



# STRATEGIC PROCUREMENT IN EUROPEAN HEALTHCARE

Selection of best practice  
and case studies



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## **Ministry of Health, Welfare and Sport, The Netherlands**

Steven Oppenheim, Senior Policy Officer  
Dr Esther Putman, Public Health Directorate

## **Intrakoop, The Netherlands**

Jesse Schrama, Energy product Manager

## **Aarhus University Hospital, Central Denmark Region**

Susanne Backer, Circular Economy Project Leader

## **The Catalan Agency for Health Information, Assessment and Quality (AQuAS)**

Jean Patrick Mathieu, Project Coordinator –  
Innovation Unit

## **University Hospital Center of Grenoble Alpes, France**

Camille Devroedt, Environmental Engineer and  
Sustainable Development

## **Swedish National Agency for Public Procurement**

Magareta Bergh, Sustainability Unit

## **Region Västra Götaland, Sweden**

Christina Camén, Procurement Officer -  
Koncerninköp, Corporate Office

Lena Göransson Modigh, Sustainability Manager -  
Koncerninköp, Corporate Office

Dr Anders Bolmstedt, Chemist -  
Hälsan & Stressmedicin

## **Vienna Hospital Association, Austria**

Christina Schmidt, Director of Kitchen Manage-  
ment - Hietzing Hospital & Neurological Center,  
Rosenhügel and KAV Coordinator for Sustainable  
Food Management

## **Landspítali - The National University Hospital of Iceland**

Hulda Steingrímisdóttir, Environmental Manager

## **The Germans Trias i Pujol University Hospital, Spain**

Yolanda Fernández Serrano, Catering Manager  
Laura Raya, Responsible for the Dietetics Service

# TABLE OF CONTENTS

<b>Introduction</b>	<b>4</b>
<b>The legal framework</b>	<b>5</b>
<b>Strategic procurement in European Healthcare   Case Studies</b>	<b>6</b>
A Green Deal for Sustainable Care	<b>7</b>
Circular Solutions in Healthcare Plastics	<b>10</b>
Cross-border innovation procurement for AMR solutions	<b>12</b>
A new activity and mobility promotion plan	<b>14</b>
Increasing demand for sustainable products with harmonised procurement criteria	<b>16</b>
<b>Focus: Public food procurement</b>	<b>19</b>
Case studies – Sustainable food procurement in European healthcare	
Balancing the complexities of nutrition and sustainability	<b>20</b>
Reducing the kitchen's carbon footprint	<b>22</b>
Redefining procurement of food and catering services	<b>24</b>
<b>Recommendations and conclusions</b>	<b>26</b>

# INTRODUCTION

Healthcare accounts for approximately half of public spending in the EU - 14% of annual EU GDP in total.<sup>1,2</sup> Sustainable procurement is a strategic opportunity for public authorities and purchasers for the healthcare sector to leverage their purchasing power to achieve sustainable development and climate objectives. With over 15,000 hospitals in the EU, the European healthcare sector can play a significant role in influencing market supply and demand, and lead the transition to safer, innovative, and more sustainable products and services in healthcare.<sup>3</sup>

Aligning with their unique healing mission to “first, do not harm”, hospitals and health professionals should strive to prevent and reduce the negative health and environmental impacts of the healthcare sector’s activities.

The European healthcare sector has significant purchasing power, which can be leveraged to drive policies and markets towards more ethically produced, healthy, and sustainable products and services. Although there are different levels of maturity in integrating sustainability into healthcare procurement practices across Europe, a number of hospitals and health procurers are already using public money to serve their communities, while promoting wellbeing and protecting the environment. Health Care Without Harm (HCWH) Europe has interviewed some of these leading sustainable healthcare providers and compiled case studies in this report

to inspire other procurers to advance strategic procurement in the healthcare sector and share best practice examples.

Health Care Without Harm has found that the global healthcare sector accounts for 4.4% of total global carbon emissions, and that the healthcare sector within the European Union is one of the highest polluting healthcare sectors after the USA and China.<sup>4</sup> In the report *Health Care’s Climate Footprint*, evidence shows that the supply chain drives 75% of emissions within EU healthcare. The production, consumption, and disposal of many healthcare products pollute the environment, with severe consequences for human health. Harmful chemicals can be found in a wide range of products used in healthcare settings – disinfectants, medical devices, furniture, electronic equipment, solvents, and pharmaceuticals – all of which can pollute the environment and negatively affect human health.<sup>5</sup> Considering the vast quantities of products and resources used in hospitals and health centres throughout the world, it is not difficult to imagine the global scale of the environmental impact caused by the healthcare sector. Sustainable procurement should therefore be at the core of healthcare sustainability strategies; substituting suspected hazardous products with safer alternatives and reducing CO<sub>2</sub> emissions through low carbon products and services, for example.



# THE LEGAL FRAMEWORK

In 2014, three public procurement directives were adopted to modernise public procurement rules and enable governments to manage the operational requirements of efficient procurement.<sup>i</sup> The deadline to transpose the directive into national legislation was April 2016; whilst the majority of EU Member States have this legal framework in place, they are not yet using it to the full potential.

In October 2017, to combat this limited uptake, the European Commission (EC) released a Communication identifying opportunities to improve the way public money is spent in the Member States.<sup>6</sup>

<sup>i</sup> Directive 2014/23/EU on the award of concession contracts. Directive 2014/24/EU on Public procurement. Directive 2014/25/EU on Procurement by entities operating in the water, energy, transport and postal services sectors

The EC called for broad partnership and closer collaboration between public authorities and stakeholders to:

- Ensure wider uptake of innovative, green, and social procurement criteria, and extensive use of pre-market consultation or qualitative assessments e.g. Most Economically Advantageous Tender (MEAT) approach<sup>ii</sup>
- Improve the professionalisation of public buyers at national, regional, and local levels
- Increase access to procurement markets for small/medium-sized enterprises (SMEs), and promoting more cross-border procurement
- Improve transparency, integrity, and data to signal and tackle corruption in public procurement and holds governments more accountable
- Boost the digital transformation of procurement
- Cooperate to procure together

The **EU green public procurement (GPP) criteria** are designed to reduce the administrative burden for economic operators and public administrations that want to balance environmental performance, cost considerations, market availability of products, and ease of verification. Since 2008, the Commission has developed more than 20 sets of common GPP criteria, such as the recently updated GPP criteria for Food and Catering services (see page 19) and those for Electrical and Electronic Equipment used in the Health Care Sector.<sup>7</sup>

<sup>ii</sup> MEAT considers sustainability elements from any stage of the product/service lifecycle (e.g. production and delivery), accessibility, social and innovative characteristics, and the level of qualification/experience of the provider.

