inclusion of environmental criteria and specifications into centrally managed public procurement, (ii) development of green procurement guidelines, as well as training and support to federal departments and agencies, (iii) establishment of green procurement targets across different departments in the public administration (OECD 2014). There is no strictly defined eco-labelling scheme that is used as a basis for tenderers to enter in GPP in Canada.

The Public Services and Procurement Canada (PSPC) is the federal department responsible for executing the major share of public procurement at the federal level. The department's strategy The Federal Sustainable Development Strategy (FSDS) is working to increase the incorporation of GPP as part of a greater focus on sustainability in general. Since 2017, FSDS has specifically aimed at contributing to the SDGs, for instance, fulfilling no. 2 Zero hunger, and no. 14 Life below Sea (FSDS 2019).

Canada has established government-wide green procurement instruments for commonly procured goods and services. These can be used as guidance for all government departments. In the food and catering sector, the new National Food & Beverage Strategy, overseen by PSPC, will guide the purchase of food for federal departments. Herein, environmental considerations, including the incorporation of green point-rated criteria, are mentioned. This point system has similarities with the EU GPP criteria. Some of the green criteria in the strategy are, for example:

- Organisational policies (awarding ISO 14001 certification and other environmental standards);
- Transportation (awarding greener vehicles, optimisation of delivery routes, fuel-efficient driving);
- Packaging, distribution, and delivery (promotion of recyclable bulk packaging, reducing the use of refrigerating units, smarter distribution centres, etc.).

Canada is expected to enforce a stronger focus on greening PPCS in the future. At present, there is an interest in strengthening locally grown organic food products (FSDS 2019). In Canada, local and regional authorities are not obliged to incorporate GPP criteria in their procurement by law, but many of them do. Namely, the city of Ottawa is often highlighted as one of the frontrunners in the field (FSDS 2019).

Staff training

The Canadian government has developed public procurement tools for a range of different products. As the environmental factors are incorporated into a value-for-money approach, life-cycle costs (LCC) are also assessed when public purchasing is carried out. This is done by adding an extra 'price' column in the evaluation model named 'evaluated price'. In this column, the procurer evaluates the product, considering the life-cycle costs (Attwater 2014). The LCC approach in Canada might be comparable to the principle of Most Economically Advantageous Tender in the EU public procurement directive. The PSPC is currently working on an even more advanced electronic procurement solution, which will make it easier for both suppliers and procurers to add more comprehensive data about green product specifications.

Incentives and approaches to the promotion of GPP
The Canadian government has (like the EU) developed a series of free online training tools for procurement staff in the public administration. Furthermore, a centre of expertise provides detailed guidance on the operational tools mentioned in the above. Finally, the inclusion of stakeholders on both the supplier and procurer side, in the development of new standards and policies for GPP, allows for continuous development (Attwater 2014).

Monitoring
All Canadian departments and agencies are required to report their present and forecasted progress on green procurement annually. The results are published in a governmental report made available online each year (Attwater 2014).

Green Public Procurement in Japan

The context for Green Public Procurement, Legal Framework, and Ecolabelling
Policies and regulations to help the promotion of GPP have been enacted in Japan since 1989, making the country a GPP pioneer in Asia. GPP policies cover a vast number of food products in public procurement. However, Japan does not have a dedicated section in its Green Purchasing Act for catering food in public institutions, as catering is included in the "services" category. This category mainly focuses on how to run canteens (i.e. reusable plates and cutlery, waste management, composting, etc.) (UN Environment 2017).

Launched in 1989, the Japanese 'Eco Mark' was the first Asian ecolabelling program. This was followed up with a more formal procurement-related act in 1994 (Act on Promotion of Procurement of Eco-Friendly Goods and Services by the State and Other Entities) and Japan's first Action Plan on Green Government Operations, which defined the objectives and methods for greening public procurement by the year 2000, in 1995 (UN Environment 2017).

