

# The Contribution of Purchasing to the Sustainability of the Dutch Healthcare Sector

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## ABSTRACT,

*Over the past years, society has started to become more aware of the importance of sustainability. The same shift can be seen in the Dutch healthcare sector. However, the focus on sustainability has mainly started in the beginning of 2023. The purpose of this study aims to discover the implemented changes and developments in the purchasing departments of hospitals regarding sustainability. The study has researched the current procurement practices and its obstacles. A case study has been conducted based on three hospitals throughout the Netherlands through the use of interviews. The results support the literature discussed, which covers multiple theories and topics related to corporate social responsibility. Furthermore, the results are discussed and linked to the Sustainability Theory, which focuses on three main objectives: the economical, social and environmental objective. The study discusses how the purchasing department handles budgetary limits, the methods to reduce resistance to change between colleagues and suppliers, the various contracts signed by hospitals in order to implement and adhere to new changes, and the evaluation and selection process of suppliers and products. Finally, it focuses on the current obstacles the purchasing department faces while attempting to implement more sustainable practices. The results show that the hospitals in the Netherlands are all in the first stages of implementing sustainability into their daily practices. They also show the obstacles faced by these hospitals in order to succeed in the implementation of more sustainable practices. Finally, the results focus on the improvements made so far by hospitals and their purchasers' expectations for the future.*

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## Keywords

Healthcare sector, sustainable practices, purchasing developments, sustainability theory, corporate social responsibility, sustainability efforts

## 1. INTRODUCTION: DEVELOPMENTS OF SUSTAINABILITY IN THE DUTCH HEALTHCARE SECTOR

Technological innovations have spurred economic growth throughout the world with the result of healthcare systems expansion and an unprecedented demand for medical supplies and equipment (Singh et al. 2022, p. 2). At the same time, mismanagement and unsafe disposal of medical waste has become a common phenomenon in many countries. Statistics from HCWH (Healthcare Without Harm) place the healthcare sector on the fifth position in the leading emitters of greenhouse gases (Singh et al. 2022, p.2). According to Sepetis et al. (2022, p. 1) the global carbon footprint of the healthcare sector is around 4.4 percent of the greenhouse gas emissions in the world. Predictions show that it will rise three-fold in 2050.

One of the reasons for the increase in waste from the healthcare industry is poor management resulting in waste that expose to patients, handlers of waste and healthcare workers to injuries, toxic effects, and infection (Nwachukwu et al. 2013, n.p). Also, lack of effective waste management strategies has resulted in environmental pollution. Thus, the industry is a major contributor to climate change and other consequences of environmental degradation. Sepetis et al (2022, p. 1) explains that climate change is considered one of the most significant threats since it puts the well-being and lives of the largest part of the world population at risk. According to a Lancet study, the death of one in every six people was caused by pollution (Sepetis et al. 2022, p. 2).

The situation has led to dedicated efforts to provide mitigations for the risks brought about by pollution resulting from human activities. Among them is the creation of Sustainable Development Goals published by the United Nations in 2015. Still, the healthcare sector has been recognized as an essential player in the preservation and attainment of social well-being and health. Thus, there is a need for the necessary models of management, operational procedures, reformations of health policy, and organizational reforms in the achievement of sustainable healthcare. Along the same lines, healthcare providers, healthcare systems, and hospitals should remodel their strategy in regard to sustainable development. Some of the recommended approaches are management of risks, reduction of costs of operation, and improved energy efficiency. At the centre of sustainable development is the creation and implementation of strategies for sustainable purchasing. In the Dutch healthcare sector, like in many countries in the world, biomedical waste management is among the top priorities. Statistics show that in 2020, the Dutch market of biomedical waste management had hit the \$743 million mark (GlobalData). Simultaneously, the country produced 2.71 kg of biomedical waste per bed every day in 2020 (Goswami et al. 2021, p. 6). Thus, there is a need to devise methods of mitigating the waste production and management situation from the country's healthcare system.

While there are a number of ways of achieving the goal, the study in this paper focuses on the application of purchasing in initiating and maintaining sustainability in the healthcare system in The Netherlands. The proposition is that procurement has a significant role to play in ensuring sustainability in the Dutch healthcare sector.

The objective of this research is to assess the contributions of purchasing to sustainability in the healthcare sector in The Netherlands. The study aims to focus on three areas of research. They are the influence of purchasing in determining sustainability in the production and consumption of medical

provisions and equipment in the Netherlands. Another area is the contribution of purchasing towards environmental sustainability goals designed for the health sector in the Netherlands. Lastly, the study's objectives include the determination of the role that purchasing plays in reduction of greenhouse gas emissions by the Dutch health sector. The research is based on previous findings showing that there is a significant rise in biomedical waste in countries throughout the world. As a result, the well-being and health of communities are put at risk. The situation is exacerbated by the risks to the environment posed by poor management of biomedical waste. The projected rise in healthcare waste calls for measures to reduce the possibility of waste early in the procurement stage. According to HCWH, purchasing is one of the major entry points for the promotion of sustainable patterns of production and consumption. Also, procurement has a major influence on the environmental effects of the operations in the health sector. Further, purchasing is a key tool in the reduction of greenhouse gas emissions produced by the health sector.

Resulting from the goals of the study, the following research questions have been formulated:

1. *What purchasing practices have been put in place with the aim of positively influencing production and consumption of medical provisions and equipment in the Netherlands?*
2. *In what ways does purchasing contribute toward the achievement of environmental sustainability goals set for the healthcare industry in the Netherlands?*
3. *How does purchasing play the role of reduction of greenhouse gas emissions in the Dutch healthcare sector?*

The research questions will be answered through the data obtained by interviewing purchasers at Hospitals A, B and C, all located throughout the Netherlands. Aside from this, information will also be acquired through the use of literature review on the topic of sustainable practices in the Dutch healthcare sector and the current methods used in order to increase the importance of sustainability. The main focus of this research is going to be on hospitals in The Netherlands. The rough planning and time frame of this research is shown in appendix A.

The study will attempt to make a marked contribution to the purchasing and procurement practices, specifically in the healthcare industry. According to Hilderink et al. (2020, p. 7) dementia is one of the leading causes of an increased disease burden in The Netherlands. The prevalence of cardiovascular ailments is also at a high level. It is worth pointing out that the diseases are mostly likely to occur among the elderly population. Hilderink et al. (2020, p.2) reveals that multimorbidity in Netherlands is a significant matter, especially in a population that is ageing. Along the same line, the heightened need to provide healthcare services to a rapidly increasing population of the ageing individuals may mean more healthcare costs that go into medical supplies. Further, there may be increased waste and unnecessary costs related to patient care. There is, thus, a need to consider the role that purchasing practices play in the level of sustainability in the Dutch healthcare system.

## 2. THEORETICAL FRAMEWORK

This chapter will describe multiple theories that lie behind the research questions, most of which are relevant to the research in one way or another. However, the theory this paper will focus on the most while analysing its own results is the

sustainability theory. Its relevance to the topic is described and illustrated in subsection 2.10.2 and is linked to the acquired data in chapter five.

## 2.1 The Different Roles of Strategic Purchasing in the Healthcare Industry

Strategic purchasing in the healthcare industry has been a dominant policy concept in the world for decades (Greer et al. 2020, p. 976). Some of the advanced benefits of strategic purchasing to the healthcare industry are improved health of the population, accountability, efficiency, patient satisfaction, and quality (Greer et al. 2020, p. 975). Purchasing is a healthcare financing function characterized by channelling public funds to healthcare service providers through third-party entities serving as the population's agent (Kachapila et al., 2023 p. 97). The definition of strategic purchasing refers to a procurement approach characterized by a selection of a mix of providers aimed at maximizing society's objectives. It also means evidence-based and active engagement in identifying the service volume and mix (Greer et al. 2020, p. 976). Also, it has been defined as a practice that incorporates specifications, requirements, and criteria that favour environmental protection that is compatible with it. It also enables the improvement of services and products and seeks efficiency of resources (Lindstrom & Coronado-Garcia 2020, p. 7).

One of the most significant objectives of strategic purchasing is enabling of social progress and cost optimization. When they adopt practices, strategies, and procurement policies, governments, health systems, and international stakeholders can serve as drivers toward green economies that are also inclusive (HCWH). While previous scholarly literature has endeavoured to provide findings about the role of procurement in developing countries, few have set out to find about the situation in the developed world.

The Dutch healthcare system serves an embodiment of the current strategic purchasing practices in high-income countries and its relationship with sustainability. The European Commission (2021, p. 22) reveal that the Netherlands dedicates a significant amount of funds on disease prevention and long-term care. At the same time, the country has been recognized as one of the nations spending a low amount of financial funding directed to medical devices and pharmaceuticals. One of the key factors attributed to the situation is policies centred on price control (European Commission 2021, p. 21). Still, there is a need to determine the role that purchasing plays in lowering healthcare costs while significantly providing for sustainability within the healthcare sector in the Netherlands.

Rahmani et al. (2021, p. 2) argue that the conventional approach to medical devices procurement is driven by the price factor, whether the transactions occur in developing or developed countries. According to Rahmani et al. (2021, p. 2), however, considering the price alone in medical devices, procurement leaves out patient outcome, which contributes to an insufficient determination of the total cost of purchasing the medical equipment. Therefore, a focus centred on the price alone leads to a neglect of the part that various stakeholders play in overcoming challenges encountered by the healthcare system. At the same time, there is a need to consider such factors as medical equipment procurement within or without the country. Rahmani et al (2021, p. 2) argue that the procurement limitations are occasioned by international procurement procedures. They are witnessed through procurement disqualification, lack of proper procurer organization, conflicting incentives, and insufficient information systems.

While the purchasing departments in the healthcare institutions in the Netherlands have made considerations of strategic procurement, there is still an increase in expenditures associated with procurement. There was a 50 percent increase of the cost of running hospitals in the country, with a significant part of healthcare expenditure attributed to medication and treatment costs (Salm 2022, n.p). Worthy of note is that the Dutch healthcare system has been characterized by the a mix of government intervention and input from the private sector. Kuipers et al. (2022, p.3) note that the mix made up by the government and the private stakeholders have resulted in health inequalities within the Dutch communities. While private insurers assured the wealthy of access to medical services, the government stepped in on behalf of the low-income households in the form of social insurance.

## 2.2 Corporate Social Responsibility: an Increasing Need in Healthcare

Corporate social responsibility (CSR) has attracted much attention recently across many sectors, and the healthcare industry is no different. The buying function becomes essential in maintaining the sustainability and ethical standards of the Dutch healthcare sector as healthcare organizations work to address social and environmental concerns (Steenmeijer et al., 2022, P. 1). This article examines how buying contributes to the Netherlands' healthcare sector's sustainability while emphasizing important tactics and advantages.

### 2.2.1 Promoting Ethical and Sustainable Procurement

The environmental, social, and economic aspects of sustainability are directly impacted by purchasing choices. Healthcare firms may strengthen their commitment to CSR by implementing ethical and sustainable buying strategies (Holterman et al., 2021, P. 28). This entails choosing suppliers that emphasize sustainable methods and considering the whole lifetime of goods and services, from the extraction of raw materials through disposal. Healthcare businesses may lessen their environmental impact and promote a healthier environment by purchasing environmentally friendly items and generating less trash. Supplier Diversity and Local Sourcing: Purchasing is essential to fostering supplier diversity and local sourcing in the healthcare industry. Healthcare institutions may promote diversity and economic development by working with diverse suppliers, such as minority- and women-owned enterprises. Supporting local vendors helps lessen the carbon footprint associated with long-distance transportation and boosts the local economy. Additionally, collaborating more closely and facilitating the customization of goods and services to address particular healthcare requirements are made possible by working with local vendors

### 2.2.2 Promoting Fair and Ethical Labour Methods in the Healthcare Industry

Purchasing methods help to advance fair and ethical labour practices in the healthcare industry. Healthcare firms may guarantee the welfare of employees across the supply chain by choosing suppliers that uphold high labour standards, such as offering safe working conditions, fair compensation, and employee benefits. Avoiding suppliers that engage in child labour, slave labour, or other labour exploitation is another aspect of responsible buying. Healthcare businesses show their commitment to social responsibility and make a positive contribution to society by placing a high priority on ethical labour practices (Georghiou et al., 2014, P. 9).

## 2.3 Cost-Savings and Efficiency

While emphasizing sustainability and CSR may seem generous, it also offers healthcare firms real advantages. Sustainable buying methods often result in cost reductions and increased productivity. Healthcare firms may minimize operating costs and improve resource allocation by streamlining supply chains, cutting waste, and deploying energy-efficient solutions.

Additionally, sustainable methods may draw in investors and customers who care about the environment, enhancing your reputation and giving you a competitive edge.

### 2.3.1 Collaboration and Expertise Sharing

Purchasing may help healthcare companies collaborate and share their expertise. Organizations may work together to solve sustainability concerns, exchange best practices, and foster innovation by establishing partnerships and networks (Georghiou et al., 2014, P. 9). Through resource sharing, bulk purchases, and combined supplier agreements, collaborative buying efforts provide buyers with more negotiating power and better price (Georghiou et al., 2014, P. 9). Platforms for sharing knowledge also enable disseminating knowledge on environmentally friendly goods, innovations, and methods, encouraging the industry to improve. Corporate social responsibility is becoming increasingly significant in the healthcare industry, and buying is crucial to developing sustainability and ethical behaviour. Healthcare institutions in the Netherlands may support environmental preservation, social inclusion, and economic prosperity by implementing ethical and sustainable buying practices. The healthcare industry may simultaneously improve its sustainability performance and realize substantial advantages via supplier diversification, local sourcing, ethical labour practices, and cost-effective operations. The industry may promote continual development and group progress toward a more sustainable future in healthcare by embracing cooperation and information exchange.

## 2.4 Evaluation of Suppliers' Sustainability Efforts

The field of study known as "procurement theory" delves into the theories and methods behind purchasing materials and services. Procurement departments are implementing procurement theory through their use of the Request for Proposals (RFPs) process. RFPs allow hospitals to specify their needs and evaluate prospective vendors. Healthcare facilities can better achieve their sustainability objectives by working with suppliers who can demonstrate their commitment to and expertise in providing eco-friendly goods and services through a well-defined procurement process (Tiwari & Thakur, 2021). Strategic supplier selection is emphasized in procurement theory as a means to help achieve an organization's goals. The Erasmus Medical Centre in Rotterdam includes green practices in its proposal requests. Questions about energy efficiency, recyclable materials, and eco-friendly production methods are among those asked of potential medical device vendors (Selleger et al., 2016, p. 1). With this method, the hospital can choose providers that share their commitment to environmental responsibility and help spread the word about environmentally friendly medical supplies.

To ensure that suppliers align with the hospital's sustainability objectives, the purchasing department reviews suppliers' sustainability efforts and practices. They create a procedure for evaluating suppliers that heavily weighs sustainability standards. Data collecting and reporting systems are set up to collect pertinent information from various sources, including supplier performance reports, statistics on energy use, and

waste management records. In order to evaluate their sustainability performance to industry standards or best practices, hospitals may also participate in benchmarking efforts (Trout et al., 201, P. 806). Regular sustainability reports that shed light on the effects of sustainable procurement practices are produced using analysis of the gathered data and indicators. To promote ongoing development and assist with decision-making, these reports are sent to internal stakeholders, including management, sustainability committees, and pertinent departments. By including sustainability criteria in the procurement process, assessing suppliers for their sustainability practices, and gauging the effect of sustainable procurement practices, the buying division at hospitals in the Netherlands prioritizes sustainability. Hospitals help ensure the general sustainability of the Dutch healthcare system by implementing these practices (Georghiou et al., 2014, P. 9). Making sustainability a top priority when making purchases guarantees that the products and services comply with social and environmental norms, with beneficial effects including less resource consumption, less waste production, and more social responsibility. In order to promote sustainability across the supply chain, relationships with like-minded organizations are developed as a result of the examination of suppliers' sustainability practices. Hospitals may evaluate their efficacy, pinpoint problem areas, and promote a culture of continuous improvement in sustainability performance by measuring and monitoring sustainable procurement practices.

Overall, the sustainability commitment of the buying department is crucial to achieving the sustainability objectives of the Dutch healthcare industry. Sustainable procurement practices strongly support the Dutch healthcare sector's sustainability.