# STRATEGIC PROCUREMENT IN EUROPEAN HEALTHCARE | CASE STUDIES



## 1

### A Green Deal for Sustainable Care

The Netherlands has approximately 17 million inhabitants and a GDP of €700 billion, 10% of which is spent on healthcare. The Health Insurance Act (2006) created a more competitive market to reduce patient waiting times and improve the quality and efficiency of care through a process of selective contracting managed by health insurance companies. The healthcare system is mostly private, but the Dutch government protects public interest and ensures that all residents have access to healthcare. Private health insurance companies act as not-for-profit cooperatives by using profits to sustain or lower insurance premiums. In this setting, the Dutch government does not purchase healthcare goods, but can still provide guidelines and recommendations on how to improve procurement practices.<sup>8</sup>

Purchasing is seen as a strategic tool to meet both the rising demand for quality and efficient healthcare whilst also addressing current climate challenges. The Dutch government aims to move toward a sustainable economy by reducing greenhouse gas emissions, saving and promoting sustainable energy sources, and halving consumption of raw materials by 2030.<sup>9</sup> The transition towards a circular economy is therefore a primary strategy to achieve these objectives.

To accelerate this transition, the Ministry of Economic Affairs launched the Green Deal in 2011 which aims to give space to innovative and sustainable initiatives by identifying and removing regulatory bottlenecks, creating a marketplace, increasing access to information, and optimising partnerships. The Green Deal is complementary to the climate neutrality by 2050 and circularity by 2030 policies as it supports their implementation. The most important principle of the Green Deal approach is to ensure the viability of the most successful deals and that they are scaled up and replicated, inspiring other stakeholders to follow the example.

### How the Green Deal supports the transition towards sustainable healthcare

The Dutch Green Deal, when applied to the healthcare sector became known as the **Sustainable Care Green Deal** and has four overarching goals:

1. Reduce CO<sub>2</sub> emissions
2. Resource efficiency through circularity
3. Medicine residues from water
4. Healthy living and healthy environment for patients and employees.

The targets and indicators of these goals are illustrated in the Deal, and signatory companies must make a pledge explaining how they are going to contribute to achieving these goals.<sup>11</sup> Pledges are made publicly available to increase exposure so that interested stakeholders can connect and collaborate with signatory companies based on common priorities and field of action.

The Ministry of Health, Welfare and Sport is involved in the facilitation of the Green Deal and supports participants to develop expertise and achieve these goals by providing guidelines, best practice examples, tools, and financial incentives. The Director General of the Ministry has regular meetings with the Managing Directors of the Sector Organisations<sup>iii</sup> to discuss new projects and strategies to advance the work; the objective is to change the market by stimulating the collaboration among all the stakeholders.

This regular dialogue helps maintain the healthcare sector's motivation to implement the national goals and identifies regulatory barriers to achieving transformation (e.g. privacy regulations, hygiene standards, etc.).

This case study will focus on the first two goals of the Green Deal.

### Achieving Goal 1 under the Healthcare Climate Agreement

As part of the Sustainable Care Green Deal, the Branch Organisations, together with the Ministry of Health, Welfare and Sport signed a Climate Agree-

<sup>iii</sup> Sector organisations receive operational funding to represent hospitals and specialised healthcare providers (e.g. nursing home, mental hospitals, etc.)

ment and have developed a multi-layered roadmap for the healthcare sector to become climate neutral by 2050. The roadmap projects different scenarios and the related costs of the transition, providing guidelines for individual organisations on how to make their own road map for reducing CO<sub>2</sub> emissions and improving circularity, starting from buildings and energy efficiency. Any changes in energy provision require a district-oriented approach, the Dutch Government is therefore involving different cabinets and partners to ensure feasibility.

**Scoping and implementation:** The Central Bureau of Statistics and the Land Registry provides data on healthcare facilities' energy consumption. In parallel, the Ministry of the Interior leads the creation of a *Knowledge and Innovation Platform* for all social real estate that will support designing the healthcare climate strategy. Hospitals and healthcare organisations are then expected to reproduce this strategy at organisational level by detailing their roadmap and identifying the tailored actions needed to make their building and operations sustainable.

**Compliance:** Three Ministries<sup>iv</sup>, together with the Branch Organisations, are aligning to make sure that the regulatory framework supports the Climate Agreement without increasing hospitals' administrative burden. The Government is exploring how healthcare organisations can best report on the measures taken and prove compliance with the climate legal requirements.

**Financing:** The roadmap will describe the long-term benefits that justify the required significant investment for energy-saving measures in the healthcare sector. Banks, insurers, and the Government are refining a funding scheme to stimulate the uptake of these measures. The Ministry of Health, Welfare and Sport is allocating funding to adapt social housing and long-term care facilities, and subsidising those healthcare institutions that implement energy saving and sustainable care schemes. At the end of 2018, approximately 200 healthcare institutions used this subsidy to reduce the costs of investing in sustainable energy.

### Achieving Goal 2 with Circular Procurement

The Green Deal acknowledges that circular procurement is key to achieving the second goal of resource efficiency i.e. reducing waste and optimising the use of resources. Beyond waste segregation, the healthcare sector wants to use procurement to demand products that are circular by design -

circularity should be embedded in every stage of product lifecycles. Priority is given to transforming textile and plastics in healthcare, starting with fully recyclable packaging from clean plastic waste.

Different actors are involved in the implementation of strategic procurement:

- The Netherlands Standardisation Institute, together with the healthcare sector and the business community, is investigating how climate-neutral and circular procurement could be applied to the purchase of medical devices.
- Medical staff (represented by the Dutch Association of Nurses and the Federation of Medical Specialists), along with the Ministry of Health, Welfare and Sport, are exploring the potential of *green care pathways* and other actions to reduce waste.
- The corporate social responsibility organisation MVO Netherlands has initiated a project on circular nutrition and food waste prevention as well as an innovation programme for plastic waste.
- The group-purchasing organisation Intrakoop and the Dutch Association of Purchasers were awarded the coordination of circular procurement. Intrakoop purchases on behalf of 20% of Dutch healthcare organisations accounting for an annual spend of €18.8 billion. With funding from the Climate Agreement, they operate a programme for the entire healthcare sector to share knowledge and develop solutions to merge their purchasing power.

The group is developing harmonised procurement criteria for medical product groups and organising conferences on topics such as reducing the sector's CO<sub>2</sub> emissions through sustainable procurement. They are also establishing pilot projects on innovative solutions such as:

- Standard maintenance contract for sustainable management of healthcare facilities.
- Segregation and processing of waste (plastic, metal and beverage cartons) in healthcare facilities.
- Sustainable food and catering services procurement, the project *Foodstep* and *Intrakoop Care Monitor* provides insights on the CO<sub>2</sub> emissions of purchased food and drinks – particularly meat and dairy.
- Sharing/reusing marketplaces for healthcare products.<sup>12</sup>

### Results and next steps

As of November 2019, over 200 organisations have signed up to the Green Deal for Sustainable Care.<sup>13</sup> The innovative projects and partnerships created under this initiative benefit the green economic growth of the country; participants share their progress via a dedicated newsletter and the Ministry of Health, Welfare and Sport organises a Sustainability Day annually to exchange experiences and results, and to further develop knowledge and expertise.