In 2001, the Green Purchasing Law came into force, setting environment-related standards for 101 procurement goods and services. Today the list covers over 500 items. In the government entities that are obliged to comply with this law, 95% of all purchased products – that are listed in the Green Purchasing Law – follow the provided standards. It is also mandatory for government agencies to create tenders based on green public procurement, as described in the abovementioned laws (UN Environment 2017).

Japan was the first Asian country to develop a framework for ecolabelling guidelines, making it easy for consumers and producers to identify products that live up to the standards. The eco-labelling guidelines are based on international standards (ISO/JIS Q 14020, 14021).

Procurement in Japan is decentralised so that each regional and local procuring authority buys its own goods at the lowest possible administrative level. Hence, there is no centralised national procurement agency with the overall responsibility for GPP. However, there is a comprehensive national database with information and guides for government-issued tenders. Every year the Ministry of Environment tasks its advisory board and committee to revise further and develop the list of designated procurement items. The committee consists of academics, law experts, the private sector, consumer representatives and ministerial levels. The committee also reviews the evaluation criteria and monitors the implementation of green public procurement procedures and policies (UN Environment 2017).

In addition, the Japanese NGO Green Purchasing Network has been set up to support the implementation and promotion of GPP and has more than 2,400 members. The main objectives are (i) to promote better GPP practices in both public and private sectors, and (ii) to create a market for environmentally friendly products (UN Environment 2017).

Staff training
The Japanese Ministry of Environment provides basic GPP training for public procurers. Furthermore, the NGO Green Purchasing Network provides additional training for public and private employees.

Incentives and approaches to the promotion of GPP
There are no national funds or fiscal initiatives to promote GPP in Japan. However, the government as part of their effort to strengthen GPP initiated the "Premium Criteria Guideline" in 2012, which is a document explaining how public procurers can design their own, tailor-made criteria for greener purchasing, depending on their circumstances (size of local government, socioeconomic conditions, etc.).

Monitoring
Despite Japan being at the forefront of digital development, there is not yet an established digital system for reporting GPP results at different public levels. However, some general progress reports are published every year on the website of the Ministry of Environment (UN Environment 2017).

The monitoring process takes place at two levels: at the central government level and the local governance level. Each agency covered by the GPP legislation monitors the amount of procured goods/services and reports its results to the Ministry of Environment, including the number of eco-friendly goods and the ratio of 'green goods' to conventional goods. At the local level, monitoring is carried out via a survey by the Ministry of Environment. According to the Japanese government, GPP practices have led to a reduction of more than 400,000 tonnes of CO_2 annually (UN Environment 2017).

Green Public Procurement in the Republic of Korea

The context for Green Public Procurement, Legal Framework, and Ecolabelling
At the national level, the key responsible institutions dealing with GPP are the Ministry of Environment, Korea Environmental Industry, the Technology Institute (KEITI), and the Korean

Public Procurement Service. The Ministry of Environment is responsible for the overall management of the GPP policies, such as new guidelines, regulations and action plans.

The development of green procurement in Korea started in 1992 with the introduction of the eco-label program covering four product categories. By now it has grown to include 156 product categories with more than 16,650 products. With the introduction of the Support for Environment Technology and Industry Act in 1994, all public institutions were required to give preference to products carrying the ecolabels (UN Environment 2017).

The eco-label criteria consider both environmental indicators such as water and energy savings, recycling, reduction of toxic substances, biological safety, but also product quality indicators. The environmental criteria are set to weigh 20–30% when assessing products in the same category (UN Environment 2017). Compliance with Korean Ecolabel standard is verified by an independent organisation (third party) following ISO 17025 on Testing and Calibration Laboratories (Ecolabel Index 2019). At present, there are not many specific GPP guidelines on food products, but on a range of crops, raw ingredients, and equipment used in producing food products.

Since 2002, the Public Procurement System has established the Korea Online E-Procurement System (KONEPS) to digitize all procurement processes. It is mandatory to use KONEPS for all public tenders above certain thresholds. KONEPS is used for more than 2/3 of all public procurement, and reportedly it saves more than 8 billion USD annually in administration costs (UN Environment 2017).