## 2.5 Significant Challenges for the Purchasing Department

This section will examine the metrics used for evaluation, the level of supplier engagement in producing sustainable products, the significant challenges faced by the purchasing department in implementing sustainable procurement practices, and how hospitals measure and track the impact of their sustainable procurement practices (Holterman et al., 2021, P. 28). Hospitals in the Dutch healthcare system are aware of the significance of gauging and monitoring the effects of their sustainable buying methods. They use various measures to evaluate their effectiveness and advancement toward sustainability objectives. By monitoring indicators including energy use, water use, waste output, and greenhouse gas emissions, hospitals may assess their environmental effect (Steenmeijer et al., 2022, P. 1). These metrics aid in their evaluation of the efficiency of resource-saving and environmental harm-reduction strategies used in sustainable procurement practices. Hospitals undertake supplier evaluations to gauge how well their suppliers are doing regarding sustainability. These evaluations consider social responsibility, labour practices, ethical sourcing, and environmental certifications. The findings assist hospitals in determining how closely their suppliers adhere to sustainability objectives.

### 2.5.1 Cost-Savings

Hospitals keep track of the money they save thanks to environmentally friendly purchasing methods (Georghiou et al., 2014, P. 12). Hospitals may evaluate the financial advantages of their sustainability initiatives by comparing the prices of sustainable goods and services to those of conventional alternatives. Energy-efficient equipment, reduced

waste, and prolonged product lifecycles may all result in cost savings.

Compared to traditional alternatives, sustainable goods and services could have a greater initial cost (Meehan et al., 2017, P. 227). Despite long-term cost reductions, hospitals might struggle to participate in sustainable procurement practices due to budgetary restraints and financial concerns.

### 2.5.2 *Resistance to Change*

Putting sustainable procurement practices into place often calls for a change in how people think and behave inside organizations. Adoption of sustainability may be hampered by stakeholders' and staff members' resistance to change. Healthcare supply chains may be complicated, comprising a number of suppliers and intermediaries (Zaidi et al., 2019). Collaboration and openness are necessary for ensuring sustainability across the supply chain, yet these goals might be difficult to reach. In conclusion, key elements in the contribution of buying to the sustainability of the Dutch healthcare sector are the measurement and monitoring of sustainable procurement practices, supplier participation in generating sustainable goods, and overcoming obstacles.

### 2.5.3 *Measurement of Impact*

Hospitals in the Dutch healthcare system use a variety of indicators to gauge their influence, assess the sustainability of their suppliers, and monitor cost savings and patient outcomes. Suppliers actively endeavour to provide sustainable goods, including anything from packaging materials to medical gadgets and eco-friendly cleaning products (Georghiou et al., 2014, P. 7). Despite the advances, obstacles remain in the buying department adopting sustainable procurement practices. These obstacles include restricted supplier selections, economic concerns, reluctance to change, and complicated supply chains. To overcome these obstacles and improve the sustainability performance of the Dutch healthcare sector via buying practices, teamwork, stakeholder involvement, and strategic planning are required. When buying different items, purchasing departments in the Dutch healthcare industry consider sustainability factors.

### 2.5.4 *Metrics for Evaluation*

Metrics, including patient satisfaction, infection rates, and patient safety, are used to assess the influence of sustainable procurement on healthcare outcomes. For instance, hospitals may increase patient safety and lower the chance of problems by purchasing environmentally friendly medical equipment and technology (Subbe et al., 2023). Hospitals must actively engage with suppliers in order to provide sustainable products if they are to meet their procurement goals. The Dutch healthcare industry has several suppliers that actively endeavour to provide sustainable goods because they understand how important sustainability is.

### 2.5.5 *Sustainable Supplies*

#### 2.5.5.1 *Sustainable Medical Equipment*

Suppliers increasingly supply medical equipment that is long-lasting, energy-efficient, and constructed of recyclable or biodegradable materials (Lee & Lee, 2022). These are just a few examples of sustainable goods and projects. These tools preserve the quality of patient treatment while reducing waste output and environmental impact.

#### 2.5.5.2 *Environmentally Friendly Cleaning Supplies*

Vendors provide hospitals with environmentally friendly cleaning supplies that are less hazardous to people's health and

the environment (Holterman et al., 2021, P. 23). These goods often include fewer chemicals and are biodegradable, which helps to achieve sustainability objectives and enhance indoor air quality.

#### 2.5.5.3 *Sustainable Packaging*

Suppliers are implementing sustainable packaging practices by employing recyclable or biodegradable materials. For instance, packaging for medical supplies may be made from recycled or bio-based materials to minimize its impact on the environment (Alami et al., 2017, P. 56). Hospitals confront major obstacles in adopting sustainable procurement practices despite progress in this area.

### 2.5.6 *Limited Supplier Options*

Hospitals may have trouble locating vendors that provide a broad choice of environmentally friendly goods and services. To learn about clinical departments' unique needs and demands concerning sustainable goods, the purchasing department speaks with them (Georghiou et al., 2014, P. 4). They work together to find eco-friendly substitutes for medical equipment, gadgets, and supplies. Understanding clinical operations, interacting with healthcare experts, and considering the environmental effect of various product possibilities are all part of this partnership. Clinical personnel are also given instruction and training on sustainable buying methods and the justification for choosing sustainable items by the purchasing department.

### 2.5.7 *Collaborations*

Aside from this, collaborating with the administration and finance departments is crucial to balance sustainability aims with financial concerns. When analysing the life cycle costs of sustainable goods and determining their cost-effectiveness, the purchasing department collaborates with the finance department (Alami et al., 2017, P. 55). They work together to establish business cases for sustainable procurement projects, find financing sources, and assess return on investment. Many hospitals have task forces or committees that are specifically focused on sustainability. The purchasing division actively engages in these committees to share its knowledge of sustainable purchasing practices and work with other stakeholders on sustainability-related projects (Georghiou et al., 2014, P. 4). They collaborate to create sustainability strategy and action plans by exchanging knowledge and best practices. The purchasing division works closely with other divisions to incorporate sustainable practices throughout the hospital, serving as a facilitator and collaborator. They may jointly drive

## 2.6 **The Diffusion of Innovations Theory**

The Diffusion of Innovations theory is demonstrated well by the adoption of electronic health records (EHRs) in the Dutch healthcare sector. Healthcare institutions have mostly implemented EHR systems, with the Netherlands leading the way in their adoption. EHRs were first implemented by a limited group of cutting-edge hospitals and clinics that saw their potential to improve patient care and productivity. The benefits gradually became apparent, which led to the industry-wide adoption of EHRs. As a result, the majority of healthcare organizations now manage patient information using digital records (Velter et al., 2020). One Dutch hospital using Diffusion of Innovation Theory is the Maastricht University Medical Centre+ (MUMC+). The MUMC+ Telemedicine Program uses digital communication techniques to provide patients with remote access to medical professionals for consultation and follow-up. With the help of cutting-edge technology, MUMC+ plans to provide medical care to underserved communities

(Ekkel, 2010). The medical facility supports telemedicine and educates patients and medical staff on its advantages and applications to increase its use and facilitate its spread.

## 2.7 The Social Learning Theory

The Social Learning Theory examines how people pick up new skills and attitudes through observing those around them and the impact that social interactions have on shaping behaviour. It posits that individuals pick up social norms and behaviours from the groups they find themselves in. This approach is used in the Dutch healthcare system to encourage healthy habits and improve communication among specialists (Tiwari & Thakur, 2021). One institution in Nijmegen where the Social Learning Theory has been successfully implemented is Radboud University Medical Centre (Radboud UMC). To better clinical practice and encourage professional development, Radboud UMC has created a peer coaching program in which seasoned healthcare professionals advise and guide their colleagues. This program allows healthcare workers to network with one another, observe one another at work, and benefit from one another's experiences and insights. Using this approach to teaching, healthcare providers and their teams may better serve their patients.

## 2.8 The Humanistic Theory

The Dutch healthcare system also heavily employs humanistic theory, which places a focus on getting to know each patient's story and values and making their happiness the number one priority. This idea is frequently employed to enhance patient care and promote a more integrative strategy. Humanistic Medicine has a role model at the Sint Maartenskliniek in Nijmegen, the Netherlands. The Sint Maartenskliniek is well-known as a patient-focused orthopaedic and rheumatic facility. Personalised care for each patient is a priority at this medical facility. According to (Ertz & Patrick, 2020). The medical staff of Sint Maartenskliniek places a premium on involving patients in treatment decisions, giving transparent and thorough information, and making patients feel heard and valued. Patients are encouraged to play an active role in their care, with their preferences and values being used as the major criteria for making decisions at the medical institution.

## 2.9 Principle of Stakeholders

Last but not least, the principle of stakeholders is being utilised through the participation of many parties in healthcare decision-making in the Netherlands. Healthcare facilities, for example, consider the needs of patients, doctors, insurance companies, and governments when deciding on sustainability initiatives. They work together to satisfy the needs of these constituents through the application of sustainable practices. Many different people and organisations in the healthcare system work together to determine what they need and want from sustainability efforts.

## 2.10 Advancing Sustainable Procurement in Healthcare: Strategies, Practices and Impact

Sustainable buying methods have received more attention in recent years from many departments. The important factors and strategies buying departments use to prioritise sustainable goods and advance sustainability across their procurement processes are highlighted in this literature review.

Prioritising energy-efficient items with little environmental effect during manufacture and disposal is a major area of attention for buying departments. Meehan et al. (2017) stress the significance of choosing goods built for durability and long-term usage, minimising the total environmental imprint. These factors guarantee that the acquired products adhere to

sustainability standards. Sustainable purchasing practices in the context of medications and supplies include selecting goods with environmentally friendly packaging, reducing waste production, and considering ethical sourcing and fair trade. This comprehensive approach tackles the environmental effect of the whole supply chain and the goods themselves (Meehan et al., 2017).

Acquiring environmentally friendly cleaning products with a minimum negative impact on the quality of the air and water is another priority for hospitals. These cleaning solutions should also promote safe, long-lasting sanitation practices and contain harmful substances. Hospitals actively support a healthier and more sustainable environment by choosing such items (Meehan et al., 2017).

Additionally, by buying food and catering services, purchasing departments in many organisations want to lower transportation carbon emissions while promoting regional economies and biodiversity. This entails a desire for sustainably, organically, and locally obtained foods. Such actions promote regional development in addition to having favourable environmental effects (Meehan et al., 2017). Sustainable procurement strategies call for using energy- and environmentally-conscious materials for infrastructure and building projects.

Building materials' lifespan impact is also considered to guarantee long-term sustainability. Organisations may reduce their ecological footprint by including these elements in the procurement process (Meehan et al., 2017).

Procurement departments regularly work with suppliers and vendors to encourage sustainable practices. Noort et al. (2020) stress the need for continuing conversations and outlining precise sustainability objectives and standards. Such partnerships help to promote a more sustainable supply chain by encouraging suppliers to use green technology and provide sustainable products. Sustainable buying methods are receiving a lot of attention from several departments. The literature study demonstrates the importance placed on waste reduction, ethical sourcing, energy-efficient goods, ecologically friendly packaging, and lifespan effects of materials. Additionally, working with suppliers is essential for advancing sustainability and accelerating the adoption of green technology. Organisations work to attain long-term sustainability objectives and promote a healthy world by putting these practices into practice.

Sustainability activities lessen environmental effects and advance a sustainability culture within the Dutch healthcare sector by cooperating with facilities management, waste management, clinical departments, administration, and finance. Global awareness of the healthcare industry's environmental impact and the need for more sustainable practices has increased the importance of this subject, with the promotion of sustainability within healthcare organisations being greatly aided by purchasing. In the case of the hospitals embracing the "Green Deal Healthcare" platform, collective action theory is applicable. According to this notion, when many groups work together to meet shared objectives or problems, they can produce more outstanding results than they might independently. It specifies sustainability-related goals and obligations, such as attaining carbon neutrality. According to research, hospitals participating in the Green Deal Healthcare have made great strides toward implementing sustainability activities, such as waste reduction plans, energy efficiency projects, and sustainable procurement techniques (Pichler et al., 2019). The St. Antonius Hospital in Nieuwegein, which signed the Green Deal in 2016, is one instance of the influence of the healthcare sector. The hospital

developed several sustainable practices, including LED lighting, improved energy management systems, and waste reduction programs. In just three years, they reduced their CO2 emissions by 39%.

The principle behind performance measurement and benchmarking revolves around doing just that: measuring and comparing results against a set of standards. The application of the Environmental Thermometer for Healthcare illustrates this hypothesis. The thermometer provides a set of measurements and indicators for gauging the sustainability initiatives of hospitals. Hospitals can evaluate their performance, pinpoint problem areas, and gauge how they stack up against the competition by employing set standards (Tasdemir et al., 2020). According to this theory, it is essential to use objective metrics and constant monitoring to motivate sustained performance enhancement. Research shows that hospitals with higher certification levels, such as the silver certificate, are more dedicated to environmentally responsible purchasing and management. Hospitals can lessen their adverse effects on the environment and boost their efficiency with the help of certified items. For instance, the Environmental Thermometer for Healthcare awarded silver status to the Rijnstate Hospital in Arnhem (Mengensatzproduktion 2017). The hospital was able to accomplish this through the use of sustainable procurement policies, which gave preference to eco-friendly goods and services. Efficient management of resources was another area of emphasis, intending to decrease energy use and trash production.

Furthermore, hospital sustainability programmes rely heavily on the work of sustainability working groups of representatives from several departments (Velter et al., 2020). Establishing "green teams" or working groups in healthcare facilities is an example of applying organizational change theory, which studies and manages the procedures involved in transforming businesses like the Amsterdam UMC's "Duurzaamheid in UMCs" (Sustainability in UMCs) group, which focuses on environmental responsibility. Group members work together on sustainable procurement policies, employee education, and strategy implementation. Sustainability working groups have been shown to improve environmental performance and promote a culture of sustainability inside healthcare institutions, according to research.

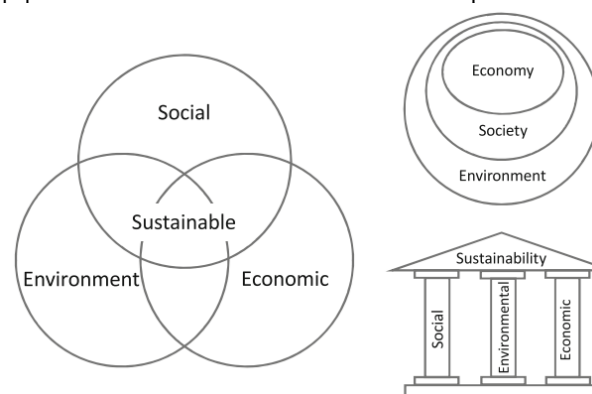
### 2.10.1 Systems Theory

The Dutch healthcare industry's approach to sustainable healthcare is informed by systems theory. For instance, Dutch healthcare institutions prioritize implementing a circular economy model through decreasing waste and fostering resource efficiency. They put concepts into practice, including recycling medical equipment, using eco-friendly packaging, and investigating cutting-edge waste management techniques. This systemic viewpoint makes sure that sustainability programs take into account a product's or service's whole lifecycle, reducing the environmental impact (Ertz & Patrick, 2020). For instance, the Catharina Hospital in Eindhoven has a circular team that implements and promotes circularity throughout the hospital (Mengensatzproduktion 2017). A closed-loop system for medical textiles has been created at the hospital, whereby old textiles are collected, sorted, and recycled into something new. This method maximizes efficiency while decreasing waste and the demand for raw resources.

### 2.10.2 Sustainability Theory

According to Akerboom et al. (2020), the interplay of economic, social, and environmental issues, as well as the decision-making procedures that aim to produce sustainable outcomes, are examined by sustainability theory. When choosing suppliers,

businesses must balance environmental goals and economic factors. Instead of concentrating only on short-term financial rewards, the theory emphasises the significance of considering the long-term environmental impact and externalities of purchase decisions. According to the available evidence, these difficulties can be surmounted, and a more compelling business case for sustainable procurement can be developed by taking a longer view and factoring in the potential savings and health advantages associated with sustainability activities (Walraven et al., 2021). The Reinier de Graaf Hospital in Delft, Netherlands, overcame this obstacle using eco-friendly purchasing methods (Batelaan, 2013). They performed a lifetime cost study to determine which products and services would provide the best return on investment. As a result, the hospital was able to rationalise its sustainability expenditures based on its overall cost-effectiveness and to bring them into line with its financial limitations. The sustainability theory is accurately represented in the figure one, from a paper written by Purvis et al. (2018). It describes the three pillars of sustainability: economic, environmental and social. The connection between these three influences and this paper's own research will become evident in chapter five.



**Figure 1: The three pillars of sustainability theory by Purvis et al., (2018)**

### 2.10.3 Sustainability Scorecards

Healthcare firms are increasingly using sustainability criteria to assess their suppliers. Scorecards evaluate providers' promises and monitor their progress over time. The review highlights the value of requiring suppliers to take responsibility for sustainability initiatives and provides examples of how scorecards may be used to track that accountability. Sustainability scorecards are used by the University Medical Center Groningen (UMCG) to evaluate vendors (Kalendralis, 2019). When choosing which vendors to work with, they look at things like a company's carbon footprint, environmental certifications, and social responsibility. UMCG uses this evaluation approach to find suppliers with robust sustainability practices to ensure its supply chain aligns with its sustainability goals.