Despite not being directly responsible for procuring health products and services, the Dutch Government is concentrating effort and funding for sustainable procurement standard practice. This way of working creates a win-win for the Government: gaining detailed knowledge about new processes and aligns the healthcare sector with national targets. Participating companies also benefit by becoming more competitive and gaining access to new

markets.

The current Green Deal for Sustainable Healthcare will end in 2022; depending on its success and the willingness and feedback of participants, a third edition might be established through a participatory process and to involve all the healthcare Branch Organisations.

Frans Timmermans, Vice President of the European Commission from 2019, aims to scale up the Dutch model with a European Green Deal.<sup>14</sup>



The Dutch Minister of healthcare signs the Sustainable Care Green deal



Green Deal group picture



<sup>iv</sup> Ministry of Health and Welfare and Sport, Ministry of the Interior and Kingdom Relations, Ministry of Economic Affairs and Climate Policy

## Circular Solutions in Healthcare Plastics, Denmark

The **Aarhus University Hospital (AUH)** offers specialised medical treatments to the citizens of the Central Denmark Region and serves as the local hospital to the people of Aarhus city and the island of Samsø. AUH has 1,150 beds and annually receives over 1 million patient visits.

Hospitals produce large amounts of plastic packaging waste: many products used on a daily basis in a hospital are wrapped in plastic to ensure sterility and therefore patient safety. Sample tests at AUH indicated that 18% of their solid waste is clean plastic packaging - approximately 400 tonnes annually, of which only 7 tonnes are currently recycled each year. Part of this problem can be attributed to a lack universal manufacturing standards for plastic packaging; furthermore, many waste management facilities are reluctant to work with hospital plastic waste because of the complex and varied compositions of the plastic. There are also concerns that hospital waste may contain contaminated and/or infectious material; it is therefore difficult to immediately recycle plastic packaging from hospitals at a reasonable cost.

The Aarhus University Hospital decided to therefore collaborate with suppliers to overcome the reluctance and concerns surrounding healthcare plastic recycling. Bottles used for irrigation fluids were chosen as a baseline product since they are used frequently everyday within hospitals and are a relatively simple product.

## Circular Solutions in Healthcare Plastics project

The overall goal of the project is to increase recycling rates and to create more circular solutions within the value chain of medical plastic packaging waste.

Currently, AUH and the Central Denmark Region are testing a set of generic criteria to support increased recyclability by applying these criteria to different tenders. In doing so, the relevance of the criteria and the market response is tested and further refined. The generic criteria are:

- Reduced packaging
- Include recycled material in secondary and tertiary packaging
- Develop take-back systems wherever relevant/possible
- Create products with monopolymer packaging made of either PP, PE, or PET so they can be recycled
- Mark products for recycling
- The following material and characteristics are less preferred: PVC, laminates, combinations of paper and plastics.

AUH wants to develop and test a value chain model for the creation of commercial and alternate values for hospital plastic packaging waste, by involving all the relevant stakeholders:

- **Manufacturers:** Develop guidelines for healthcare packaging to reduce packing and commit to specific targets for improved recyclability.
- **Procurement:** Develop uniform tender requirements for cooperation across markets.
- **Hospitals:** Increase sorting of specific high value fractions (e.g. PP, PE, PET).
- **Waste haulers and compounders:** Develop capacity to recycle clean plastic from hospitals in separate and certified streams.

## Results and next steps

Though the project runs until July 2020, preliminary results already demonstrate that introducing recyclability criteria in tenders does not lead to higher prices. AUH's first test in a joint national tender showed that by setting recycling criteria, Central Denmark Region actually achieved a 24% cost saving compared to previous offers on the same product (bottles for irrigation fluid). As this was the first time responding to the recycling criteria, suppliers could not meet more than 50%, although the criteria did not form more than 5% of the total tender weighting, it did help determine the outcome because of the close price competition.

It is important to signal that there is demand for recyclable products and packaging through dialogue with manufacturers and recyclability criteria in tenders. Another key factor to make recycling feasible is to keep packaging material as simple and clean as possible, and avoiding mixing different polymers. Whilst the irrigation bottles were chosen for their relative simplicity, it will take time to implement changes in any medical product: firstly, the European approval system process for medical products takes three years, and secondly, tenders typically run for 3-4 years.

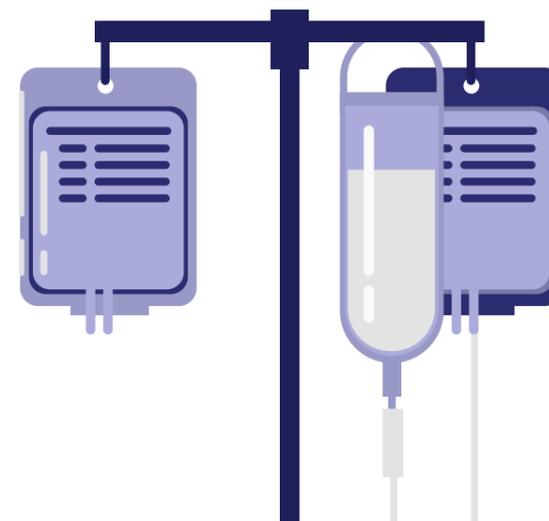
Nevertheless, with the help of the Circular Solutions in Healthcare Plastics project, recyclability criteria slowly continues to gain exposure in the Global Medtech Industry; interest in sharing procurement criteria also continues to expand across North Western Europe.



Nurses are willing to sort plastic packaging, but that's not the only challenge



Given the right design, plastic packaging for medical devices can be high-quality and therefore recyclable



## Cross-Border Innovation Procurement for AMR Solutions

The **Catalan Agency for Health Information, Assessment and Quality (AQuAS)** - a public agency of the Catalan Health Ministry - is responsible for health technology assessment, health care evaluation services, and managing calls for research. Its mission is to generate knowledge that contributes to improved quality, safety, and sustainability of the Catalan Healthcare System and thus easing the decision-making process for citizens and healthcare managers and professionals.

AQuAS is currently working in a consortium with six procuring authorities, namely Institut Català d'Ocologia, Provincia Autonoma di Trento, HELIOS Klinikum Wuppertal, Fundació Mutua de Terrassa, Sheffield Teaching Hospitals and Universitaetklinikum Aachen, on the Anti-SUPERBugs Pre-Commercial Procurement (PCP) project to develop solutions against Antimicrobial Resistance (AMR).<sup>15</sup> In the EU, it is estimated that AMR is responsible for 33,000 deaths a year, and a loss of over €1.5 billion to the economy i.e. healthcare costs and productivity losses.<sup>15</sup>



Provincia Autonoma di Trento presents the Anti-SUPERBugs project at HCWH Europe workshop

Hospitals are considered hotspots for the development and spread of drug-resistant bacteria, with approximately 75% of drug-resistant bacteria associated with healthcare. This group of procurers,

<sup>15</sup> Pre-Commercial Procurement (PCP) is a tool that public authorities can use to stimulate innovation and the development of solutions for unmet needs.<sup>16</sup>

lead by AQuAS, aims to scale up efforts in active surveillance systems and contribute to the reduction of Multi-drug resistant organisms (MDROs, aka "Superbugs") infections.<sup>17</sup>

### Anti-SUPERBugs Pre-Commercial Procurement Project

As project coordinator, AQuAS acts as a procuring entity on behalf of the other six procuring authorities; to deliver the project, they collaborate with a EU expert on innovation procurement, Sara Bedin, and RISE Research Institutes of Sweden (technology expert in the field).