Staff training

The Ministry of Environment provides basic green public procurement training for public procurement staff. In addition, KEITI organises nationwide (mandatory) training for over 6,000 public officials each year (UN Environment 2017).

Incentives and approaches to the promotion of GPP

Besides the situations in which the use of the eco-label scheme is mandatory, environmentally friendly products can be favoured in the tendering process in two ways. First, the procurers can include the provisions of the use of “green” products in the technical specifications of the tender document. Therefore, the use of green products is set as a pre-requirement for participating in the tender. Secondly, the use of green products can be included as one of the award criteria, along with price, technology, product quality, etc. Life-cycle costing (LCC) has not been fully integrated into the green public procurement processes but is in progress (UN Environment 2017).

In 2007, the KEITI established the Green Products Information Platform (GPIP), in order to facilitate green public procurement implementation and data reporting. This platform serves as the main source of information for GPP in Korea. There are some fiscal incentives linked to better GPP performance from the public level. Moreover, the best public institutions are assessed and rewarded with a bonus every year based on their GPP performance (UN Environment 2017).

Monitoring

KEITI has overseen GPP monitoring since 2005 based on two annual indicators: (i) the number of organisations submitting GPP performance records, and (ii) the purchase of green products and services from the list of designated products and services, in both percentage and total expenditure.

Although the three international cases have worked with GPP for years (Korea and Canada since 1992, Japan since 1989), none have as comprehensively developed GPP criteria for food and catering as the EU. However, some inspiring practices include Canada's ambitions to link GPP practices directly to the Sustainable Development Goals (since 2017). Furthermore, fiscal incentives to best performing public entities in Korea is an example of how to create incentives for GPP. Finally, Korea has a fully digitized procurement system (KONEPS), while in several European countries, digitization is still progressing slowly.

6 Concluding Remarks

The European demand for convenient, fresh, organic, healthy and local food is growing continuously. The need for sustainable food options is putting pressure on catering businesses and public food kitchens to implement greener practices when it comes to the sourcing of food, preparation, prevention of food waste, and better waste management. Although the EU and national governments in some of the StratKIT countries have extensive lists of guidelines and policies on GPP, it is typically local and regional authorities who are the key actors of change. Public procurement can be a key tool in driving the development of innovative goods and services on the European market. By working together, and pooling their resources, cities, central purchasing bodies, and other major public procurers can maximise their market power and impact.

Based on the examples it can be summarised that Finland, Denmark and Germany have worked for a longer time towards systematic approach to green and sustainable food and catering procurement at the governmental and regional levels, while Estonia, Poland and Russia have more recently started to introduce the concept in their countries and pilot some green procurement criteria for purchasing catering services.

Cities and regions are already advancing rapidly on trending priorities of the EU when it comes to waste, energy savings, and sustainability. The only potential discrepancy observed is regarding the strong demand for local or seasonal produce, which might conflict with EU competition policies. Many European cities have embarked on serious ambitions to cut waste and avoiding items with unnecessary packaging, but also to redistribute leftover food and reduce meat consumption. Regarding disposal, local and regional authorities also have good opportunities to develop smarter solutions, since local authorities or enterprises manage most waste. For instance, more could be done to embark on the valorization of biowaste (food waste).

The mapping results of the StratKIT countries show that public meals are relevant in a wide range of customer segments, from kindergartens and schools to armed forces and prisons. However, in terms of volume and growth, educational as well as health and elderly care segments are the most dominant ones. Even though contract caterers are having a hard time getting access to all public segments in some EU Member States, the general picture shows a strong market penetration from private catering food for both the young and the elderlies in the EU and the StratKIT countries alike.

The step-down approach in identifying the models of public procurement and catering services in the StratKIT countries enabled us to define appropriate segments for moving towards a more sustainable food procurement or a more sustainable public meal provision: schools, kindergartens and canteens of the federal ministries. The drivers and barriers of public catering in the selected segments will be further elaborated in Work Packages 3 and 4 of the StratKIT project to set up a Baltic Sea Region's Sustainability Toolkit – an easy-to-follow and bottom-up guidance for public catering professionals.

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