### 2.10.4 Diffusion of Innovations Theory

The Diffusion of Innovations theory is demonstrated well by adopting electronic health records (EHRs) in the Dutch healthcare sector. Healthcare institutions have primarily implemented EHR systems, with the Netherlands leading the way in their adoption. EHRs were first implemented by a limited group of cutting-edge hospitals and clinics that saw their potential to improve patient care and productivity. The benefits gradually became apparent, which led to the industry-wide adoption of EHRs. As a result, most healthcare organizations now manage patient information using digital records (Tiwari & Thakur, 2021). The involvement of multiple stakeholders in decision-making processes in the Dutch healthcare sector is

another example of how the theory of stakeholders is applied. When adopting sustainability projects, healthcare institutions, for instance, consider the interests of patients, healthcare professionals, insurance companies, and governmental entities. They collaborate to develop sustainable methods that meet the demands of these stakeholders. Sustainability efforts are tailored to meet the needs and values of many healthcare stakeholders through a collaborative process.

### 3. METHODOLOGY: CASE STUDY

#### 3.1 Research Design: Case Study at Dutch Hospitals and the Sustainability Practices of their Purchasing Departments

The research design of the paper is in accordance with the qualitative research approach called case study research. This approach is chosen due to its relevance to this particular research. According to Yin (2009), a case study can be described as a thorough investigation of a current phenomenon within its real-life setting, particularly when it is challenging to distinguish between the phenomenon and its surrounding context. Yin further explains that case studies are particularly suitable when researchers want to understand the "how" or "why" aspects of a situation and have limited control over the events being studied. Since the data collection of this research consists of open-ended interview questions with no influence on what the interviewee is going to say or do, it is a relevant method.

Yin outlines six key components of research design that are particularly relevant for case study research, each of which will be shortly discussed. First of all, Yin refers to research questions, which serve as the foundation for the case study and should be broken down into more specific sub-questions that can guide the investigation. Propositions are the second component, which serve as hypotheses that guide the research and provide a basis for testing the research questions. The third component are the units of analysis, which entail the entities that the researcher will investigate. Furthermore, the logic linking data to propositions is considered the fourth component. It outlines the process by which data will be collected, analysed and interpreted in order to test the propositions. The fifth component consists of the criteria for interpreting findings. In order to draw conclusions from the data, researchers need to have clear criteria for interpretation. The final component entails the techniques for managing and analysing data. In order for this to succeed, the researcher should have a systematic approach for managing and analysing the data.

In order to acquire the necessary data for studying the research questions, the use of a literature review has been applied. Furthermore, detailed information about the sustainability practices of the purchasing departments has been acquired through the use of a case study at hospitals A, B and C, all located throughout the Netherlands. In order to get more detailed information, a qualitative approach has been taken through the use of interviews. The research questions have been used as a base for the interview questions. Given the limited size of the sample, the findings have a restricted scope for generalization. With the use of quantitative research, the sample size would have been larger, however, a quantitative approach does not explain why people think, feel, or act in particular ways. In other words, quantitative research emphasizes patterns across data sets or study groups, but not the motives underlying observed behaviours (Siripipattanakul et al., 2023). Finally, the interviewed hospitals were researched

beforehand to make sure that they are not part of the same purchasing groups, in order to avoid skewed results.

#### 3.2 Interviews at Hospitals A, B and C

The interviews conducted for this research at the three hospitals are focused on the purchasing department. Therefore, the exact job titles of the interviewees are two purchasers and one head of purchasing. Due to anonymity regulations, all interviewees will be referred to as purchasers.

In order to assure a diversity in answers, the interviewees all work at different hospitals throughout the Netherlands. Furthermore, research into the hospitals, prior to requesting an interview, has concluded that the selected hospitals are all a part of different hospital groups. This is done under the assumption that hospitals from the same hospital group have more similarities in their practices than hospitals from different groups. Therefore, due to the limited time frame for the research and the difficulty of getting interviews, the decision has been made to interview hospitals from as many different groups as possible. It is important to note that one interviewee has been conducting their own research in this field. Therefore, they were in the position to share some valuable insights regarding the progress in sustainability practices of other hospitals.

#### 3.3 Interview Structure

For the interviews, one questionnaire was created based on the research questions. The main focus of the interviews was sustainability and how this is taken into account in the purchasing process. The questionnaire consists of twelve open-ended questions. Prior to starting the interview, the interviewees have been asked for permission to record the interview, as this facilitates the analysis of the results. The recording at hospital A has been done through mobile phone and the recordings of hospital B and C have been done through laptop. Aside from that, the interviews for hospital A and B have been done through physical meetings, whereas the interview for hospital C has been done through Microsoft Teams. Before starting the interview, each participant has been reminded of the anonymity of the interview and have given a small introduction of themselves.

The questionnaire consists of questions regarding the following main aspects: the purchaser's actions for sustainable practices, the importance of sustainability within the purchasing department, sustainable supplier evaluation, measurement of sustainability and the impacts of their changed practices, actions taken by suppliers, possible challenges for the purchasing department regarding sustainability, examples of sustainable products from their firm, and the purchaser's view on possible impacts made from their department. These questions have been asked in the same order and with the same formulation at each interview in order to facilitate the analysis. Sometimes additional questions have been asked during the interview in order to clarify certain information or to obtain a more in-depth answer.

#### 3.4 Data Analysis

The first step to take in order to analyse the data obtained through the interviews is transcribing the interviews. This will be done manually by listening to the recording and writing it in Microsoft Word. The manual approach will take longer than doing it through an automated programme, but considering the low quality of some of the recordings, it will prevent transcription mistakes. Furthermore, the interviews have been held in Dutch, therefore they will need to be translated to English in order to be analysed. For the coding process, the



programme ATLAS.TI will be used, since it uses a combination of inductive and deductive coding. Additionally, line by line open coding will be used in order to highlight comparisons between the interviews which have not been mentioned in the theoretical framework chapter. Finally, the results will be categorized, displayed and discussed in the following chapters.

#### 4. ANALYSIS AND RESULTS

This chapter will discuss the data found in the conducted interviews. It will start by explaining the purchasing process applied in Dutch hospitals and the development in the importance of sustainability. Following this, the measurement tools for impact and supplier evaluation will be discussed. Furthermore, the shortcomings and challenges will be talked about. The final section includes a comparison of the interview data to the literature review.

Both the Dutch and the English versions of the interviews can be found in the appendix (exhibit B-H). Hospital A has also provided additional information on sustainable products via e-mail after the interview, this can be found in exhibit D.

##### 4.1 The Sustainable Purchasing Process in Dutch Hospitals and Developments in the Importance of Sustainability

The interviewees have all expressed that they, as purchasers, are the middle man between the hospital departments and the suppliers. According to Interviewee B, the purchasing department does not make any additional costs themselves aside from the facilitative supplies and salaries. Therefore, the purchasing department does not get their own yearly expenditure limit. The purchasers have to supply each department of the hospital with the necessary supplies and therefore have to adhere to the budgets set for each specific department. According to interviewee A, each department manager sets the budget for their own department.

As for the role of sustainable purchasing, the purchasers have all stated that the roles they have in this are sending and receiving. They send the information of sustainable products, which they receive from suppliers, to the departments, so they can decide whether or not it is an appropriate alternative to work with. Aside from this, they send the message to suppliers that the hospital would prefer to switch to more sustainable products. Furthermore, the purchasers also receive information about sustainable innovations and alternatives from the departments themselves and will send this to suppliers in order to check the best price and if this is a feasible option. Finally, interviewee B has said to also receive information on sustainable innovations through conferences and trade shows.

The interviewed purchasers mentioned the recent shift towards the importance of more sustainable practices. All three hospitals started taking this into account from the start of 2023. Therefore, it is still an extremely new category to consider and as section 4.3 will show, there are a lot of challenges to be dealt with. However, a start has been made by setting up groups per department focused on sustainability, the so-called 'Green Teams'. Each department or department group has a member assigned to a Green Team, who stays updated about current innovations and market changes. Aside from staying updated, the Green Teams also come up with new ideas to enhance sustainability. The purchasing process and its developments in sustainability are summarised in Table 1 below.

**Table 1: The purchasing process and its developments towards sustainability**

Sustainable purchasing process	Hospital		
	A	B	C
Purchaser takes role of middle man by 'sending and receiving information'	Yes	Yes	Yes
Purchaser has own allocated budget	No	No	No
Purchaser actively requests supplier for sustainable options	Yes	Yes	Yes
Purchaser has expressed to look for sustainable innovations outside of work, e.g. by attending conferences	No	Yes	No
Sustainability becomes an important criteria for purchasing	Start 2023	Start 2023	Start 2023
The use of Green Teams	Yes	Yes	Yes

##### 4.2 Impact Measurement and Supplier Evaluation

The measurement for impact of sustainable practices in the purchasing department is crucial in order to determine the effectiveness of their new methods. Therefore, the interviewees all received the question how the hospital measures and tracks the impact of its sustainable procurement practices. Interviewee A was very elaborate on this. They explained that hospitals join the Environmental Platform for Healthcare, the so called 'Green Deal Healthcare', which has three levels. Each level has its own objectives outlined that the hospital has to adhere to. Furthermore, the Environmental Thermometer for Healthcare is mentioned. Hospital A has the silver certificate in this deal, which focuses on the procurement of sustainable goods. Both hospital B and C have also mentioned this Thermometer, but suggested that they are still considering working with this, instead of already doing it. The Thermometer can both be used for supplier evaluation, by looking at the necessary criteria per level, and it can be used as a guideline for purchaser's themselves. All three hospitals have mentioned to have a sustainability coordinator who comes in to check on the progress regarding sustainability and calculates the carbon footprint of the hospital, which is later on published and therefore gives the hospitals the opportunity to compare their progress with each other. Finally, hospital A mentioned the use of socially responsible procurement criteria, obtained from the Dutch Public Procurement Expertise Centre (PIANOO).

As for the supplier evaluation, multiple methods are being used. Hospital B mentions the use of scorecards, which help for assessment and reminders for suppliers on agreed-upon terms. The Environmental Thermometer is used by hospital A and hospital B and C still wish to implement this. Furthermore, all hospitals have said to look at certificates of suppliers and similar credentials. The measurement tools for the impact and supplier evaluation are summarised in Table 2.

**Table 2: The measurement tools for impact and supplier evaluation**

Measurement tools for impact	Hospital		
	A	B	C
Joined Green Deal Healthcare	Yes	Yes	Yes
Use of Environmental Thermometer for Healthcare	Yes	No	No
Hospital has a sustainability coordinator who calculates carbon footprint	Yes	Yes	Yes
Use of PIANOo	Yes	No	No
Supplier evaluation tools	Hospital		
	A	B	C
Scorecards	No	Yes	No
Certificates and credentials of suppliers	Yes	Yes	Yes
Previous supplier performance	Yes	Yes	Yes

### 4.3 Challenges and Shortcomings

As mentioned in section 4.1, the sustainability criteria have been made a priority since the start of 2023. Therefore, it is a new metric for the purchasers to work with and certain challenges and shortcomings arise.

One of these challenges is the cost of sustainable products. Both purchasers have mentioned that they are stuck to a predetermined budget and therefore have spending limits. Also, even if sustainable products are not always more expensive, they usually still are. Another issue is that the purchasers do not have the necessary knowledge about the medical products in order to make the right decision. Therefore, they need to send it to the departments, who then have to discuss and evaluate the option. However, some people are satisfied with the products they have now and therefore they could easily reject the more sustainable options (resistance to change). Finally, the lack of accurate measurement tools is a problem. Interviewee A gave two clear examples about this: *'is switching from paper cups to mugs, which cause the dishwasher to run a few times a day, really more sustainable?'* and *'is switching from a current product to a more sustainable version actually more sustainable if it is produced in, for instance, China?'*

Despite the obstacles the purchasers are currently facing, they have all expressed to be positive about their impact if they keep requesting sustainable items and spreading awareness, both towards fellow colleagues and suppliers.

**Table 3: Challenges and shortcomings for purchasers**

Challenges and shortcomings	Hospital		
	A	B	C
Cost-based obstacles	Yes	Yes	Yes
Lack of medical product knowledge	Yes	Yes	Yes
Resistance to change within departments	Yes	Yes	Yes
Overview of sustainability through entire supply chain of products	Yes	Yes	Yes

### 4.4 The Need for Solutions

As the interviews have shown, hospitals are taking the first steps towards more sustainable practices, including the purchasing practices. However, due to the growing demand for sustainability from the government (Ministerie van Volksgezondheid, Welzijn en Sport, 2022), the purchasing department has to find solutions to the above mentioned

challenges as soon as possible. Akerboom et al. (2020) explain that the interplay of economic, social, and environmental issues, as well as the decision-making procedures that aim to produce sustainable outcomes, are examined by sustainability theory. The conflict between cost-effectiveness and sustainability in purchasing decisions is highlighted in the interviews, supporting this argument. According to Walraven et al., 2021, it is possible to overcome these challenges and create a stronger argument for adopting sustainable procurement practices. By adopting a broader perspective and considering the potential cost savings and health benefits that come with sustainability initiatives, a more convincing justification for sustainable procurement can be formulated. The formation of Green Teams in the interviewed hospitals is also in accordance with the research from Velter et al., 2020. However, since hospitals are non-profit organisations, they would need more funding from the government in order to surpass the cost barriers they are facing now surrounding sustainability. Aside from this, the purchasers remain hopeful for the future and expect to be able to make a great impact from their department on the sustainability rate of the hospital.

## 5. DISCUSSION

This chapter will discuss the comparisons between the findings and the literature, and will finish by discussing the contributions, limitations and possibilities for further research.

### 5.1 The Connection to Sustainability Theory

The acquired data through the interviews is mainly comparable to the sustainability theory. According to Purvis et al. (2018), the sustainability theory consists of three main objectives, the economical, social and environmental objective. This section will describe how each of these objectives come forward through the interview results, including their possibilities and challenges.

#### 5.1.1 The Economical Factors

Firstly, there is the economical objective. As all the interviewees have mentioned, they have noticed that sustainable products have a higher price label than the products they are currently using. This claim is consistent with the research conducted by Karlsson and Luttrupp (2006): 'A growing number of sound, green products have been designed and produced. However, products with "eco-properties" are often more expensive to purchase and most customers are sceptical to such higher prices. Even explicit advantages such as lower energy consumption tend to get limited attention; most people are sceptical to paying extra for a green product image. Consequently, it is difficult to cover the costs for investments in changes to greener products; consequently, company incentives to do "green" design are vague.' This is also in compliance with the statements that the hospitals have just recently started to take sustainability into account while purchasing new products. Therefore, the additional costs for sustainable products have not yet been taken into account while allocating the budgets for each department. This, in turn, makes it extremely challenging for the purchasers to find suitable replacements, which fit into the budget and are more sustainable.

#### 5.1.2 The Social Factors

Secondly, there is the social objective. Social objectives include the in- and outside pressures on the hospital to become more sustainable and implement 'greener' practices. Furthermore, it also includes the resistance to change within the hospital itself and from the suppliers. As the literature has

shown, hospitals have to become more sustainable due to governmental decisions (Ministerie van Volksgezondheid, Welzijn en Sport, 2022). As a result, the purchasing department is forced, so to speak, to implement more sustainable practices in their work (Steenmeijer et al., 2022, P. 1). Furthermore, the purchasers have all explained that they are attempting to spread awareness about the importance of sustainability throughout the hospital. They do this by talking to their fellow colleagues and showing them more sustainable products they could use. The influence of speech about topics such as sustainability has been researched through an experiment conducted by Hurst et al. (2023).

During this experiment, three groups were compared. Group number one would only speak about sustainability topics, group number two would speak about non-sustainability topics and public commitment, and group number three would speak about sustainability topics and public commitment. As the results have shown after analysing all the data, it can be concluded that promoting discussions about sustainability can effectively encourage greater commitment to sustainable objectives. This is especially true when both individuals engaging in the conversation already possess pro-environmental attitudes, and are supportive of environmental initiatives. However, the results also indicate that even when one person initially opposes the sustainability effort, pairing them with a more supportive partner has the potential to influence the behaviour of both individuals towards more sustainable actions.

Based on this experiment, the purchasers are advised to continue spreading awareness about the sustainability topic with both their colleagues and the suppliers. The mentioned implementation of Green Teams at every interviewee's hospital is also a way to spread more awareness. However, even though a change in attitude is unlikely to happen after solely one conversation, the chances grow after continuously hearing about it, which means the outside pressures for both the departments and the suppliers will be increasing.