They launched a pre-commercial procurement project to support and finance the development of a smart ICT solution that will:

- Improve the quality of care processes in hospitals.
- Reduce both the healthcare & governmental costs and the operational impact resulting from infections caused by MDROs.
- Improve the appropriateness and effectiveness of antimicrobial medicine usage.
- Reduce the community and social care impact of MDROs acquired in hospitals through the procurement of pre-commercial technologies that will transform current Surveillance and Infections control systems into new comprehensive systems.

The project consists of the following steps (as of 2019, steps 5-9 are still under implementation):

- 1. Business case and criteria prioritisation:** Each procuring authority of the consortium had to identify common requirements, business cases, and criteria for a solution that would reduce costs by 10%. The outcome of this step was a 'wish-list' with the procurement requirements and available budget to develop the technology.
- 2. Market research:** The technology expert analysed advanced, state of the art technologies available, technology surveillance, and validation of the technological solution.
- 3. Open market consultation:** The consortium organised consultations in each of the project countries in both local language and English

to involve as many companies as possible, including SMEs. Suppliers provided feedback on the feasibility of the procurement demand, but there was no need to readjust the initial list of criteria.

- 4. Definition** of the rules and regulation that would be implemented in the project Request for Tenders (RfT) document, which included the description of the tendering procedure, the expected results, the contracting approach and the Budget distribution between phases.
- 5. Tender publication:** Suppliers were given three months to submit their bid; the tender closed on 28 October 2019 and four suppliers were awarded with a framework Agreement and the Phase 1 contract.
- 6. Evaluation** and selection process of the offers received, based on their technical offers for innovative approach while also asking them to demonstrate that they have the technical and financial solvency to carry forward the project and ensure its sustainability beyond the PCP.
- 7. Phase 1 Solution Design:** The four shortlisted companies will have three months to design a business plan to develop the innovation; three companies will be selected based on the quality of their work plan and will receive funding for the next phase of the project.
- 8. Phase 2 Prototyping:** The three selected companies will receive funding to prototype and test the technology over a period of six months.
- 9. Phase 3 Proof of concept and solution test:** Two of these companies will then have the opportunity to test their prototypes in three of the participating hospitals for a period of nine months.



### Results and next steps

Despite all partners agreeing about the need for that type of technology, it was difficult to secure R&D funding from the public and not-for profit entities involved, due to the inherent risks of R&D activities, no guarantee of success are offered to the public entities investing in innovation. Taking such financial risks with public funds is a difficult path to take in public procurement. To overcome this, each hospital involved prepared a business case from a demand and cost perspective, analysing their organisational costs caused by Hospital Acquired Infections (HAIs) e.g. longer hospital stays or increased use of antibiotics. They also considered the potential savings of using this new technology e.g. early detection helps to identify the correct amount of the most appropriate drugs.

Although the project is not yet concluded, AQuAS has a lot of experience in innovation procurement. Their experience is that it is important to have as many suppliers as possible in the process to create competition and avoid a 'locked-in' situation. Procurers should foresee regular interaction with selected contractors throughout the whole process and give feedback on the innovation. The procurers are thus ensure that the solutions are tailored-made to their needs. The contractors receive indications, right from the start of the design process, from their potential clients and can include improvements right in the design phase of their future products.

Additionally, the goal of the project is not only to reduce HAIs and the related costs, but also to strengthen a Europe-wide procurers network that can share experience and challenge the industry to innovate for addressing the major societal challenges. By identifying their common needs, aligning their procurement demand, and merging their purchasing power, public authorities can create a bigger market for these types of innovations and achieve cost efficiencies. The project aims at encouraging the paradigm shift in the public procuring approach, where demand-driven innovation policies should have a greater impact in how business is currently done. This could contribute to a win-win situation in Europe, where public authorities can acquire innovative solutions, adapted to their specific needs and new competition from small and medium enterprises is possible through early investment in R&D.

## A new activity and mobility promotion plan

The **University Hospital of Grenoble** in the French Alps, comprises three main sites providing the majority of medical specialities including maternity, paediatric, orthopaedic, and rehabilitation services amongst others. In total, the Hospital has 2,100 beds, with 9,000 professionals providing medical and surgical treatments

In France, diseases caused by air pollution have become the third largest public health problem with more than 42,000 premature deaths per year. A 2016 study showed that in the city of Grenoble, 3%-7% of deaths and 3%-10% of new cases of lung cancer are attributed to air pollution.

Environmental and health issues related to air quality have now become a priority for the French Government. Considering its environmental footprint and the need to act, University Hospital of Grenoble introduced a Corporate Transport Plan in 2003, and more recently committed to the Climate Energy Program of Grenoble Alpes Métropole in 2010 and in the M'PRO approach in 2017.<sup>18</sup>

The key actions of this Mobility Plan are to:

- Provide sufficient parking capacity for bikes
- Ensure the safety and continuity of cycle paths
- Support cyclists with bike maintenance with a participatory repair workshop
- Support cyclists with equipment purchases i.e. visibility kits and offer a registration system to track stolen bicycles more easily).
- Create a community carpool for hospital staff on a carpooling platform
- Organise “speed dating” carpooling to set up teams of carpoolers
- Make public transport affordable by allowing hospital staff to benefit from preferential rates and by paying 50% of their subscription costs.
- Establish permanent, personalised mobility advice that considers professional and personal constraints to determine the best travel option
- Organise on-site campaigns

The Mobility Plan also includes different communication strategies (website, poster, newsletter,

dedicated email inbox to inform and engage people. There is also a monthly campaign organised by the region: “Au travail j'y vais autrement” or “I go to work differently” which aims to raise awareness about the Mobility Plan and challenges residents to use alternative modes of transport to the private car. The hospital also hosts Mobility Days on all its sites twice a year, with the participation of different transport organisations, such as TAG, METRO VELO, and CITIZ.

### Results and next steps

Monitoring the Mobility Plan highlights multiple environmental, health, social, and economic benefits:

- A 25% reduction in overall fuel consumption within the city and a 50% reduction in diesel consumption since 2012.
- A reduction in pollutant emissions.
- Improved urban integration and accessibility thanks to reduced car traffic, clear orientation signs, and strengthened public transit.
- Reduced maintenance costs from reduced traffic and route optimisation.
- Reduced road risk and accidents.