### 5.1.3 The Environmental Factors

Finally, there is the third pillar of the sustainability theory: the environmental objective. In this case, the environmental objective can be viewed as the contracts signed by the purchasing departments in order to become more sustainable, but also as the ways the purchasers evaluate their suppliers and the products.

Firstly, there are the contracts signed by the interviewed hospitals regarding their sustainability goals and practices. As can be seen in the results, section 4.2, the different hospitals do have various agreements. Hospital A, for example, has the most. They have signed the Green Deal Healthcare contract, they use the Environmental Thermometer for Healthcare, they have a sustainability coordinator who monitors the progress, and they make use of PIANOo. The Green Deal Healthcare contract has been signed by each interviewed hospital. According to the website of the Dutch government (Ministerie van Volksgezondheid, Welzijn en Sport, 2023), this deal consists of five key agreements: 'promote health among patients, clients and employees; raise awareness and understanding of the impact of healthcare on climate and vice versa; reduce CO<sub>2</sub> emissions by 55% by 2030 and to be climate neutral by 2050; reduce the consumption of primary raw materials by 50% by 2030 and maximise circularity in healthcare by 2050; reduce environmental harm caused by (use of) medication. As mentioned before, all three hospitals that were interviewed have signed this agreement, so therefore it is

safe to assume that all three of them are striving to do the best they can regarding their sustainability practices. Hospital A is the only out of the three that has signed the PIANOo agreement and that uses the Environmental Thermometer. However, hospital B and C are both actively looking into using the Environmental Thermometer soon. Regardless of these differences, they have all indicated to have a sustainability coordinator working at their hospitals. The role of this coordinator is to measure the impact of the sustainability practices implemented by the departments, which will mainly be the result of different purchasing strategies. A carbon footprint report will then be calculated and published, so hospitals can compare each others' improvements to their own.

Secondly, there are the actions taken while choosing suppliers and products. The interviewees have mentioned several criteria they use in order to select their suppliers. All three purchasers have indicated that they look into the certificates and other credentials of the suppliers before making a purchasing request. Furthermore, they have also all indicated to base their decision on the past performance of suppliers. However, this data is not always as easily accessible, which can cause some challenges. Finally, hospital B has mentioned the use of scorecards. These scorecards will help the purchasers and the suppliers to stick to their previously upon agreed decisions, also regarding sustainability. As for the products, the purchasers have all unanimously said that it is extremely difficult to decide whether a product is actually more sustainable or not. This depends on a lot of different factors, which all have to be compared to another. Aside from this, hospital C has indicated that they have switched to digitalizing more documents instead of printing all of them, which is in accordance with the research conducted by Velter et al., 2020. Since the sustainability criterium is a very recent one, there still need of be some developments in order to do this efficiently.

## 5.2 The Challenges Faced by the Purchasing Department and a Possible Solution based on the Interviews

As becomes visible from the data obtained through the interviews, the selected hospitals want to improve their sustainable methods, but are struggling to do so due to the lack of funds and necessary tools. The purchasing department in particular, has the ultimate position to make a change, by procuring more sustainable goods and services.

The financial factor influencing the developments of sustainable procurement, is mainly the budgetary restriction. As explained before, each medical department has its own annual budget. The purchasers have to provide these departments throughout the entire year, but have to stick to the budget assigned to the department. Aside from this the problem occurs that sustainable options are, not always, but, most of the time more costly than the current supplies the department uses. This cost-benefit problem is in accordance with the research provided by Meehan et al., 2017. Therefore, notwithstanding the potential for long-term financial benefits, hospitals may encounter difficulties in engaging in sustainable procurement practices due to limitations imposed by budget constraints and financial considerations.

The social factors influencing sustainability developments are not necessarily all negative. The first one is the resistance to change, which can occur both in the purchasing department and in the medical departments. Once a purchaser decides that they do not want to make their own practices harder by focusing on sustainability, the options to become sustainable shrink significantly. Luckily, this was not the case with any of the

interviewees. However, what does occasionally occur at the interviewed hospitals, is that the employees of the medical departments do not want to change to more sustainable options, due to the fact that they do not see the point of it and are satisfied with the products they are using now. This presents significant challenges for the purchasing department. Therefore, the purchasers are trying to spread as much awareness on the importance of becoming more sustainable as possible and are encouraging other people to do the same. Furthermore, there is a lack of knowledge and available tools regarding sustainability. As interviewee A has mentioned, it is extremely difficult to determine which option is more sustainable when the metrics used to measure it are different. A possible solution to this could be to create a nation wide internal programme in which purchasers could enter the available data per product (for instance, the distance from the manufacturing plant to the hospital, the emission for producing one batch of product, the costs of use – in case of a dishwasher, the electricity and water use for instance), which could automatically calculate the most sustainable option. However, developing such a programme is costly, requires collaboration from all hospitals and suppliers in sharing the emission and other relevant information, and it is very time consuming.

These challenges all fall under the same three pillars that carry the sustainability theory: economical, social and environmental.

### 5.3 Suggestions and Contradictions of the Results Compared to the Literature

Regardless of the similarities between the results of the interviews and to the literature described in the literature review, there are still some contradictions between the interviews and the literature. These will be discussed in this section, which will also provide a number of suggestions for the hospitals to implement.

Meehan et al., 2017 has mentioned the use of more ecological and organic food in the hospital. Since the interviewees have only mentioned the reduction of disposables in this area, this could be something to focus on. Furthermore, reduction in food that is wrapped in plastics would be another suggestion for the purchasing department to look into. A third suggestion is based on the importance of working closely with suppliers, described in the research by Noort et al., 2020. They describe the importance of working closely with suppliers which would have positive effects on the shift towards sustainability. Therefore, the hospital could let a purchaser visit the sites of the suppliers and make more accurate suggestions to them based on their manufacturing sites.

Even though the interviewed hospitals are all in the starting phase of including sustainability in their practices, the St. Antonius Hospital in Nieuwegein has already booked a lot of progress in this area. The hospital developed several sustainable practices, including LED lighting, improved energy management systems, and waste reduction programs. In just three years, they reduced their CO<sub>2</sub> emissions by 39%. These days, they are focused on waste reduction, recycling their operation room tables, and delivering medications by bike (Duurzaam Antonius in Het Nieuws | St. Antonius Ziekenhuis, n.d.). Another hospital which has made great progress towards sustainability is The Reinier de Graaf Hospital in Delft. By conducting a comprehensive analysis of costs over the lifespan, they conducted a study to identify the products and services that would yield the greatest return on investment. Consequently, the hospital was able to optimize its sustainability expenses by aligning them with its financial constraints, prioritizing overall

cost-effectiveness. This enabled them to rationalize their sustainability expenditures and ensure that they remained within the limits of their financial capabilities (Batelaan, 2013). A suggestion for all hospitals in the Netherlands would therefore be to share their practices and tools in order to improve sustainability nationwide.

Some contradictions between the literature and the interview results will now be discussed. Tasdemir et al., 2020 states that the Environmental Thermometer provides measurement tools in order to track and measure the improvements of the sustainable practices. However, the interviewee of hospital A, which is the only interviewed hospital currently using the Thermometer, has mentioned that tracking and measuring the results is still extremely difficult to do. Furthermore, Akerboom et al., 2020 of the sustainability theory mentions that hospitals should focus more on the long-term environmental impact rather than the short-term financial rewards. However, according to the interviewed purchasers, the budget is still the main criterium they have to take into account while making purchases. Akerboom's claim is also supported by the research conducted by Walraven et al., 2020, which adds that hospitals will eventually benefit financially from switching to more sustainable practices, since it will improve the overall health.

### 5.4 Contributions, Limitations and Possibilities for Further Research

The research has intended to have significant academic benefits to scholars seeking to study the part that purchasing plays in creating and maintain sustainability in the Dutch healthcare industry. As Singh (2021, n.p) posits, research encourages inductive and scientific thinking, in addition to enhancement of logical behaviours of organization and thinking. It is one of the few scholarly endeavours dedicated to the determination of the role that purchasing plays in ensuring sustainability in the healthcare sector in The Netherlands. One of the study's aims is to identify research gaps that will provide background for further investigation into the association between the healthcare system and sustainability policies in The Netherlands. In addition to this, it has studied the developments made up until now by hospitals and researched the obstacles faced by the purchasers in order to boost sustainability. Finally, it has intended to contribute to the previous literature on the sustainability in the Dutch healthcare sector, with a focus on the purchasing department in hospitals.

This research has faced some limitations. One of these limitations is the small sample size. Future research could therefore focus on a larger sample of hospitals and obtain more information into the sustainability developments and practices applied. A second limitation is the lack of existing research on the sustainability in Dutch hospitals. Therefore, it was hard to find information solely based on the Dutch practices and could lead to national or cultural differences, which possibly affects the relevance of the literature and theories used. Not conducting a pilot interview in order to check whether all questions are relevant or whether questions need to be added to obtain the desired information is another limitation to this research. Future research could take this into account. Finally, the recent focus on sustainability in hospitals has made it difficult for some of the purchasers to answer the questions to their fullest detail. This also stems from a lack of knowledge on certain aspects. Future research could focus on interviewing both purchasers and the environmental coordinators working in the hospital, to obtain more detailed information regarding the sustainability performance. Finally, future research could investigate whether solutions have been developed for the

current obstacles and in case no developments have been made, it could look into possible feasible solutions.

## **6. FINAL CONCLUSION**

The main implications of this research are the great progress the hospitals have made so far, for instance by implementing the Green Teams. However, the study also made clear that there are still many issues to be resolved in order to make further progress, due to the recent importance of sustainability in the purchasing practices. In order to solve these complications, both internal and external help is necessary for the hospitals. This will be explained below.

The findings support most of the previous research on the contribution of the purchasing department to the sustainability of the Dutch healthcare sector. The interviewees have all clearly stated that inter-departmental communication is significant to them for making the hospital more sustainable. However, hospitals should also take into account that communicating their sustainability practices to other hospitals could increase the speed of improvement on a national level.

Furthermore, the purchasers lack certain measurement metrics in order to make a well considered decision when comparing different products in order to find the most sustainable version. It is important to note that the purchasers have expressed their succeeding efforts in changing the facilitative products to more sustainable products. They will keep considering sustainable options and will keep spreading awareness throughout the hospital and to the suppliers, which according to the social experiment discussed in section 5.1.2 is a successful method to convince people to become more sustainable in their actions. Finally, the financial limits cause unavoidable restrictions for the purchasing department to positively influence the sustainability of the Dutch hospitals in the most effective way possible. What should be taken into account by the financial department of the hospitals and the government is to increase the budget for the purchasing of sustainable goods in order to achieve the desired results. Furthermore, it is important to realize, for the hospitals and all other parties involved in the hospitals' funding process, that long-term environmental impact should be a higher priority than short-term financial rewards.

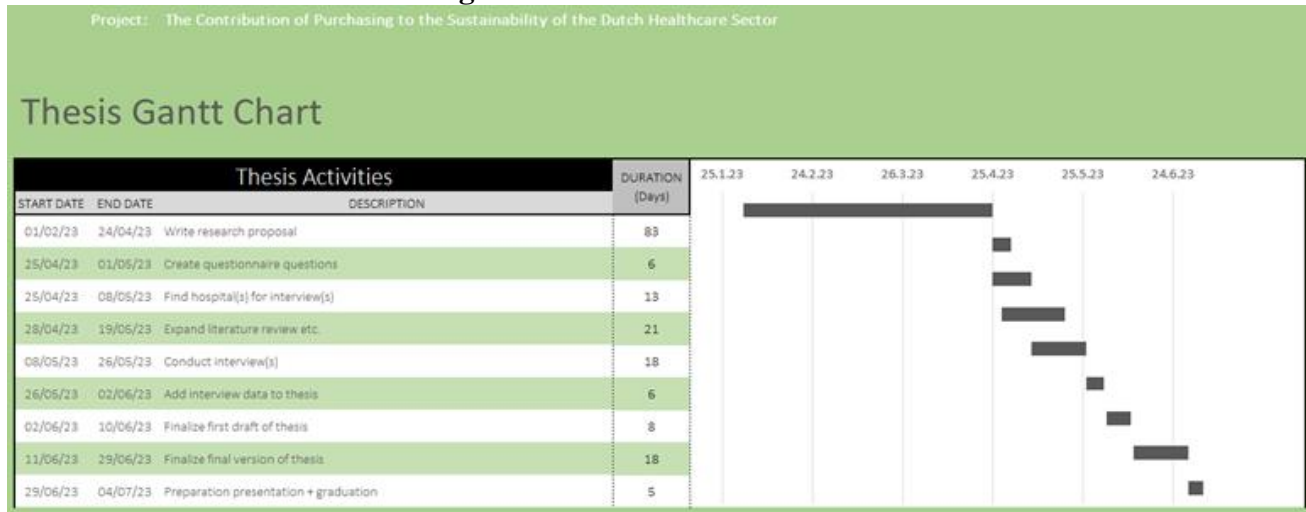
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## 8. APPENDIX

### 8.1 Exhibit A: Research Planning



### 8.2 Exhibit B: Interview Hospital A, Dutch Version

#### Hoe prioriteert de inkoopafdeling van het ziekenhuis duurzaamheid bij het inkopen van goederen en diensten?

Ja het is even zo, ziekenhuizen die sluiten zich aan bij milieuplatform zorg, het heet de zogenaamde “Green deal zorg”. Daar is een versie 1 van, een versie 2 en een versie 3. Die wordt geïnitieerd, dacht ik, door de overheid en daar is ziekenhuis A een van de ondertekenaars van. En dat wil zeggen je conformeert je aan de doelstellingen die daar in staan, dus in 2050 zijn bepaalde doelstellingen als CO2-neutraal en dat soort dingen. Nu heeft ziekenhuis A eind december 2022 een certificaat zilver behaald binnen de Milieuthermometer zorg. En binnen dat niveau zilver wordt de inkoop van duurzame goederen geprioriteerd, maar dan ook inkoop van duurzame goederen op facilitair gebied. Dat wil zeggen, dus vorig jaar hebben we dat certificaat gehaald, daar gaan we een beleid voor schrijven. ‘Oke dus we gaan duurzaam inkopen op deze en deze artikelen en nu betekent dat voor dit jaar dat ik moet aantonen dat ik het in ieder geval uitgevraagd heb, dat ik mijn best heb gedaan en dat ik dus ook daadwerkelijk heb ingekocht’. Facilitaire productgroepen dat is dus drukwerk, dat is vervoer, dat is ICT faciliteiten. Dus in die zin is het geprioriteerd vanuit het certificaat zilver.

#### Hoe evalueert de inkoopafdeling leveranciers op hun duurzaamheidspraktijken en initiatieven?

Dit maakt allemaal deel uit van onze offerte uitvraag, dus dan zeggen wij van ben je ook hiermee bezig en kun je eens laten zien of je ook milieukeurmerken hebt of dat soort zaken. Dus offerte uitvraag, daarin zet je je eisenpakket neer en daarnaast wat ik net noemde, de milieuthermometer, dat noem je een platform en die heeft bepaalde tools waarin de eisen staan waaraan dus die duurzame producten moeten voldoen, dus dat wordt gebruikt als meetlat. Verder zouden we kunnen toetsen op basis van onze leveranciers prestatie metingen, daar is nu nog het een en andere aan maar dat zou wel moeten.

#### Hoe meet en volgt het ziekenhuis de impact van zijn duurzame inkooppraktijken, en welke meetgegevens worden gebruikt?

Daar is dus de milieuthermometer zorg weer. Daarin worden we jaarlijks geauditeerd en komt iemand langs om te vragen wat we hebben gedaan om te verduurzamen en dan moeten we dit laten zien. En vervolgens wordt dan, op de prestaties die we hebben geleverd, wordt er een CO2 voetafdruk gemaakt en die wordt dan weer gepubliceerd zodat je het ook kunt vergelijken met andere ziekenhuizen.

#### Werken de leveranciers actief aan het produceren van duurzame producten? Kunt u enkele voorbeelden geven?

Bijvoorbeeld nu, dit kartonnen bekertje gaat weg, omdat daar een plastic laagje in zit en alle leveranciers zijn heel druk bezig met een alternatief, alleen dat is nogal lastig, want met hete vloeistoffen lekt het zo door. Dus dat is lastig zoeken, want of je krijgt een koffiekopje die de vaatwasser in gaat en dan kan je je afvragen ‘hey, wat is nu werkelijk duurzaam?’. Dus de initiatieven zijn er zeker. Er zijn ziekenhuizen die hebben naaldencontainers, daarin gaat vuil afval en die worden steeds vaker gemaakt van gerecyclede plastic en dat soort zaken. Je ziet bij koeriersdiensten ook vaak dat ze meer elektrisch gaan rijden. Dus zaken die je voornamelijk ook in je dagelijks leven tegenkomt die zie je dus ook bij de leveranciers.

#### Wat zijn de grootste uitdagingen waarmee de inkoopafdeling wordt geconfronteerd bij het implementeren van duurzame inkooppraktijken in het ziekenhuis?

Er zijn heel veel websites die je naar voren krijgt als je dit gaat zoeken op internet. Waardoor je vaak verward raakt welke weg je op moet gaan. Waar wij ons op richten zijn PIANOO, daarin zitten maatschappelijk verantwoord inkomen criteria, daarom hebben wij ons geconformeerd voor een basis level, daar richten wij ons op. Daarnaast zijn er nog de duurzaamheidscriteria zoals vanuit de Europese richtlijnen ten opzichte van medische producten. Alleen, heel vaak ontbreekt de kennis bij onszelf om te beoordelen of wat aangeboden wordt ook echt duurzaam is. Want hoe kan je dit toetsen, waarmee kan je het toetsen. Bijvoorbeeld met het duurzaam inkopen van het koffiebekertje kan je op zoek gaan naar een alternatief wat geproduceerd wordt, maar op een of andere manier zou je dit moeten gaan vergelijken met de afwasbare koffiemok en er is dus geen goed vergelijkingsmateriaal. En dat is waar we hier tegenaan lopen. Je kunt bijvoorbeeld een heel mooi gerecyclede duurzaam product inkopen, maar voor hetzelfde geldt dat het ook zo vanuit China kan zijn overgevoerd, omdat het daar is geproduceerd. Dus wat nu ontbreekt bij heel veel artikelen, is dat de volledige keten niet inzichtelijk is. Zodat je kunt kijken wat nou precies duurzaam is, maar wat ook over de hele linie duurzaam is. En dat zijn de worstelingen die wij hebben.



**Welke producten die worden ingekocht, worden beschouwd in termen van duurzaamheidsaspecten? Kunt u enkele voorbeelden geven?**

Ik zal je dit even doormailen, want het zijn er heel veel [bijlage D]. Producten die wij bijvoorbeeld moeten inkopen volgens duurzaamheidscriteria, waarvoor ook een eis is volgens dat certificaat Zilver, is onder andere afvalinzameling (gescheiden houden), bedlinnen, bedrijfskleding, catering en voeding, groenbeheer, incontinentiemateriaal, printpapier, schilderwerk, textielreiniging. Dus alles binnen de facilitaire product branche.

**In hoeverre betreft de inkoopafdeling leveranciers en verkopers om hen aan te moedigen duurzame praktijken aan te nemen/duurzame producten te produceren?**

Dit doen we dus bij de offerte uitvraag, en door steeds maar de vraag te blijven stellen. Want in dat opzicht is de inkoper maar een tussenpartij. Want, je hebt de gebruikers op de afdeling, vervolgens zit daar een hoofd boven, een manager en die heeft een bepaald budget, zij bepalen ook wat ze hier willen hebben en de inkoper doet dan weer zijn best om de beste producten voor de beste prijs te krijgen. Als die budgethouder van origine niet te duurzaam is, dan kan ik het wel gaan uitvragen, maar uiteindelijk is de budgethouder degene die beslist. Maar ik vind het zelf wel heel belangrijk, dus ik blijf het wel uitvragen, want zolang je niet vraagt gaat de leverancier niet veranderen. Ik behandel zelf de facilitaire producten en mijn collega doet de medische producten en hij blijft het ook steeds uitvragen, maar hij loopt veel meer tegen muren aan dan ik met de facilitaire producten. Want een arts is gewend om met bepaalde producten en machinerij te werken en dan komt er ineens een alternatief. Maar we blijven ermee bezig.

**Hoe blijft de inkoopafdeling op de hoogte van nieuwe duurzame inkooppraktijken en innovaties?**

We zijn als ziekenhuis aangesloten bij een overkoepelende inkooporganisatie, inkoopalliantie ziekenhuizen (IAZ). Daarnaast zijn we ook lid van Intrakoop, ook een overkoepelende branche organisatie. En die zijn heel erg bezig om alle innovaties voor hun leden inzichtelijk te maken. Dus via die platformen, en ook hebben we hier een milieucoördinator vanuit de milieucoördinator is er een werkgroep duurzaamheid. En die werkgroep bestaat dan weer uit green teams. Dus dan, hebben we bijvoorbeeld zo'n team op de afdeling OK, maar landelijk is er dan weer een team genaamd de landelijke OK, dus zo houden we elkaar op de hoogte van initiatieven.

**Extra vraag en ieder ziekenhuis is daarmee verbonden?**

Nee, bij de IAZ zitten landelijk 10 ziekenhuizen, maar bijvoorbeeld het Ziekenhuis B is verbonden met het Santeon verband en dat is weer een andere inkoopalliantie. Intrakoop is dan weer wat groter en wat algemener. Maar zo heb je verschillende inkooporganisaties en dat zijn dan jouw branchegenoten en die lopen dus voor met duurzame ontwikkelingen.

**Geloof u dat u, als inkoper, kunt helpen om de koolstofvoetafdruk van het ziekenhuis te verbeteren? Zo ja, hoe?**

Zoals ik al eerder zei, door continu te blijven uitvragen en ik ben uiteindelijk de adviseur, dus ik blijf het uitvragen, ook al wordt er niet vanuit de afdeling gevraagd, maar zo kan je het in ieder geval intern blijven aanbieden. En ik geloof ook wel dat als je het blijft doen dat er uiteindelijk ook wel wat aan de mindset veranderd. Dus, in mijn mening, kunnen wij redelijk verschil maken. Het heeft alleen wel tijd nodig.

**Hoe balanceert de inkoopafdeling de behoefte aan kosteneffectiviteit met de wens om duurzame inkooppraktijken te implementeren?**

We veronderstellen over het algemeen dat duurzaam ook daadwerkelijk duur is, maar dit is niet altijd het geval. Bovendien hebben wij een meerderjarige beleidsvisie die wij uitschrijven voor vier jaar, dit wordt gebruikt als een van onze strategische pijlers. Alleen die pijler moet nu nog bepaald worden, aangezien het begin dit jaar is ingegaan. Dus wat willen we nou daadwerkelijk bereiken en hangen we er ook een bepaald budget aan, dat is nu nog onduidelijk. Maar als je het als een strategische doelstelling hebt, dan mag je ook aannemen dat je er iets voorover hebt zodat je ook daadwerkelijk verschil kunt maken. Er worden doelen en doelstellingen ingezet en daarna moet bepaald worden wat dit precies in de praktijk betekent en hoe het zich naar de werkvloer vertaalt.

**Zijn er de afgelopen jaren specifieke inkooppraktijken veranderd/toegevoegd om de productie en consumptie van medische voorzieningen en apparatuur duurzamer te maken?**

Volgens mij nog niet. Maar ik hoor in mijn eigen onderzoek vanuit andere ziekenhuizen dat sommigen experimenteren met tweedehands apparatuur of refurbished machines. Maar ik beschik zelf niet over die kennis. Tijdens mijn onderzoek gaven mijn geïnterviewden aan 'ja weet je, dat betekent nogal iets om bijvoorbeeld op de OK een tweedehands apparaat neer te zetten. Voornamelijk in verband met de veiligheid, want hoe veilig is het, krijgt het vaker storingen, hoe lang gaat het dan mee, hebben we dan ook daadwerkelijk kwaliteit en verbruikt het bijvoorbeeld uiteindelijk meer stroom en energie dan een nieuw apparaat zal doen?'. Daarnaast is zoiets doen op de OK een stuk kritischer dan bijvoorbeeld een tweedehands koffiemachine in gebruik te nemen voor het personeel.

**Hoe werkt de inkoopafdeling samen met andere afdelingen in het ziekenhuis om duurzaamheid te bevorderen, zoals afvalvermindering en energie-efficiëntie?**

We hebben hier dan de werkgroep duurzaamheid we hebben daar een milieucoördinator op zitten en vanuit het facilitair ook eentje vanuit vastgoed. De laatst genoemde houdt zich weer bezig met energieverbruik en dat soort zaken. En de eerstgenoemde houdt zich volledig bezig met het facilitaire gebied en daar zitten weer projectleiders omheen die zich bezighouden met afvalscheiding en met de afvalstromen en die werkgroep bestaat dus weer uit green teams. Iemand vanuit de OK, iemand vanuit de IC, iemand vanuit anesthesie en daar komen de ideeën uit bovendrijven en zo vindt eigenlijk de samenwerking vanuit alle afdelingen plaats. Op deze manier heb je zowel een bottom-up inzicht als een top-down. Een mooi voorbeeld van hoe we aan duurzaamheid werken is dat het steriele materiaal wordt afgedekt met een bepaald materiaal wat op plastic lijkt, maar dat is het niet, maar dat materiaal wordt nu dus hergebruikt en daar worden kantoorstoelen van gemaakt. Daar werken wij dus onder andere aan mee. Maar duurzaamheid wil ook zeggen dat je jezelf als inkoper de vraag moet stellen of we een product ook daadwerkelijk moeten inkopen en of we het echt nodig hebben, of dat we ook zonder kunnen. Ik merk zelf dat dit hele proces nog flink in de kinderschoenen staat en dat elk ziekenhuis een beetje dezelfde dingen

doet, omdat er vooralsnog geen duidelijk overzicht is van de richting die we op moeten door een gebrek aan overzicht en een overvloed aan informatie. Daarnaast is het ook lastig te meten, zoals eerder gezegd.

### **8.3 Exhibit C: Interview Hospital A, English Version**

#### **How does the purchasing department at the hospital prioritize sustainability when procuring goods and services?**

It is as follows. Hospitals join the Environmental Platform for Healthcare, known as the "Green Deal Healthcare." There are three versions of it: version 1, version 2, and version 3. It is initiated, I believe, by the government, and Hospital A is one of the signatories. By signing, you commit to the objectives outlined in the deal, such as achieving carbon neutrality by 2050 and other similar goals. Hospital A obtained a silver certificate within the Environmental Thermometer for Healthcare at the end of December 2022. Within the silver level, the prioritization is given to the procurement of sustainable goods, including in the area of facilities management. So, last year, we achieved that certificate, and now we are going to develop a policy for it. "Okay, so we are going to procure sustainably for these specific items, and for this year, it means that I need to demonstrate that I have requested it, made my best efforts, and actually made sustainable purchases." Facility product groups include printing, transportation, and ICT facilities. In that sense, it is prioritized based on the silver certificate.

#### **How does the purchasing department evaluate suppliers for their sustainability practices and initiatives?**

This is all part of our request for proposal, so we include questions about whether the supplier is also engaged in these aspects and whether they can demonstrate any environmental certifications or similar credentials. So, in the request for proposal, we outline our requirements, and in addition to that, the Environmental Thermometer, which I mentioned earlier, is referred to as a platform that provides specific tools with the criteria that sustainable products must meet. It serves as a benchmark. Furthermore, we could assess suppliers based on their performance evaluations, although there are still some aspects to be developed in that area.

#### **How does the hospital measure and track the impact of its sustainable procurement practices, and what metrics are used?**

That is where the Environmental Thermometer for Healthcare comes in. We undergo an annual audit as part of that program, where someone visits us to inquire about our sustainability efforts, and we need to demonstrate what we have done in that regard. Based on the performance we have achieved, a carbon footprint is calculated and then published, allowing us to compare it with other hospitals.

#### **Are the suppliers actively working to produce sustainable products? Could you provide some examples?**

For example, right now, this cardboard cup is being phased out because it has a plastic lining, and all suppliers are actively working on finding an alternative. However, it is quite challenging because the hot liquids tend to leak through. So, it is a difficult search because you either end up with a coffee mug that needs to go in the dishwasher, so then you should question if that is truly more sustainable. But the initiatives are certainly there. Some hospitals have needle containers that are made of recycled plastic, and they are increasingly being used for disposing contaminated waste and similar things. You also often see courier services transitioning to electric vehicles. So, the things you encounter in your daily life are also evident with suppliers.

#### **What are the biggest challenges the purchasing department faces in implementing sustainable procurement practices in the hospital?**

There are numerous websites that come up when you search for this on the internet, which often leads to confusion about which direction to take. What we focus on are PIANO, which includes socially responsible procurement criteria. That is why we have committed ourselves to a basic level, which is our focus. Additionally, there are sustainability criteria, such as those outlined in European guidelines for medical products. However, we often lack the knowledge to assess whether what is being offered is truly sustainable. How can we evaluate it? What can we use to assess it? For example, when it comes to sustainably purchasing coffee cups, we can search for an alternative that is produced sustainably. However, it becomes challenging to compare it with a reusable coffee mug because there is no good point of comparison. This is where we encounter difficulties. You can purchase a beautifully recycled sustainable product, but it may have been flown in from China, for instance, where it was produced. So, what is currently lacking for many items is visibility into the entire supply chain. This would allow us to determine what is truly sustainable and sustainable across the board. These are the struggles we face.

#### **Which products are purchased considered sustainability aspects? Could you provide some examples?**

I will email this to you because there are quite a lot of them [Exhibit D]. Products that we need to procure according to sustainability criteria, which also have requirements based on the Silver certificate, include waste management (separation), bed linen, workwear, catering and food, green management, incontinence materials, printing paper, painting services, and textile cleaning. So, everything within the facility product sector.

#### **To what extent does the procurement department engage with suppliers and vendors to encourage them to adopt sustainable practices/produce sustainable products?**

So we do this during the request for proposal process, and by continuously asking the question. In that sense, the purchaser is just an intermediary. You have the users in the department, then there is a head above them, a manager who has a certain budget. They also determine what they want to have here, and the purchaser then does their best to obtain the best products at the best price. If the budget holder is not originally inclined towards sustainability, I can still request it, but ultimately the budget holder is the one who decides. But I personally find it very important, so I keep asking for it because if you do not ask, the supplier will not change. I handle the facility products myself, and my colleague handles the medical products. He also keeps asking for sustainable options, but he faces more obstacles than I do with the facility products. Because doctors are accustomed to working with certain products and machinery, and then suddenly an alternative is introduced. But we keep working on it.

**How does the purchasing department stay up-to-date on new sustainable procurement practices and innovations?**

We are affiliated with a centralized purchasing organization called "Inkoopalliantie Ziekenhuizen" (Purchasing Alliance Hospitals, IAZ). Additionally, we are also members of Intrakoop, another overarching industry organization. They are actively involved in making all innovations accessible to their members. So, through these platforms, and with the help of an environmental coordinator, we have a sustainability working group. This working group consists of green teams. For instance, we have a team dedicated to the Operating Room (OR) department, and at the national level, there is a team called the National OR team. This way, we keep each other informed about initiatives.

**Is every hospital connected to IAZ and Intrakoop?**

No, there are 10 hospitals nationwide affiliated with IAZ, but for example, Hospital B is connected to the Santeon network, which is another procurement alliance. Intrakoop, on the other hand, is larger and more general. So, you have different purchasing organizations, which are your industry peers, and they are ahead in terms of sustainable developments.

**Do you believe that you, as a purchaser, could help improve the carbon footprint of the hospital, if yes then how?**

As I mentioned earlier, by consistently asking and being the advisor, I will continue to inquire, even if there is no demand from the department. This way, I can at least keep offering it internally. And I also believe that by persisting, eventually, there will be a change in mindset. So, in my opinion, we can make a reasonable difference. It just takes time.

**How does the purchasing department balance the need for cost-effectiveness with the desire to implement sustainable procurement practices?**

We generally assume that sustainability is actually expensive, but this is not always the case. Moreover, we have a multi-year policy vision that we outline for a four-year period, which is used as one of our strategic pillars. However, that pillar still needs to be determined as it came into effect earlier this year. So, what do we actually want to achieve and do we also allocate a specific budget to it? That is still unclear at the moment. But if it is a strategic objective, it can be assumed that we are willing to invest in it in order to make a real difference. Goals and objectives are being set, and then it needs to be determined what this exactly means in practice and how it translates to the workplace.

**Are there any specific purchasing practices that have changed/been added over the past years to make the production and consumption of medical provisions and equipment more sustainable?**

**FOLLOW UP: what have been the outcomes?**

I do not think so. But in my own research, I have heard from other hospitals that some are experimenting with second-hand equipment or refurbished machines. However, I do not possess that knowledge myself. During my research, my interviewees mentioned, "Well, you know, it means something significant to introduce a second-hand device in the operating room, especially in terms of safety. How reliable is it? Does it have more frequent malfunctions? How long will it last? Do we actually have the desired quality? And does it ultimately consume more electricity and energy compared to a new device?" Additionally, implementing such a change in the operating room is much more critical than, for example, using a second-hand coffee machine for the staff.