The effectiveness of a Mobility Plan depends on institutional investment and close collaboration with all the political and socio-economic actors e.g. local authorities and urban planning authorities. The measures implemented are more appropriate and effective when part of a common dynamic. Consulting local authorities is essential to ensure that the constraints and needs of the University Hospital are considered when improving accessibility and service, regardless of the mode of travel chosen.

The Mobility Plan is on-going, and the Hospital's anticipates further success.



“How do you move around the city of Grenoble?”



Free “Speed dating” carpooling



Park your bike at the hospital

## Increasing demand for sustainable products with harmonised procurement criteria

Sweden is at the forefront of sustainable procurement practices; the country is standardising its public procurement processes and criteria through multi-stakeholder collaboration at both national and regional levels.

Sweden is organised into 21 Regions that are responsible for the provision of healthcare, dental care, and public transport; the councils and regions employ 250,000 people and procure goods and services to the amount of €13 billion per year.

The **National Agency for Public Procurement** provides tools to optimise procurement processes and achieve the sustainable development goals, in particular SDG12 on Sustainable Consumption and Production. The agency has three decades of experience in developing green public procurement criteria for products used in the healthcare sector e.g. pharmaceutical products, medical devices, gloves. Their publicly available database has more than 600 criteria (environmental, social, labour, etc.) ready to be used by procurers.<sup>19</sup> The development of such product specifications (e.g. criteria to phase out phthalates from ICT equipment and allow minimum concentration of hazardous chemicals) requires the different experts and a multi-stakeholder approach.

While the environmental criteria still need to be harmonised at national level, all suppliers must comply with the national code of conduct. The demand for national standardisation of social criteria was accelerated when a Swedish news article was published highlighting child labour and hazardous working conditions in factories producing products for the Swedish healthcare sector.

The increased awareness, primarily as a consequence of this news article, expanded concerns to a more holistic view of sustainable public procurement that considers both environmental and social impacts. To minimise the negative impact of healthcare procurement, the National Agency stresses the importance of traceability throughout products' supply chains and apply a lifecycle approach that considers both the carbon footprint and the presence of hazardous substances. The National

Agency provides many toolkits, including a lifecycle-costing tool to make sure that procurement cost calculation is consistent across the country.

The inclusion of social and environmental criteria is facilitated by the Public Procurement Directives, but the Agency admits that the biggest challenge for procurers and contract managers is monitoring the implementation of contracts and verifying suppliers' compliance with the criteria throughout the whole process.

### The National Substitution Group (NSG)

Procuring authorities from the smaller Swedish regions do not have the capacity and resources to build expert multidisciplinary procurement that can consider all aspects of strategic procurement. They can, however, begin their procurement process using the baseline tool provided by the National Agency. To integrate the basic list of criteria, they interact with other experts across the country to make the requirement and criteria more ambitious and harmonised, which led to the creation of the National Substitution Group. The purpose of this group is to share best practices on the technical aspects of chemical procurement criteria and help members with contract evaluation and contract implementation.

The NSG maintains a publicly available substitution list for hazardous chemicals online, where experts or members of the group can suggest substitution for specific products or compounds. Members can comment on suggestions and discuss further with whomever made the suggestion. As the substitution group includes universities and researchers, the list is available also in English.<sup>20</sup> The National Substitution Group also has a web-platform for other related topics like the adaptation and implementation of new chemicals laws or experience with chemical registration.

### Harmonisation at Regional Level: Region Västra Götaland, Sweden

The Region of Västra Götaland in Sweden has 1.7 million inhabitants across 49 municipal areas. Gothenburg is the largest city and there are nearly 30,000 islands in the region – 153 of which are inhabited. The region's healthcare system comprises 19 hospitals and more than 200 primary and dental care facilities (both public and private, the latter are contracted by the region).



Procurement of disinfectant products



Product testing

Region Västra Götaland is a public authority that purchases goods and services to provide inhabitants with growth and sustainable regional development, healthcare, and public transport. Its mission is to contribute to a good quality of life for people in the region. The region's main funding comes from tax revenues and staffing accounts for the biggest share of the cost - approximately 53,000 employees care for the biggest share of the cost - approximately 53,000 employees at almost 2,000 work locations. Nurses make up the largest occupational group, accounting for approximately 27% of the total amount of employees and 80% of them are women; on an average day, 9,800 people visit a health centre and 52 children are born in one of their hospitals.

The Region's purchasing organisation has an annual expenditure of approximately €700 million, and it has 150 employees and 10,000 suppliers. Its objective is to become the country's leading procurement and supply function, and thereby contribute to the health and wellbeing of its citizens. Its operations include category management, procurement and purchasing in the Region, contract and product information, and customer service and support. The region also has two other procurement organisations focused on real estate construction and public transport.

### Standardised approach and marketplace

The purchasing organisation's high-level committee defines the procurement demand, the coordination body then organises the purchasing into specialised procurement teams made of different experts (nurses, dermatologists, chemists, etc.); these teams follow a standard collaborative approach throughout the entire procurement process. The secretariat supports procurement officers by organising capacity-building activities (e.g. internal courses, supplier seminars), sharing risk analysis, co-financing audits, and sharing the audit results.

Since 2016, the Västra Götaland Region prioritises purchasing Fair Trade products. All public offices and public organisations such as hospitals and care centres owned by the Region must purchase products through their Marketplace 2.0 (Marknadsplatsen 2.0). The marketplace is an e-shop/inventory of products that meet the Regions' strict procurement criteria and creates a cohesive electronic flow from

order to invoice and ensures a more efficient response between the demand and supply of goods.

Furthermore, purchased goods are distributed via warehouses that are responsible for optimising the logistics of product distribution, goods are then transported using trucks powered by locally produced biogas.

### Results and next steps

The Marketplace 2.0 offers a list of approved products or full catalogues of products from approved suppliers; the implementation and follow up of this system poses some challenges:

- **Changes in 'sub-suppliers'** that provide products to the approved supplier that has the contract agreement with the Region. When new products are introduced, procurers need to understand if they are compliant with the criteria (e.g. check for presence of hazardous substances).
- **Excessive choice** for one product group – for example, there are 160 different types of glues, but most of the listed maintenance chemicals have this challenge. The Region aims to reduce the number of choices.
- **Unauthorised purchases** can be more expensive and often do not fulfil the Region's procurement guidelines and criteria. Not all employees are aware of the reasons behind the Region's choice to list a product and they might ask for products that are not listed in the marketplace.
  - To improve employees' engagement in the process, a new policy means that employees must justify requests for unlisted products. If the product meets the sustainability and environmental criteria this request might be accepted.
  - Employees' sustainability awareness, however, is now increasing to the point that they often demand a reduction in the use of certain toxic chemicals or complain about the amount of plastic used in the healthcare sector (e.g. packaging).