**How does the purchasing department work with other departments in the hospital to promote sustainability, such as waste reduction and energy efficiency?**

We have a sustainability working group here, which includes an environmental coordinator from the facility management team and one from real estate. The latter focuses on energy consumption and related matters. The former is solely dedicated to the facility management area, and there are project leaders involved in waste separation and waste management. This working group consists of green teams, with representatives from the operating room, intensive care unit, and anesthesia, among others. It is through these teams that ideas emerge, and collaboration takes place across all departments. This approach provides both bottom-up insights and top-down guidance. A great example of our sustainability efforts is the use of a specific material, similar to plastic, to cover sterile equipment. However, this material is not plastic and is now being reused to make office chairs. We actively contribute to this initiative. However, sustainability also means that as a purchaser, we must question whether we truly need to procure a product or if we can do without it. I personally observe that this entire process is still in its early stages, and each hospital is doing somewhat similar things due to a lack of clear direction and an abundance of information. Additionally, as mentioned earlier, measurement is also challenging.

**8.4 Exhibit D: List of Sustainable Products Hospital A**

- Waste collection (mandatory)
- Bed linen (mandatory + additional)
- Company vehicles (additional)
- Company clothing (mandatory + additional)
- Catering and food (additional)
- Electricity (additional)
- Green management (mandatory + additional)
- Incontinence materials (additional)
- Printing paper (mandatory)
- Cleaning (mandatory + additional)
- Interior painting (additional)
- Exterior painting (additional)
- Textile cleaning (mandatory)
- Washing machines and dryers (mandatory)

**8.5 Exhibit E: Interview Hospital B, Dutch Version**

**Hoe prioriteert de inkoopafdeling van het ziekenhuis duurzaamheid bij het inkopen van goederen en diensten?**

In de ziekenhuiswereld is eigenlijk het stukje duurzaamheid best nog wel naar de achtergrond gezet, zo van “we zijn bezig met de zorg en we gaan inkopen baseren op prijs en wat we nodig hebben” en duurzaamheid heeft daar eigenlijk maar minimaal een rol in gespeeld. Als ik voor ziekenhuis B zelf spreek hebben we echt pas drie maanden geleden bepaald om duurzaamheid mee te nemen. Dus het staat bij ons nog wel echt heel erg in de beginfase. Nu moet ik wel zeggen dat we wel heel veel trajecten binnen het ziekenhuis zijn gestart. Maar wij als inkoop ondersteunen de afdelingen bij het inkopen van bepaalde producten, dus het gaat van machines, tot disposables etc. Alleen wij als inkopers hebben geen eigen budget, want wij verzorgen geen patiënten, dus een afdeling heeft wel een eigen potje wat ze mogen uitgeven op jaarbasis, maar wij als inkoop draaien geen eigen kosten op kantoorartikelen na. Dus dat maakt het voor ons om als afdeling zelf ook veel invloed te kunnen uitoefenen vanuit duurzaamheid zijnde vanuit onszelf. Nu gaan we wel een traject kantoorartikelen draaien, dus daar nemen we het wel in mee. Maar wat wij als inkoop heel erg proberen te stimuleren om naar afdelingen toe gaan is om naar afdelingen toe te gaan met de boodschap “als jullie nog suggesties hebben voor artikelen die duurzamer kunnen, kom dan vooral bij ons, want dan willen wij ook heel graag meekijken met jullie naar deze opties”. En mocht de leverancier zeggen “hey wij hebben een duurzaam product, wellicht is dit interessant voor jullie”, dan sturen we het wel altijd naar de betreffende afdelingen toe met de vraag of zij er iets mee kunnen en willen. En dat is voornamelijk de rol die wij aanhouden. Dus vooral het stimuleren van wel naar duurzamer gaan kijken. Maar om daar als afdeling inkoop zelf onderscheid in te maken, is dus heel moeilijk door het gebrek aan budget. Maar we gaan wel afdelingen stimuleren om zelf over duurzamere oplossingen te denken en dat dan naar ons door te spelen. Daarnaast worden binnen de ziekenhuizen ook echt werkgroepen opgezet, die heten “Green Teams”. Daarbij wordt per afdeling gekeken naar mogelijke verbeteringen en wat afdelingen samen kunnen verbeteren of wat afdelingen van elkaar kunnen leren. Zelf zit ik bij het circulaire team, dus wat kunnen we met elkaar voor de circulariteit betekenen en niet zozeer alleen binnen het ziekenhuis, maar bijvoorbeeld ook met bepaalde lokale partijen. Maar we zijn nog heel erg op zoek naar wat we precies kunnen en welke opties er zijn.

### **Hoe evalueert de inkoopafdeling leveranciers op hun duurzaamheidspraktijken en initiatieven?**

Wij hebben inkoop- en contractmanagement en bij contractmanagement wordt ook echt leveranciers beoordeling gedaan en wij kijken daar ook deels in mee. En omdat wij duurzaamheid nog niet eerder hebben meegenomen wordt daar op dit moment nog niet echt naar gekeken. Maar we hebben wel bijvoorbeeld binnenkort weer een fase waarbij de afvaldienstverlening opnieuw aanbesteed moet worden en dan zijn er dingen die we wel meenemen. En zoals nu, wat we heel erg doen is kijken naar certificaten, bepaalde waarden waar ze aan moeten voldoen. We willen wel dat leveranciers met eigen innovatieve ideeën naar ons toekomen, dus we proberen het wel heel erg uit te vragen bij onze inkoopaanvragen. Maar het beoordelen van leveranciers op basis van duurzaamheid is nog iets waar we naar op zoek zijn. En in het ziekenhuis heb je dus budgetten waar je je aan moet houden en duurzaamheid hoeft niet altijd duurder te zijn, maar we zien wel dat het vaak toch nog wel een kostenplaatje met zich meebrengt. En dan kan de leverancier wel heel erg duurzaam zijn, maar dan wordt toch de overweging gemaakt gebaseerd op het budget wat er staat, wat dus uiteindelijk ten koste kan gaan van de duurzamere producten. Dus dat is nog een beetje wankel. We hebben wel scorekaarten waarmee we leveranciers tijdens de dienstverlening kunnen blijven beoordelen en bewust kunnen maken van eerder gemaakte afspraken. Een voorbeeld: “we gaan een aanbesteding lopen voor bloemen voor intern gebruik. En toen heb ik bij de marktverkenning gevraagd hoe we als ziekenhuis duurzaamheid mee kunnen nemen, maar wel op een manier dat we nog wel een goede beoordeling kunnen doen, dus dat het niet alleen maar van duurzaamheid afhangt, maar er wel een rol in speelt. En toen kwam er dus naar voren dat leveranciers aan een barometer kunnen voldoen, daarin zijn drie niveaus. En dat zijn al wel kleine dingen waar je elkaar aan vast kunt houden. Dus stel je begint een contract op niveau brons, dan kan je samen afspreken dat je over twee jaar op zilver wilt zitten en over drie jaar op goud.” Dus op die manier zijn we aan het zoeken hoe we leveranciers een beetje kunnen meenemen en vasthouden daarin.

### **Hoe meet en volgt het ziekenhuis de impact van zijn duurzame inkooppraktijken, en welke meetgegevens worden gebruikt?**

Deze vraag is lastig te beantwoorden, want op dit moment hebben we dit nog niet. Het hangt er ook heel erg af van welke dienstverlening je inkoop. Daarnaast zijn we dus ook nog steeds heel erg zoekend in hoeverre we duurzaamheid mee gaan nemen bij inkoopbeslissingen, dus daarom is het nu erg lastig om te zeggen hoe we de impact gaan bepalen. We hebben in ons ziekenhuis wel een duurzaamheidscoördinator zitten en zij houdt vooral bij wat het ons kan besparen, waarbij ze ook naar dingen zoals de voetprint kijkt. Maar hoewel de impact moeilijk te bepalen is op het moment, hebben we in ieder geval al wel iemand die probeert te kijken wat het ons oplevert als ziekenhuis.

### **Werken de leveranciers actief aan het produceren van duurzame producten? Kunt u enkele voorbeelden geven?**

Het wordt wel langzaam meer, dat kan ik wel zeggen. Zorg gerelateerde producten zijn soms best wel lastig om een duurzaam product van te maken. Daarnaast, op het moment dat een leverancier een medisch product maakt, zoals implantaten etc. dan zit daar best wel een lange tijd aan vast, voordat het überhaupt op de Nederlandse markt kan komen. Dus als ze nu ergens iets aan het produceren zijn wat heel duurzaam is dan is dat heel mooi, maar dat zien wij pas veel later hier terug. Dat maakt het een stuk lastiger. Maar je ziet wel dat er initiatieven worden opgezet. Zo hadden we een leverancier die als een patiënt iets voor het hart in zich krijgt, ze het willen terugnemen, schoonmaken en opnieuw klaarmaken, zodat het opnieuw gebruikt kan worden in plaats van dat het weggegooid wordt. Dus dit soort initiatieven zijn er wel, maar de regelgeving hieromheen is erg streng, dus dat maakt het ook lastiger om dit soort initiatieven te krijgen. Want de firma die het product had uitgegeven zou het niet terugkopen, maar dit was weer een andere firma, dus mocht er dan iets misgaan dan zit je met het probleem wie er verantwoordelijk en aansprakelijk is. Wat ik van collega's meekrijgt wordt er ook steeds meer gekeken naar materiaalgebruik en of we andere materialen kunnen inzetten. Bijvoorbeeld bij disposables is het wel goed te doen, zoals de switch bij koffiebekers van plastic naar bijna 100% papier, maar nu moeten we weer van papier af, dus dat is weer een nieuwe uitdaging. Maar je merkt wel dat leveranciers heel erg willen meedenken naar oplossingen, zodat het ziekenhuis kan voldoen aan de nieuwe regelgeving. Ze komen ook echt zelf wel met initiatieven naar ons toe als ze nieuwe producten hebben die eventueel beter kunnen zijn. Zo hadden ze bijvoorbeeld eerst een product wat we eenmalig konden gebruiken en dan weg moesten gooien, maar nu gaan de leveranciers zelf ook steeds meer kijken naar herbruikbare alternatieven. Dus in dat opzicht begint het steeds meer te groeien.

### **Wat zijn de grootste uitdagingen waarmee de inkoopafdeling wordt geconfronteerd bij het implementeren van duurzame inkooppraktijken in het ziekenhuis?**

Wij werken er zelf niet direct mee, dus wij moeten per afdeling informeren of er interesse is bij een duurzamere optie als deze beschikbaar is. Dus dan kan het heel snel zijn dat ze nee zeggen, omdat ze tevreden zijn met de producten die ze nu hebben. Het enige wat je dan kunt doen is de afdeling aansporen om toch nog te kijken naar de duurzamere oplossing en het echt te overwegen voordat ze nee zeggen. Ik merk wel dat medewerkers elkaar echt stimuleren om er wel naar te kijken, maar je hebt ook situaties waarbij mensen tevreden zijn met wat ze nu hebben en hoe het nu gaat, dus dan zien ze het nut er niet van in om het te veranderen naar iets nieuws. Daarnaast heb je als ziekenhuis zijnde ook de richtlijnen waar je aan moet voldoen en de budgetten waar je binnen moet blijven, want vaak bij de inkoop zijn duurzamere varianten echt wel een stuk duurder.

### **Welke producten die worden ingekocht worden beschouwd in termen van duurzaamheidsaspecten? Kunt u enkele voorbeelden geven?**

We focussen momenteel voornamelijk op de disposables, want deze artikelen zijn vaak van plastic, dus dat wordt meestal één keer gebruikt en dan weggegooid, dus dat willen we heel graag verminderen. Bijvoorbeeld handschoenen, bakjes, bekertjes, etc. Op facilitair gebied moet je aan het restaurant denken, bijvoorbeeld de bakjes waar je het broodje op legt, alles in mokken doen, geen to-go bekers meer, want die zijn natuurlijk van papier/plastic, plastic schortjes die je één keer gebruikt en dan weggooit. Dus voornamelijk de doorloop artikelen die we gewoon erg veel gebruiken voor heel kort gebruik kijken we nu heel erg wat we daarmee kunnen doen om zo snel mogelijk duurzamere opties te vinden. Je ziet ook dat in dat gebied het erg snel verandert. We hebben daarnaast ook een groene OK. Daarin zit ook een collega die heel erg bewust is van duurzaamheid, maar hij probeert ook heel erg om alle disposables uit het systeem te krijgen. Iedere afdeling kijkt ook bij zichzelf wat mogelijk is om te veranderen en als je daar echt gedetailleerd naar gaat kijken dan zie je ook heel snel wat we met disposables proberen te doen. Maar het blijft wel zo dat de afdeling er zelf mee komt en dan ondersteunt inkoop het, dus het komt wel minder vanuit ons.

### **In hoeverre betreft de inkoopafdeling leveranciers en verkopers om hen aan te moedigen duurzame praktijken aan te nemen/duurzame producten te produceren?**

Ik denk dat we dit nu nog niet zo heel veel doen, omdat wij nog niet echt uitvragen hebben waarbij we naar duurzamer vragen. Daar gaan we dus nu op korte termijn pas mee beginnen en ik verwacht dat leveranciers ook gaan merken dat ze duurzaamheid moeten gaan meenemen in hun producten als ze zien dat onze aanvragen steeds duurzamer worden. En zoals ik zelf laatst heb gedaan, op het moment dat je marktverkenning gaat doen dat je er expliciet bij moet gaan zetten dat duurzaamheid een belangrijk aspect voor ons is geworden. Daarnaast kan je ook hele algemene vragen aan leveranciers stellen om erachter te komen wat er precies op hun markt speelt. Bij ons is het nu voornamelijk van belang dat we de leverancier bewust moeten maken dat we wel graag duurzamer willen handelen. Hopelijk motiveert dat de leverancier ook om bewuster te gaan produceren. We hadden laatst ook een situatie waarbij we een leverancier vertelden dat we willen verduurzamen. Vervolgens kwam hij daarop terug en hadden we drie intensieve meetings waarbij je met meerdere leveranciers en ziekenhuizen om tafel gaat zitten om te sparren over hoe je kunt verduurzamen. Dit initiatief kwam van de leverancier af. Dus het is vooral een kwestie van elkaar informeren en bewust maken van wat je nou precies wilt. Dit is hoe we het op dit moment doen.

### **Hoe blijft de inkoopafdeling op de hoogte van nieuwe duurzame inkooppraktijken en innovaties?**

Dit is ook iets waar we zelf nog erg naar opzoek zijn. Want we moeten nog een manier vinden om onszelf zo goed mogelijk geïnformeerd te houden, want in dat opzicht gaat de duurzame markt echt heel snel. Momenteel hebben we voornamelijk de best-price methode, waarbij we toch voornamelijk kijken naar de prijs/kwaliteit verhouding, maar voornamelijk met de nadruk op de prijs. Ik vind het zelf wel heel goed dat we de green teams hebben opgezet, waarvan wij ook een onderdeel uitmaken. Daarin zitten wel echt mensen die erg actief bezig zijn met wat er precies allemaal speelt op de markt en in de ziekenhuizen. Wij kijken wel naar manieren om nieuwe inkoopprojecten op te pakken, wij zorgen dus ook dat we daar nu duurzaamheid in meenemen. Maar we kijken ook naar eventuele aanpassingen in onze inkoopprocessen, zodat we leveranciers op een hele andere manier gaan beoordelen. Dus het is een kwestie van heel veel inlezen, naar beurzen en congressen gaan om te kijken wat er allemaal speelt, maar ook laten informeren door de kennis die er al is en door heel veel samen te zitten met je circulaire team. Want de duurzaamheidscoördinator is dus echt heel erg bezig om te kijken wat er allemaal op de markt speelt. En natuurlijk moeten wij ons verdiepen in het stukje van de inkoop, maar zij houdt ons wel bezig om te kijken wat dat precies inhoudt. Zo houdt ze me bijvoorbeeld via de mail op de hoogte van meetings over dit onderwerp. Dit is hoe we het momenteel aanpakken, maar het is ook goed voor ons om scherp te blijven kijken naar de kanalen die er zijn en welke daarvan de juiste informatie geven. Het voelt wel een beetje als het zoeken naar een speld in een hooiberg, maar dit is hoe we het nu doen.

### **Geloof u dat u, als inkoper, kunt helpen om de koolstofvoetafdruk van het ziekenhuis te verbeteren? Zo ja, hoe?**

Uiteindelijk geloof ik dat we daar indirect echt wel een rol in kunnen spelen. Zoals ik al eerder aangaf, we moeten voornamelijk afdelingen heel erg bewust blijven maken van het feit dat wij openstaan om hen te ondersteunen bij iets nieuws wat verduurzaming met zich meebrengt. Dus ja, ik denk echt wel dat wij daar als inkopers een rol in kunnen spelen. Voornamelijk dus door afdelingen bewust te maken van de wens om te verduurzamen of als we bijvoorbeeld iets moeten vervangen of ze willen iets nieuws op een afdeling, dat we dit wel meenemen in het traject van verduurzaming. Al verwacht ik wel dat het grootste verschil vanuit de afdelingen zelf zal komen. Aangezien zij met de producten werken en zij zijn wel de initiatiefnemers daarvoor. Daarnaast, op het moment dat wij een aanbeveling van een duurzamere variant vanuit de leverancier krijgen, sturen we dit ook door naar de desbetreffende afdeling. Alleen het lastige hieraan is dat we het alleen maar doorsturen en we hebben niet de positie om de afdeling echt te overtuigen om over te stappen, dit moeten zij uiteindelijk zelf bepalen. De mensen op de afdelingen zijn uiteindelijk degenen die de benodigde kennis hebben om een weloverwogen beslissing te nemen om wel of niet over te stappen, dus als zij aangeven met goede redenen dat ze niet gaan overstappen, dan gaan wij de discussie ook niet met hen aan.

### **Hoe balanceert de inkoopafdeling de behoefte aan kosteneffectiviteit met de wens om duurzame inkooppraktijken te implementeren?**

Momenteel is dit ook nog steeds een vraagteken bij onszelf, omdat we dit nog niet volledig doen op het moment. Wij moeten natuurlijk nog heel erg oppassen met wat we gaan uitgeven. Laatst hadden we met de kantoorartikelen dat een collega opmerkte dat we ook heel erg moeten gaan kijken naar de levenscyclus van artikelen. Een artikel kan bijvoorbeeld wel duurzamer geproduceerd zijn en eventueel hogere kosten hebben, maar dan moet je wel gaan kijken of dit dan langer of korter meegaat dan de huidige artikelen. Dus in dat opzicht is het erg zoeken naar wat de precieze invloed is op onze kosten. Daarnaast zijn we ook nog heel erg zoekende naar nieuwe projecten, dus we weten ook niet honderd procent zeker of het ook echt duurder is, want dit is niet zo vanzelfsprekend. Dus voor nu houden we ons eraan dat op het moment dat we zien dat een artikel duurzamer is en de kosten gelijk of lager zijn, dan maken we de stap om te veranderen. Maar voor onszelf moeten we daar ook een goed meetinstrument vinden om te kijken wat we nu precies besparen, zowel qua kosten als verduurzaming.

### **Zijn er de afgelopen jaren specifieke inkooppraktijken veranderd/toegevoegd om de productie en consumptie van medische voorzieningen en apparatuur duurzamer te maken? Zo ja, wat zijn de resultaten geweest?**

Ik denk dat ik hier een kort antwoord op heb: niet. Nu is dit een beetje lastig, aangezien ik hier sinds oktober werk, dus ik weet niet precies wat er hiervoor is gebeurd in dit gebied, maar ik heb wel gemerkt dat vanaf het moment dat ik hier gekomen ben het balletje heel erg is gaan rollen en er steeds meer aandacht naartoe is gegaan. Ik verwacht wel dat er met een schuin oog rekening mee is gehouden, maar het wordt nu nog niet honderd procent in inkoopprojecten meegenomen. Dus nee, we hebben het nog niet op die manier opgepakt zoals we het graag willen.

### **Hoe werkt de inkoopafdeling samen met andere afdelingen in het ziekenhuis om duurzaamheid te bevorderen, zoals afvalvermindering en energie-efficiëntie?**

Hier moest ik in het begin ook aan wennen, maar het ziekenhuis is dus opgedeeld in groepen. We hebben dus een groep waar contractmanagement onder valt. Maar we hebben ook een groep voor huisvesting die zich samen met inkoop bezighoudt met energieverbruik en dergelijke. Daarnaast afval, dat pakken we weer heel erg samen op met contractmanagement en een projectmanager die dus heel erg het contract aanhoudt met de partij en ook in de gaten houdt wat er allemaal speelt. Dus in dat gebied denk ik wel dat we echt wel een facilitaire rol aannemen. Als we iets zien wat ons interessant lijkt zijn we heel proactief en sturen we het naar de afdeling toe. Maar daarnaast willen we ook voor de afdelingen zelf heel laagdrempelig zijn om naar ons toe te komen mochten ze iets zien wat moet worden ingekocht en waarvan zij denken dat het een verbeterde oplossing is met betrekking tot duurzaamheid. Dus op dat moment gaan wij daar heel graag in mee. Dus de inkoopafdeling heeft met betrekking tot verduurzaming twee rollen: zenden en ontvangen. Maar voornamelijk het ontvangen en dan voor de afdelingen faciliteren om te kijken wat wij kunnen doen en dan het inkooptraject op te gaan zetten. Dat is in mijn ogen wel de grootste rol die wij hier aannemen. Blijven communiceren, spreek elkaars behoefte uit, houdt elkaar op de hoogte en zo hopen we een heel eind te komen.

## **8.6 Exhibit F: Interview Hospital B, English Version**

### **How does the purchasing department at the hospital prioritize sustainability when procuring goods and services?**

In the world of hospitals, sustainability has actually been somewhat pushed into the background, as if to say, "we are focused on providing care and we base our purchases on price and what we need," with minimal consideration for sustainability. Speaking specifically for Hospital B, we only made the decision to include sustainability about three months ago. So, for us, it is still in the very early stages. I must say, though, that we have initiated many projects within the hospital. However, as procurement, our role is to support the departments in purchasing specific products, ranging from machines to disposables, and so on. But we, as buyers, do not have our own budget because we do not provide patient care. Each department has its own allocated budget for annual spending, but as procurement, we do not have any costs aside from office supplies. This makes it difficult for our department to exert a lot of influence from a sustainability standpoint. However, we are starting a project on office supplies, so we will consider sustainability there. What we really try to encourage as procurement is to approach the departments with the message, "If you have any suggestions for more sustainable items, please come to us because we are eager to explore these options with you." And if a supplier says, "Hey, we have a sustainable product that might interest you," we always forward it to the relevant departments and ask if they can and want to do something with it. That is mainly the role we maintain, to stimulate a shift towards considering sustainability. However, it is challenging for our procurement department to make a distinction because of the lack of budget. But we will encourage departments to think about sustainable solutions themselves and relay those to us. Additionally, working groups are being established within the hospitals, known as "Green Teams." Each department examines possible improvements and what they can collectively achieve or learn from each other. Personally, I am part of the circular team, focusing on what we can do together for circularity, not only within the hospital but also with certain local parties, for example. However, we are still actively exploring the possibilities and options available to us.

### **How does the purchasing department evaluate suppliers for their sustainability practices and initiatives?**

We have procurement and contract management, and with contract management, supplier evaluation is also carried out, and we partly oversee that process. Currently, sustainability is not being actively considered because we have not incorporated it before. However, for example, we have an upcoming phase where waste management services need to be re-tendered, and there are aspects that we will consider. Currently, what we focus on is looking at certificates, certain criteria that suppliers must meet. We do want suppliers to come to us with their own innovative ideas, so we make sure to inquire about it in our procurement requests. However, assessing suppliers based on sustainability is something we are still searching for. In the hospital, we have budgets that we must adhere to, and sustainability does not always have to be more expensive, but we do see that it often comes with additional costs. In the end, the decision is often based on the available budget, which can compromise the more sustainable products. So, that aspect is still a bit uncertain. We do have scorecards that allow us to assess and remind suppliers of previously agreed-upon commitments during the service provision. For example, when we were exploring the market for flowers for internal use, I asked how we could incorporate sustainability as a hospital but still be able to evaluate suppliers effectively, so it would not solely depend on sustainability but it would still play a role. It was suggested that suppliers could meet certain criteria, with three levels on a barometer. These are small steps we can hold each other

accountable to. For instance, if we start a contract at the bronze level, we can agree to aim for silver in two years and gold in three years. So, we are exploring ways to involve and keep suppliers accountable in this regard.

**How does the hospital measure and track the impact of its sustainable procurement practices, and what metrics are used?**

This question is difficult to answer because we do not have that information at the moment. It also depends heavily on the type of service being procured. Additionally, we are still in the process of figuring out how to incorporate sustainability into our procurement decisions, so it is challenging to determine the exact impact at this time. We do have a sustainability coordinator in our hospital, and their role is primarily to track potential savings for us, including assessing things like carbon footprint. Although determining the impact is currently difficult, we do have someone who is actively trying to evaluate the benefits for our hospital.

**Are the suppliers actively working to produce sustainable products? Could you provide some examples?**

It is slowly becoming more prevalent, I can say that. Healthcare-related products can sometimes be challenging to make sustainable. Additionally, when a supplier manufactures a medical product such as implants, there is a significant time lag before it can even enter the Dutch market. So, even if they are producing something highly sustainable now, we will not see it here for a while. That makes it more difficult. However, we do see initiatives being established. For example, we had a supplier who wanted to take back and refurbish medical devices used in heart procedures, so they can be reused instead of being discarded. These types of initiatives exist, but the regulations surrounding them are very strict, making it harder to implement such initiatives. The company that initially provided the product would not repurchase it, but this was a different firm. So, if anything went wrong, the issue of responsibility and liability arose. From what I hear from colleagues, there is also an increasing focus on material usage and exploring alternatives. For example, with disposables, it is feasible to make the switch from plastic to almost 100% paper cups, but now we need to move away from paper, presenting a new challenge. However, we do notice that suppliers are eager to collaborate and find solutions to help the hospital comply with new regulations. They actively approach us with initiatives and new products that might offer better alternatives. For instance, they used to provide single-use products that had to be discarded, but now suppliers are increasingly exploring reusable alternatives themselves. So, in that regard, it is starting to grow steadily.

**What are the biggest challenges the purchasing department faces in implementing sustainable procurement practices in the hospital?**

We do not directly work with the products ourselves, so we have to inquire with each department if there is interest in a more sustainable option when it becomes available. It can quickly happen that they say no, because they are satisfied with the products they currently have. The only thing we can do then is encourage the department to still consider the more sustainable solution and give it serious thought before saying no. I do notice that employees motivate each other to consider it, but there are also situations where people are content with what they currently have and how things are, so they do not see the value in changing to something new. Additionally, as a hospital, we have guidelines to adhere to and budgets to work within, and often, more sustainable options in procurement are indeed more expensive.

**Which products are purchased considered sustainability aspects? Could you provide some examples?**

We are currently primarily focusing on disposables, because these items are often made of plastic, typically used once and then discarded, so we really want to reduce that. For example, gloves, containers, cups, etc. On the facility side, you have to think about the restaurant, such as the trays used for sandwiches, transitioning everything to mugs instead of to-go cups because those are typically made of paper/plastic, replacing single-use plastic aprons. So, mainly, we are closely examining the consumable items that we use for very short durations and looking for sustainable options as quickly as possible. You can also see that this area is changing rapidly. Additionally, we have a "green OR" (operating room) where a colleague is very conscious of sustainability and actively trying to eliminate all disposables from the system. Each department also looks at itself to see what changes are possible, and if you examine it in detail, you can quickly see what we are trying to do with disposables. However, it remains that the department initiates the changes, and then procurement supports them, so it is not primarily driven by us.

**To what extent does the procurement department engage with suppliers and vendors to encourage them to adopt sustainable practices/produce sustainable products?**

I do not think we are doing this a lot right now because we have not explicitly asked for sustainability in our requests. We are only starting to incorporate sustainability into our procurement requests in the near future, and I expect suppliers will also realize that they need to consider sustainability in their products as they see our requests becoming more sustainable. As I recently did myself, when conducting market research, it is important to explicitly state that sustainability has become a significant aspect for us. Additionally, you can ask suppliers general questions to find out what is happening in their market. For us, it is currently crucial to make suppliers aware that we want to act more sustainably. Hopefully, this will motivate them to produce more consciously. We recently had a situation where we informed a supplier about our sustainability goals. As a result, the supplier came back to us, and we had three intensive meetings with multiple suppliers and hospitals to discuss how to become more sustainable. This initiative came from the supplier. So, it is primarily a matter of informing and raising awareness among each other about what exactly we want. This is how we are currently approaching it.

**How does the purchasing department stay up-to-date on new sustainable procurement practices and innovations?**

This is also something we are actively seeking ourselves. We need to find a way to keep ourselves as informed as possible, because the sustainable market is evolving very rapidly in that regard. Currently, we primarily use the best-price method, where we mainly consider the price-to-quality ratio, but with a stronger emphasis on price. Personally, I think it is great that we have established green teams, of which we are also a part. They consist of individuals who are actively engaged in understanding what is happening in the market and in hospitals. We are exploring ways to incorporate sustainability into new procurement projects. We are also considering potential adjustments to our procurement processes to evaluate suppliers in a completely different way. It involves a lot of reading, attending trade shows and conferences to see what is happening, but also gaining knowledge from existing resources and collaborating extensively with

our circular team. Our sustainability coordinator is dedicated to keeping abreast of market developments. While we must delve into the procurement aspect, she keeps us informed about the specific details. For example, she keeps me updated on meetings related to this topic through email. This is how we are currently approaching it, but it is important for us to remain vigilant in assessing the channels that provide the most accurate information. It can feel like searching for a needle in a haystack, but this is how we are doing it now.

**Do you believe that you, as a purchaser, could help improve the carbon footprint of the hospital, if yes then how?**

Ultimately, I believe we can play an indirect role in that. As I mentioned earlier, our main focus should be on continuously raising awareness among departments that we are open to supporting them in adopting new sustainable practices. So yes, I do think we, as purchasers, can play a role in this. Primarily, it involves making departments aware of the desire to promote sustainability, whether it is during the replacement of existing items or when they express a need for something new. We need to incorporate sustainability considerations into those processes. However, I do expect that the biggest difference will come from the departments themselves since they work directly with the products and are the ones who initiate such changes. Additionally, when we receive a recommendation from a supplier for a more sustainable alternative, we pass it on to the respective department. However, the challenge here is that we can only provide the information, and we do not have the authority to convince the department to switch. Ultimately, they must make that decision themselves. The individuals in the departments possess the necessary knowledge to make an informed choice about whether or not to transition. If they provide valid reasons for not making the switch, we will not engage in a debate with them.

**How does the purchasing department balance the need for cost-effectiveness with the desire to implement sustainable procurement practices?**

Currently, this is still a question mark for us because we have not fully implemented it yet. We still need to be cautious about our expenditures. Recently, a colleague pointed out that we also need to consider the lifecycle of products when it comes to office supplies. For example, a product may be produced in a more sustainable way and potentially have higher costs, but we need to assess whether it lasts longer or shorter than our current items. Therefore, we are actively searching for the precise impact on our costs. Additionally, we are still exploring new projects, so we are not entirely certain if they will actually be more expensive, as it is not always the case. Currently, our approach is that if we identify a product as more sustainable and the costs are equal to or lower than our current options, we make the switch. However, we also need to find a reliable measurement tool to assess the savings in terms of both costs and sustainability.

**Are there any specific purchasing practices that have changed/been added over the past years to make the production and consumption of medical provisions and equipment more sustainable?**

**FOLLOW UP: If so, what have been the outcomes?**

I think I have a short answer to this: no. Now, this is a bit tricky because I have been working here since October, so I am not exactly aware of what happened in this area before that. However, I have noticed that since I arrived, there has been a lot of momentum and increasing attention towards sustainability. I do expect that it has been considered to some extent, but it is not yet fully integrated into procurement projects. So, no, we have not approached it in the way we would like to just yet.

**How does the purchasing department work with other departments in the hospital to promote sustainability, such as waste reduction and energy efficiency?**

In the beginning, I also had to get used to this, but the hospital is divided into groups. We have a group that handles contract management. But we also have a group for facilities management, which works together with procurement on energy consumption and related matters. Additionally, waste management is a joint effort involving contract management and a project manager who oversees the contract and monitors developments. So, in that area, I do believe we play a significant facilitative role. When we come across something that seems interesting, we are proactive in sending it to the respective department. Moreover, we want to be easily accessible for the departments themselves if they identify something that needs to be procured and they believe it offers an improved sustainable solution. At that point, we gladly engage in the process. Therefore, the procurement department has two roles in sustainability: sending and receiving. However, the receiving role, facilitating the departments by exploring what we can do and initiating the procurement process, is the primary role we assume here. By maintaining communication, expressing each other's needs, and keeping each other informed, we hope to make significant progress.