Currently, all Swedish regional contracting authorities include environmental requirements in their tenders; whilst criteria have similar objectives across the country, they are often written differently and this increases the administrative burden for both procurers and suppliers and does not give a clear signal to the market. The next challenge for the Västra Götaland Region is to push for harmonisation of environmental criteria at both regional and national levels, looking further ahead, they are also in favour of harmonising these criteria at a European level to increase the demand for sustainable products and reduce price costs. The Västra Götaland Region has already initiated attempts to harmonise criteria for the procurement of pharmaceuticals. Currently, there is a lack of adequate regulations on pharmaceutical pollution, which poses additional challenges. It is hoped that wider uptake and harmonisation of criteria at a European level will contribute to the improvement of the European regulatory framework. Similarly, the National Substitution Group has the ambition to expand its expertise by becoming a pan-European or even global working group.

## FOCUS: PUBLIC FOOD PROCUREMENT



Public food procurement represents an excellent opportunity to set standards and leverage purchasing power for environmental, social, and other objectives by rewarding suppliers who can demonstrate a clear commitment to sustainability. Public procurement strategies can help steer markets towards sustainable options and contribute to long-term changes in eating habits and preferences – simultaneously improving public health and reducing the environmental burden of food production and consumption.

The EU's 2014 Public Procurement Directive together with the updated Green public procurement (GPP) criteria for Food, Catering services and Vending machines, provide an opportunity to minimise the environmental impacts of public purchasing. Though not binding, the GPP criteria provide a common basis for developing specifications and other procurement criteria that can be directly applied by contracting authorities throughout Europe. The updated criteria focus on a select number of approaches to minimise key environmental impacts related to food procurement activities, promoting in particular:

- An increased uptake of organic food products
- More environmentally responsible marine and aquaculture products
- An increased offer of plant-based menus
- More environmentally responsible vegetable fats
- Products produced following higher animal welfare standards
- Products labelled in accordance with fair and ethical trade standards
- Food and beverage waste prevention
- Improved prevention, sorting, and disposal of other wastes
- Lower energy use and water consumption in kitchens
- Reduced emissions from food transportation
- Provision of low impact drinking water
- Staff training on the aspects covered by the GPP criteria.



# CASE STUDIES – SUSTAINABLE FOOD PROCUREMENT IN EUROPEAN HEALTHCARE

6

## Balancing the complexities of nutrition and sustainability

The **Vienna Hospital Association** is one of the largest healthcare organisations in Europe and the largest training facility for professional healthcare in Austria. It is responsible for nine hospitals, eight geriatric centres and residential nursing homes and eight educational centres. With approximately 30,000 employees, the association cares for nearly 295,000 inpatients and 2.8 million outpatients each year, serves approximately 30,000 meals per day - 34% of food served is organic, coming mostly from local suppliers.

### Sustainable food policy

For more than ten years, the Vienna Hospital Association has participated in various pilot projects focused on healthy food in the healthcare system:

**BIOFAIR II (2005)** - aimed to support large-scale kitchens to increase the share of organic ingredients in their menus as a health indicator, without increasing the budget.

**SUKI (2008-2011)** - aimed to identify options to reduce CO<sub>2</sub> emissions from canteens. Targeted selection of meals and ingredients enabled a first step towards healthy and sustainable nutrition, in parallel with contributing to the regional organic farming.

**"Natürlich gut Teller" [naturally good dish] (2010)** -, a programme of the City of Vienna for sustainable nutrition that established mandatory criteria:

- At least one main component of the dish must be organic
- Only use seasonal fruit & vegetables
- Portions may contain a maximum gross weight of 90g of meat.
- Fish must be sourced from sustainable Austrian fisheries or organic farms

**Project UMBESA (2012-2014)** - aimed to implement sustainability in large-scale kitchens prioritising regional, seasonal, organic, and freshly prepared food.

Starting in 2005, in accordance with the Vienna Municipal Council and its ambitious Climate Protection Program, the Vienna Hospital Association adopted a sustainability food strategy.

### Results

Between 2011-2016 approximately 4.4 million meals were consumed under the Natürlich gut Teller programme – 733,000 dishes annually and 2,200 dishes daily. In this four-year period, 56% of meals served were vegetarian, 24% contained fish dishes, and 20% contained meat. Looking at the overall content of this dishes, fruit and vegetable content was 87%, fish content was 8%, and 5% was meat.

- 24,000kg of organic fruit and vegetables is used annually, equivalent to 12 hectares of agricultural land farmed organically
- 190,000kg of seasonal fruit and vegetables is purchased preventing 21,600 tonnes of CO<sub>2</sub> emissions
- The reduction in meat portions has annually saved €57,000, seven cows, 65 pigs and 853 chickens. Water use is also reduced by 233,000m<sup>3</sup>
- By using only local fish, a further annual saving of €150,000 is achieved.

### Environmental benefits

Procuring organic food is an energy saving and resource efficient alternative to conventional agriculture; the use of chemical/synthetic fertilisers and pesticides is greatly reduced, and overfishing is reduced by prioritising local fish. The proportion of organic food in the City of Vienna has already saved approx. 11,700t of CO<sub>2</sub> equivalent per year; savings between 2008-2012 amounted to approximately 58,600t of CO<sub>2</sub> equivalent.

### Social benefits

With regional and seasonal criteria the Vienna Hospital Association's sustainable food strategy promotes urban and peri-urban food production and processing based on sustainable approaches, while reducing food insecurity as well as food and nutrient loss and waste. By using fair trade products, social rights for disadvantaged producers and workers are secured.

### Economic impacts

Contrary to popular belief, procuring organic food can be achieved without a significant increase in costs for sufficiently available commodity groups.

### Results and next steps

With the impressive track record of implementing sustainable food projects, the Vienna Hospital Association still recognises there are many challenges ahead, such as increasing the share of organic food in the Vienna public large-scale kitchen systems, developing more animal welfare along the entire value chain, tackling the problem of malnutrition. Sustainable food provision should be seen as a key part of patient treatment, as well as improving the quality of life for patients, employees, and the wider community; the association hopes that staff and patients spread the importance and recognition that healthy and sustainable food plays beyond the hospital itself.



Healthy and tasty dishes made from seasonal ingredients



Plant-based dishes are a simple way to boost your health

## The Reducing the kitchen's carbon footprint

With a capacity of approximately 700 beds, **The National University Hospital - Landspítali** is the leading hospital in Iceland and the largest workplace for employees in healthcare, with around 5,700 employees. The role of Landspítali is threefold: service to patients (in and outpatient services, critical care units, clinical laboratories), teaching and training of clinical staff, and scientific research.

Since 2012, Landspítali aims to be a role model for environmental issues and employs social responsibility as a guiding principle in decisions and daily work. The Landspítali environmental policy is the guide to this vision and an environmental programme has been followed since 2012.<sup>21</sup>

### Sustainable food policy

Landspítali's kitchen is one of the largest kitchens in Iceland and on average produces 5000 meals a day for patients, employees, and visitors. In 2015, the kitchen and its nine canteens received the Nordic Swan Ecolabel, and the environmental measures taken in the kitchen resulted in significant and positive benefits. Vegetarian dishes are now offered daily, the number of guests increased by 30%, guest satisfaction increased by 50% and a number of environmental benefits have been obtained.