## **8.7 Exhibit G: Interview Hospital C, Dutch Version**

**Hoe prioriteert de inkoopafdeling van het ziekenhuis duurzaamheid bij het inkopen van goederen en diensten?**

We overwegen verschillende aspecten bij het implementeren van duurzaamheid. Dit omvat het beoordelen van de milieueffecten van producten, het overwegen van energie-efficiëntie, het geven van voorkeur aan leveranciers met duurzame praktijken, en het selecteren van producten met een langere levensduur om afval te verminderen. Daarnaast hebben we Green Teams in ons ziekenhuis, dit zijn teams met een milieu-focus uit elke afdeling die voortdurend op zoek zijn naar meer duurzame producten en innovaties. Bovendien staan we open voor informatie over duurzame opties vanuit de verschillende afdelingen in het ziekenhuis, maar wij als inkopers sturen ook informatie naar die afdelingen zodra we die van onze leveranciers ontvangen. De afdelingen hebben dan het zogenaamde vetorecht als het gaat om beslissen of ze wel of niet overstappen op die opties. We stellen onszelf ook regelmatig de vraag of we de huidige voorraden echt nodig hebben of dat we zonder zouden kunnen.

**Hoe evalueert de inkoopafdeling leveranciers op hun duurzaamheidspraktijken en initiatieven?**

Dit omvat het beoordelen van leveranciersdocumentatie, certificeringen en rapporten met betrekking tot duurzaamheid. De afdeling kan ook in gesprek gaan met leveranciers over hun duurzaamheidsinspanningen en feedback zoeken bij andere ziekenhuizen binnen dezelfde ziekenhuisgroep. Bovendien onderzoeken we het gebruik van de Milieuthermometer voor ons ziekenhuis, maar we hebben het nog niet ondertekend. Ik probeer ook altijd naar het verleden van de leveranciers te kijken, maar dit gaat niet altijd even makkelijk.



### **Hoe meet en volgt het ziekenhuis de impact van zijn duurzame inkooppraktijken, en welke meetgegevens worden gebruikt?**

De gebruikte meetgegevens omvatten het volgen van verminderingen in energieverbruik, afvalproductie en uitstoot van broeikasgassen. We hebben echter een duurzaamheidscoördinator die deze zaken in de gaten houdt en ikzelf ben niet echt op de hoogte van de actuele informatie. Afgezien hiervan is het vermeldenswaardig dat we pas sinds maart van dit jaar rekening zijn gaan houden met duurzaamheid. Daarom proberen we nog steeds uit te zoeken hoe we alles correct kunnen meten, maar dit brengt zeker uitdagingen met zich mee.

### **Werken de leveranciers actief aan het produceren van duurzame producten? Kunt u enkele voorbeelden geven?**

Sommige van onze leveranciers worden actief aangemoedigd om duurzame producten te produceren. Echter, de meer duurzame opties zijn doorgaans duurder. Daarom hebben we nog enige moeite, aangezien de inkoopafdeling slechts de tussenpersoon is in het gehele proces. We hebben geen eigen budget, maar moeten ons houden aan het budget van elke afzonderlijke afdeling. De laatste tijd hebben we ons voornamelijk gericht op het verduurzamen van facilitaire producten, zoals het verminderen van het gebruik van papier en wegwerpartikelen, en het zoeken naar leveranciers die meer duurzame transportmethoden gebruiken.

### **Wat zijn de grootste uitdagingen waarmee de inkoopafdeling wordt geconfronteerd bij het implementeren van duurzame inkooppraktijken in het ziekenhuis?**

Ten eerste zijn de producten niet altijd direct beschikbaar op de Nederlandse markt, dus zouden we nog enkele maanden moeten blijven werken met de huidige producten. Ten tweede, aangezien duurzaamheid een nieuw criterium voor ons is sinds dit jaar, is het moeilijk te bepalen welke producten daadwerkelijk duurzamer zijn en welke uiteindelijk gelijkwaardig of zelfs slechter zijn. Ook moeten we rekening houden met de levensduur van de producten. Als bijvoorbeeld een duurzamer product slechts de helft van de tijd meegaat, is het dan nog steeds duurzamer? Bovendien hebben we niet de benodigde expertise over medische apparatuur, zoals de mensen die er daadwerkelijk mee werken wel hebben, dus blijft het moeilijk om te beslissen of het een goede optie is. Ten slotte verloopt de communicatie tussen de afdelingen goed, maar er werken nog steeds veel mensen die het nut van overstappen op een duurzamere optie niet inzien. Aangezien de afdeling het laatste woord heeft in de beslissing, maakt dit het soms moeilijk om veranderingen door te voeren. We blijven de afdelingen aanmoedigen en sturen duurzame opties naar hen toe, maar we hopen dat ze in de toekomst minder weerstand zullen hebben tegen verandering. Het budget is ook een probleem, omdat duurzame producten doorgaans duurder zijn dan de producten die we nu gebruiken.

### **Welke producten die worden ingekocht, worden beschouwd in termen van duurzaamheidsaspecten? Kunt u enkele voorbeelden geven?**

Zoals ik eerder zei, hebben we ons voornamelijk gericht op het verminderen van het gebruik van wegwerpproducten die niet medisch gerelateerd zijn. We hebben de beslissing genomen om onze printgewoonten te verminderen om papierafval te besparen. Bovendien gebruiken we nu papieren bekertjes in plaats van plastic bekertjes, sommige mensen brengen zelfs hun eigen mokken van huis mee. In het restaurant hebben we ook enkele veranderingen doorgevoerd, bijvoorbeeld door gewone borden te gebruiken voor mensen die daar willen eten, in plaats van papieren borden uit te delen zoals we vroeger deden. Hetzelfde geldt voor de koffiebekers, we gebruiken nu mokken in plaats van meeneembekers. Eigenlijk hebben we op onze eigen verdieping nu een tweedehands koffiemachine in plaats van een nieuwe. Er zijn meer voorbeelden, maar we hebben een beetje haast, dus je moet vooral denken aan wegwerpartikelen en facilitaire producten.

### **In hoeverre betreft de inkoopafdeling leveranciers en verkopers om hen aan te moedigen duurzame praktijken aan te nemen/duurzame producten te produceren?**

De inkoopafdeling gaat actief de dialoog aan met leveranciers en verkopers om hen aan te moedigen duurzame praktijken over te nemen en duurzame producten te produceren. We blijven onze verzoeken naar leveranciers sturen om hen bewust te maken van onze focus op duurzaamheid. We hopen dat zij als gevolg hiervan ook meer aandacht gaan besteden aan duurzaamheid en hun producten dienovereenkomstig verbeteren. Sommige leveranciers zijn hier al actief mee bezig, maar anderen hebben nog geen veranderingen doorgevoerd.

### **Hoe blijft de inkoopafdeling op de hoogte van nieuwe duurzame inkooppraktijken en innovaties?**

Zoals eerder vermeld, sturen mijn collega's en ik voortdurend verzoeken naar onze leveranciers voor meer duurzame producten. Daarom doen zij ook hetzelfde door ons suggesties te sturen voor nieuwe producten die we mogelijk kunnen gebruiken. Bovendien zijn de Green Teams een manier waarop onze afdeling op de hoogte blijft. Mijn collega is de vertegenwoordiger van onze afdeling en stuurt ons altijd relevante informatie die tijdens de vergaderingen is besproken. Daarnaast neemt deze collega ook deel aan conferenties en andere evenementen over duurzaamheid en de ontwikkelingen op dat gebied.

### **Gelooft u dat u, als inkoper, kunt helpen om de koolstofvoetafdruk van het ziekenhuis te verbeteren? Zo ja, hoe?**

Kort antwoord: ja. Ik geloof dat onze afdeling een verschil kan maken doordat we voortdurend nieuwe duurzame producten blijven aanvragen bij zowel de leveranciers als de afdelingen. Daarnaast blijf ik bewustzijn creëren over dit concept bij mijn collega's. Uiteindelijk ligt de keuze om over te stappen nog steeds bij de afdelingen zelf, maar ik ben hoopvol dat hoe bewuster ze worden, hoe flexibeler ze zullen worden.

### **Hoe balanceert de inkoopafdeling de behoefte aan kosteneffectiviteit met de wens om duurzame inkooppraktijken te implementeren?**

Dit is nog steeds erg moeilijk voor ons om te doen, omdat we ons moeten houden aan de jaarlijkse budgetten van de afdelingen. Zoals ik eerder al zei, duurzame producten zijn niet altijd duurder, maar meestal wel. Daarom is het moeilijk voor ons om het te zien als een goede vervanging, zelfs als het product zelf geweldig zou zijn. Daarnaast moeten we rekening houden met de instemming van de afdelingen, wat de overgang ook niet gemakkelijker maakt. Omdat we nog niet beschikken over de juiste meetgegevens om de duurzaamheidsscore te bepalen en de prijs van nieuwe producten te vergelijken met hun levensduur en daardoor te beslissen of het de moeite waard is, hebben we hier nog steeds veel moeite mee.

**Zijn er de afgelopen jaren specifieke inkooppraktijken veranderd/toegevoegd om de productie en consumptie van medische voorzieningen en apparatuur duurzamer te maken?**

**VERVOLG: Wat zijn de resultaten geweest?**

Ik denk het niet. Ik werk hier al een paar jaar, maar dit jaar is de eerste keer dat ik merk dat mensen zich meer gaan richten op duurzaamheid. Zoals ik al zei, zijn we op dit moment vooral gericht op het veranderen van wegwerpartikelen en facilitaire producten, en het doorvoeren van veranderingen in de personeelsafdelingen, zoals de tweedehands koffiemachine. Maar er moet nog veel meer veranderd worden.

**Hoe werkt de inkoopafdeling samen met andere afdelingen in het ziekenhuis om duurzaamheid te bevorderen, zoals afvalvermindering en energie-efficiëntie?**

De inkoopafdeling werkt nauw samen met andere afdelingen. Deze samenwerking omvat het delen van informatie en beste praktijken, het uitvoeren van gezamenlijke initiatieven en campagnes, en het opzetten van interdisciplinaire teams om duurzaamheidsuitdagingen aan te pakken, voornamelijk in de vorm van de Green Teams, aangezien die aanwezig zijn in elke afdeling. We werken ook samen met de afvalafdeling om mogelijkheden voor veranderingen te onderzoeken. Bovendien spreekt de duurzaamheidscoördinator regelmatig met ons over ontwikkelingen en mogelijkheden, waarna we hier verder naar kijken. Tot slot hebben we de rol om informatie van zowel leveranciers als afdelingen te verkrijgen en deze vervolgens naar beide partijen te sturen. Daarom communiceren we voortdurend met hen over dit onderwerp.

## **8.8 Exhibit H: Interview Hospital C, English Version**

**How does the purchasing department at the hospital prioritize sustainability when procuring goods and services?**

We are considering various aspects while trying to implement sustainability. These include trying to assess the environmental impact of products, considering energy efficiency, favoring suppliers with sustainable practices, and selecting items with a longer lifespan to reduce waste. Aside from that we have Green Teams at our hospital, those are environmentally focused teams from each department who keep looking for more sustainable products and innovations. Furthermore, we are open to receive information about sustainable options from the departments in the hospital, but we as purchasers also send the information to those departments once we receive it from our suppliers. The departments then have the veto right, so to speak, when it comes down to deciding to whether or not to switch to those options. We also keep asking ourselves whether we really need the current supplies or if we could do without.

**How does the purchasing department evaluate suppliers for their sustainability practices and initiatives?**

This involves reviewing supplier documentation, certifications, and reports related to sustainability. The department may also engage in discussions with suppliers about their sustainability efforts, and seek feedback from other hospitals from the same hospital group. Furthermore we are looking into the use of the Environmental Thermometer for our hospital, but we have not yet signed it. I also always try to look into the past performance of the suppliers, but this is not always clear.

**How does the hospital measure and track the impact of its sustainable procurement practices, and what metrics are used?**

The metrics include tracking reductions in energy consumption, waste generation, and greenhouse gas emissions, however we have a sustainability coordinator who keeps track of these things and I myself am not really up-to-date on the current information. Aside from this, it is worth mentioning that we only started taking sustainability into account around March this year, so therefore we are still trying to figure out how to measure everything correctly, but this certainly has its challenges.

**Are the suppliers actively working to produce sustainable products? Could you provide some examples?**

Some of our suppliers are actively encouraged to produce sustainable products. However, the more sustainable options are usually more expensive. Therefore we still have some trouble, since the purchasing department is simply the middle man in the entire process. We do not have our own budget, but have to adhere to the budget of each separate department. Lately, we have mostly been focusing on making the facilitative products more sustainable, such as using less paper, disposables, and looking for suppliers that use more sustainable transportation methods.

**What are the biggest challenges the purchasing department faces in implementing sustainable procurement practices in the hospital?**

Firstly, the products are not always directly available on the Dutch market, therefore we would still have to continue using the current ones for a few months. Secondly, since sustainability is a new criteria for us since this year, it is hard to determine which products are actually more sustainable and which ones will end up being the same or worse. Also, we have to take the life span of the products into account. For instance, if a more sustainable product only lasts half the time, is it still more sustainable? Furthermore, we do not have the required expertise about medical equipment as the people actually working with it do, therefore it remains hard to decide whether or not it is a good option. Lastly, the communication between the departments is going well, but there are still quite a lot of people working in them who do not see the point of switching to a more sustainable option. Since the department has the last word on the decision, this makes it sometimes quite hard to change. We do keep encouraging and sending the sustainable options to the departments, but we are hoping they will become less resistant to change in the future. The budget is also a problem, because, as I mentioned, sustainable products are usually more expensive than the ones we are using now.

**Which products are purchased considered sustainability aspects? Could you provide some examples?**

As I said before, we have mostly been focused on eliminating the use of disposable products that are not medical related. We have made the decision to reduce our printing habits in order to save paper waste. Furthermore, we are now using paper cups instead of plastic ones, some people are even bringing their own mugs from home. In the restaurant we have also made some changes, for instance by using regular plates for people who want to eat there, instead of giving out paper plates as we used to do before. The same goes for the coffee cups, we now use mugs instead of to-go cups. Actually, on our own floor, we now have a second hand coffee machine instead of a new one. There are more examples, but we are a little short on time, so you should mostly think about the disposables and facilitative products.

**To what extent does the procurement department engage with suppliers and vendors to encourage them to adopt sustainable practices/produce sustainable products?**

The procurement department actively engages with suppliers and vendors to encourage them to adopt sustainable practices and produce sustainable products. We keep sending suppliers our requests in order to make them aware of our focus on sustainability. We hope that they, as a result, will also start to focus on it more and improve their products accordingly. Some suppliers are already active in doing this, but some have not changed yet.

**How does the purchasing department stay up-to-date on new sustainable procurement practices and innovations?**

As mentioned before, me and my colleagues keep sending out requests for more sustainable products to our suppliers. Therefore, they are also returning the favor by sending us suggestions on new products that we could potentially use. Furthermore, the Green Teams is a way our department stays up-to-date. My fellow colleague is the representative from our department, but he always sends us the information discussed that might be relevant for us. Aside from that, this colleague I just mentioned also attends conferences etc. about sustainability and its developments.

**Do you believe that you, as a purchaser, could help improve the carbon footprint of the hospital, if yes then how?**

Short answer: yes. I do believe our department can make a change in the sense that we keep requesting new sustainable products from both the suppliers and the departments. Also, I keep spreading awareness about this concept to my fellow colleagues. In the end, the choice to transition is still on the departments themselves, but I am hopeful that the more aware they get, the more flexible they will become.

**How does the purchasing department balance the need for cost-effectiveness with the desire to implement sustainable procurement practices?**

This is still very hard for us to do, since we have the departments' annual budgets to adhere to. Like I said before, sustainable products are not always more expensive, but usually that is the case. Therefore, it is hard for us to see it as a good replacement, even if the product itself would be great. Aside from that we have to deal with the consent of the departments, which also does not make it any easier to transition. Since we do not have the correct metrics yet to measure the sustainability rate and compare the price of the new products with their life span and therefore decide if it is worth it, we are still very much struggling with this.

**Are there any specific purchasing practices that have changed/been added over the past years to make the production and consumption of medical provisions and equipment more sustainable? FOLLOW UP: If so, what have been the outcomes?**

I do not think so. I have been working here for a few years already, but this year is the first time I notice people are starting to become more focused on sustainability. As I said, we are mostly focused on changing the disposables and facilitative products at the moment and making changes in the personnel departments, such as the second hand coffee machine. But there is still a lot more to be changed.

**How does the purchasing department work with other departments in the hospital to promote sustainability, such as waste reduction and energy efficiency?**

The purchasing department works closely with other departments. This collaboration involves sharing information and best practices, conducting joint initiatives and campaigns, and establishing cross-functional teams to address sustainability challenges, mostly in the form of the Green Teams, since those are present in each department. We are also working with the waste department in order to see possibilities for changes there. Furthermore, the sustainability coordinator also regularly speaks to us about developments and possibilities, so we look into those more after she has informed us. Finally, we have the role of getting information from both suppliers and departments and sending that to both parties afterwards. Therefore, we are constantly communicating with them as well about this.