- **Food waste is monitored** and measure have been taken to reduce it as much as possible. Menus have been improved and portions have been adapted, an ordering system has been developed and purchasing has been better organised to support a reduction in food waste. Since January 2017, unsold food is sent to a charitable organisation and in 2019, a self-service system for employees was introduced.
- **More organic products are offered:** 13 organic products are regularly stocked by the kitchen with at least seven made available daily: barley, yogurt, rice, oats, pasta, crispbread, millet, tea, muesli, soya milk, coconut milk, oat porridge, gluten free oats, and spices.
- **Fewer plastic and disposable containers:** reusable food containers and cutlery have been introduced and disposable containers

use cardboard in place of plastic along with plant-based cutlery for take-away options. Plastic containers are practically eliminated.

- **More ecolabel products are used:** over 90% of all detergents and cleaning products are ecolabel, including toilet paper, office paper and napkins. Detergent management has been improved and coordinated in all canteens, and 10 non-ecolabel detergents have been removed; the number of detergents was reduced from 26 to 16.
- **More recycling:** sorting facilities are available for guests in all nine canteens and kitchen waste is sorted into seven waste categories and recycled. All food waste is composted, and hospital employees can receive free compost to use in their own gardens.

The environmental policy is systematically followed, using green accounting, environmental impacts such as carbon emissions or waste are considered economically. This approach justifies increasing classification of waste, reducing the use of disposable products, reducing food waste, increasing ecological purchases and encouraging employees to use sustainable travel methods to get to and from work. The hospital has focused on measurable results and has set the ISO 14001 standard as a benchmark; policies and work plans are drafted with the support of the hospital's commission and environment committee.

Between 2018-2020, Landspítali will pursue ambitious and focused environmental issues aligned with its environmental policy, their climate objectives, and, with particular focus on SDGs 3, 7, 12, 13, and 17. Landspítali's key objectives in the 2018-2020 work plan are divided into three priorities:

1. Healthy environment
2. Improved resource efficiency - together against waste
3. Climate change – for a better future.

Specifically on food, the work plan includes objectives to:

1. Reduce food waste by 4%, a goal of 1.22 kg/patient.
2. Increase the share of locally sourced foods and select ingredients with a smaller carbon footprint.
3. Increase the share of organic food on the menu.

### Results and next step

In cooperation with suppliers, Landspítali University Hospital buys products and services that meet their needs, have the least environmental impact and the lowest life cycle cost. Suppliers are asked to consider the hospital's environmental policy and the hospital's climate goals that have been set for the years ahead, which can have a long-term significant impact on the community's wellbeing and the environment.



Fresh ingredients are important



Landspítali's employee canteen

## Redefining procurement of food and catering services

The **Germans Trias i Pujol University Hospital** is a public health centre that provides a range of healthcare services for over 1 million people living in Badalona and surrounding municipalities. The hospital employs 2,500 health and non-health professionals.

### Sustainable food policy

The hospital has its own kitchen, currently managed by the catering company Arcasa, which serves approximately 130,000 meals patients a year and 547,500 meals to professionals and visitors annually.

### Procurement guidelines

The hospital has introduced sustainability criteria for purchasing food products, with a particular focus on fresh and local products. The procurement of vending machine services also includes sustainability criteria and promotion of healthy and balanced food, requiring 50% of the food offered to comprise healthy products: fresh fruit, salads, drinks without added sugar, foods with high fibre content, low levels of fat as well as fair trade and organic. The hospital offers a great diversity of meals to cater for allergies, intolerances, and other dietary requirements, as well as other nutritional and cultural requirements of its patients and the general public.

### Production guidelines

In 2010 the Hospital began working on a project for the prevention and reduction of food waste. This project includes a 3R strategy for waste prevention in its three main phases: **R**educe- optimisation of production at source, **R**euse - donation of surplus food to social organisations, and **R**ecycle - separation of organic waste. In 2018 the budget was set to guarantee the segregation of organic waste in kitchen and coffee shops, and during 2019 internal training was established along with a coloured container system to improved characterisation and segregation of waste.

### Service and catering guidelines

The hospital menu meets the Mediterranean Diet (AMED) requirements, with accreditation provided by the Health Department of Catalunya. This accreditation is based on a varied, healthy diet and the use of fresh, seasonal, and local products. Gastronomic and healthy days are held during the year to promote and share AMED requirements with diners. Reusable water bottles are now offered in canteens resulting in a reduction of disposable plastic water bottles.

Other strategic objectives to increase the level of awareness of environmental sustainability include expanding the provision of recycling areas known as “eco-points” to promote recycling amongst the staff and visitors. The hospital aims to replace 100% of single-use containers with reusable materials in

catering and with biodegradable materials in dining rooms and vending machines - they are currently at 40%.

### Monitoring

The hospital monitors its food strategy regularly using the following indicators:

- Total food waste from patient meals
- Reduction of total food waste
- Prevention of food waste - number of kilos of recovered food
- Prevention of total food waste
- Organic residue sorting efficiency (compared to other types of waste)
- Efficiency in reducing the environmental impact of packaging in coffee shops

### Results and next steps

The hospital has learned that training is a key mechanism to share policies and objectives and establish work guidelines, and that synergies between the hospital and suppliers are essential to achieving its goals. In the future, the hospital would like to achieve the following objectives:

#### Short-term

- Purchase compostable organic bags to improve waste segregation
- Create a “Healthy Corner” space in coffee shops to arrange bulk products
- Create a specific training plan for staff.

#### Long-term:

- Expand environmental requirements in technical specifications
- Introduce organic products in the menu
- Establish criteria for equipment in terms of energy efficiency



Mediterranean food is available to take away in biodegradable containers



A diverse range of food is on offer

## RECOMMENDATIONS AND CONCLUSIONS

Creating and implementing sustainable procurement strategies gives public authorities an excellent opportunity to link the provision of healthcare services with the achievement of the Sustainable Development Goals, the Paris Agreement on climate change, and other multilateral environmental, ethical and social conventions.

Promoting and strengthening capacity for strategic public procurement is key to creating a more innovative, sustainable, inclusive, circular, and competitive economy in Europe. The recent EU Directives on public procurement, together with the public procurement strategy, have been important steps forward - but more ambitious action and policies are needed. The European institutions, national and local authorities should work together to:

- Harmonise sustainable procurement criteria and procedures, and merge their purchasing power to increase demand for sustainable and safer products/services that generate less impact on the environment.
- Expand the availability of Green Public Procurement Criteria and tools that support the incorporation of social, environmental, and health considerations into decision-making.
- Increase the knowledge, awareness, and skills of procurement professionals in the healthcare sector.
- Encourage the creation of transparent and sustainable value chains and procurement practices through increased access to information on products/services, joint audits, and contract follow up.
- Establish an EU-wide target for sustainable public procurement and advance the creation and implementation of Member States' National Action Plans.



## REFERENCES

1. Eurostat. (2018) **Healthcare Expenditure Statistics [Dataset]**. [https://ec.europa.eu/eurostat/statistics-explained/index.php/Healthcare\\_expenditure\\_statistics](https://ec.europa.eu/eurostat/statistics-explained/index.php/Healthcare_expenditure_statistics)
2. European Commission (2019). **Single Market Scoreboard: Public Procurement. Reporting period: 01/2018 – 12/2018**. [ec.europa.eu/internal\\_market/scoreboard/docs/2019/performance\\_per\\_policy\\_area/public\\_procurement\\_en.pdf](https://ec.europa.eu/internal_market/scoreboard/docs/2019/performance_per_policy_area/public_procurement_en.pdf)
3. Dexia, HOPE (2009). **Hospitals in the 27 Member States of the European Union**. [www.hope.be/wp-content/uploads/2015/11/79\\_2009\\_OTHER\\_Hospitals-in-27-Member-States-of-the-European-Union-eng.pdf](http://www.hope.be/wp-content/uploads/2015/11/79_2009_OTHER_Hospitals-in-27-Member-States-of-the-European-Union-eng.pdf)
4. Health Care Without Harm (2019). **Health care's climate footprint: How the health sector contributes to the global climate crisis and opportunities for action (p.22)**. [noharm-europe.org/sites/default/files/documents-files/5961/HealthCaresClimateFootprint\\_092319.pdf](http://noharm-europe.org/sites/default/files/documents-files/5961/HealthCaresClimateFootprint_092319.pdf)
5. UNEP (2012). **Report of the International Conference on Chemicals Management on the work of its third session (pp. 61–71)**. [www.who.int/ipcs/capacity\\_building/chemicals\\_management/saicm\\_iccm3\\_en.pdf?ua=1](http://www.who.int/ipcs/capacity_building/chemicals_management/saicm_iccm3_en.pdf?ua=1)
6. European Commission (2017). **Communication from the Commission Making Public Procurement work in and for Europe**. [eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52017DC0572&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52017DC0572&from=EN)
7. European Commission (2019). **EU green public procurement criteria for food, catering services and vending machines**. [ec.europa.eu/environment/gpp/eu\\_gpp\\_criteria\\_en.htm](https://ec.europa.eu/environment/gpp/eu_gpp_criteria_en.htm)
8. Ministry of Health, Welfare and Sport (2018) **Healthcare in the Netherlands**. [www.government.nl/documents/leaflets/2016/02/09/healthcare-in-the-netherlands](http://www.government.nl/documents/leaflets/2016/02/09/healthcare-in-the-netherlands)
9. The Ministry of Infrastructure and the Environment and the Ministry of Economic Affairs, also on behalf of the Ministry of Foreign Affairs and the Ministry of the Interior and Kingdom Relations (2016). **A Circular Economy in the Netherlands by 2050**. [www.government.nl/documents/policy-notes/2016/09/14/a-circular-economy-in-the-netherlands-by-2050](http://www.government.nl/documents/policy-notes/2016/09/14/a-circular-economy-in-the-netherlands-by-2050)
10. Green Deal (2018). [NL] **Green Deal voor duurzame zorg** [www.greendeals.nl/nieuws/green-deal-voor-duurzame-zorg](http://www.greendeals.nl/nieuws/green-deal-voor-duurzame-zorg)
11. Green Deal. [NL] **Aanmelden Green Deal initiatief**. [www.greendeals.nl/aanpak/aanmelden-green-deal-initiatief](http://www.greendeals.nl/aanpak/aanmelden-green-deal-initiatief) [Last accessed 20/11/2019]
12. Intrakoop (2019). [NL] **Green Deal Duurzame Zorg: een jaar later**. [www.intrakoop.nl/nieuws/details/2019/10/09/green-deal-duurzame-zorg-een-jaar-later](http://www.intrakoop.nl/nieuws/details/2019/10/09/green-deal-duurzame-zorg-een-jaar-later)
13. Green Deal. [NL] **De Green Deals** [www.greendeals.nl/green-deals](http://www.greendeals.nl/green-deals) [Last accessed 20/11/2019]
14. Erbach, G (2019). **Briefings, Hearing of European Commissioners-designate Frans Timmermans, Vice-President: European Green Deal**. [www.europarl.europa.eu/RegData/etudes/BRIE/2019/640170/EPRS\\_BRI\(2019\)640170\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/BRIE/2019/640170/EPRS_BRI(2019)640170_EN.pdf)
15. European Commission (2019). **EU Action on Antimicrobial Resistance**. [ec.europa.eu/health/amr/antimicrobial-resistance\\_en](https://ec.europa.eu/health/amr/antimicrobial-resistance_en)
16. European Commission, **Digital Single Market (2018). Policy: Pre-Commercial Procurement**. [ec.europa.eu/digital-single-market/en/pre-commercial-procurement](https://ec.europa.eu/digital-single-market/en/pre-commercial-procurement) [Last accessed 20/11/2019].
17. Cassini, A. et al. (2019). **Attributable deaths and disability-adjusted life-years caused by infectious with antibiotic-resistant bacteria in the EU and the EEA in 2015: A population-level modelling analysis**. *The Lancet Infectious Diseases*, Volume 19, Issue 1, pp. 56-66. [www.thelancet.com/journals/laninf/article/PIIS1473-3099\(18\)30605-4/fulltext](http://www.thelancet.com/journals/laninf/article/PIIS1473-3099(18)30605-4/fulltext)
18. Métromobilité (2019). [FR] **Découvrir le Plan de Mobilité** [www.metromobilite.fr/pages/pdmDecouvrir.html](http://www.metromobilite.fr/pages/pdmDecouvrir.html)
19. The National Agency for Public Procurement. [www.upphandlingsmyndigheten.se/en](http://www.upphandlingsmyndigheten.se/en) [Last accessed 20/11/2019]
20. Region Västra Götaland. **Nationella Substitutionsgruppen [SE]** [www.vgregion.se/nsg](http://www.vgregion.se/nsg) [Last accessed 20/11/2019]
21. Landspítali (2017) **Environmental Management At Landspítali University Hospital**. [www.landspitali.is/library/Sameiginlegar-skrar/Gagnasafn/Rit-og-skyrslur/Umhverfismal/environmental\\_management\\_at\\_Landspitali\\_summary\\_2012-2017\\_-\\_Copy\\_\(2\).pdf](http://www.landspitali.is/library/Sameiginlegar-skrar/Gagnasafn/Rit-og-skyrslur/Umhverfismal/environmental_management_at_Landspitali_summary_2012-2017_-_Copy_(2).pdf)



HCWH Europe  
Rue de la Pépinière 1,  
1000 Brussels, Belgium

E. europe@hcwh.org  
T. +32 2503 4911

@HCWHEurope HCWHEurope

[www.noharm-europe.org](http://www.noharm-europe.org)

Authors: Arianna Gamba, Procurement Policy and Project Officer,  
Paola Hernández Olivan, Food Policy and Project Officer

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