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EMAS

VERIFIED
ENVIRONMENTAL
MANAGEMENT

SUCCESS STORY

NÚSCH, a.s.

September 2024



NÚSCH, a.s.

The National Institute of Heart and Vascular Diseases, a. s. (NÚSCH, a.s.) is one of the most modern and best equipped hospitals in Slovakia. It is a state organisation that provides specialized health care, conducts basic and applied clinical research and provides education and training of students at Comenius University in Bratislava and postgraduate medical students at the Slovak Medical University (SZU). The Children's Cardiac Centre – SR, a part of NÚSCH, a. s. is the only specialised facility in Slovakia that provides treatment for children with congenital and acquired heart defects.

Industry: Healthcare

Size: 1045 employees

Date: EMAS registered since 2021

The organization traces its origins back to 1979, but a major advancement was the construction of a new building, to which the Institute of Heart and Vascular Diseases relocated in June 1997. Another major progress was the construction of a new pavilion for the Children's Cardio Center and the extension of the Diagnostic Center in 2021. The new centre is equipped with the most modern examination and treatment technology and provides 242 beds in the adult section and 40 beds in the children's section. With over 1.000 employees, the institute serves as a crucial center for advanced medical care in the country.



What is your approach towards sustainability?

NÚSCH, a.s. is committed to sustainability, which is reflected in its adoption of EMAS. This transition has enabled the hospital to enhance its sustainability practices, ultimately improving the quality of healthcare services. The hospital's comprehensive sustainability strategy includes energy efficiency, waste management, and sustainable procurement. EMAS has reinforced NÚSCH's dedication to these principles, driving continuous improvement and fostering active stakeholder engagement. This commitment emphasizes the significant role EMAS plays in the healthcare sector by integrating environmental considerations into the hospital's core operations, which contributes to better patient care and overall community health.

societal change. By caring for the environment while caring for people, the hospital is contributing step by step to the "One Health" approach which emphasizes the interconnectedness of human, animal, and environmental health.

NÚSCH, a.s. cooperates with a wide range of suppliers who can significantly influence its environmental behaviour. Thanks to EMAS, the hospital has further implemented various practices to minimise the risk of negative impacts on its value chain, such as regularly assessing the performance of suppliers and involving them in its environmental management initiatives.

By implementing EMAS, NÚSCH, a.s. has realized significant improvements in energy efficiency, waste reduction, and staff engagement in environmental practices, thereby enhancing



Why did your company join EMAS?

NÚSCH, a.s. has been ISO 14001 certified since 2010 and decided to switch to EMAS in 2021 with the ambition to ensure sustainable development and a level of healthcare provision comparable to the world's leading facilities. It was the first and so far, the only healthcare organisation to register for EMAS in the Slovak Republic. This pioneering move has positioned the hospital at the forefront of the healthcare sector in Slovakia. By adopting EMAS, the hospital has been able to develop and improve the quality of its services while minimising negative environmental impacts. The organisation is committed to the protection and safety of patients and staff, as well as the residents of the city. These key stakeholders are also involved in the hospital's environmental awareness raising activities. As a health service provider, NUSCH a.s. has a strong social orientation. Through EMAS the organisation has identified motivational and educational elements that help influence the behaviour of health workers both within and outside their working environment. This approach serves as a catalyst for



Main results so far?

The structured system of indicators and monitoring embedded in EMAS helps NUSCH, a.s. to continuously evaluate the level of environmental quality of the services provided, better understand the relevance of its environmental aspects and impacts, improve its performance over time and maintain transparency. The primary objectives have focused on reducing negative environmental impacts, particularly in energy and waste management, resulting in substantial cost savings. In particular, gas consumption was reduced by more than 1% during the evaluated period 2021-2023 while water consumption decreased up to 30% in 2023 compared to 2020.

Additionally, fuel consumption and related emissions were reduced by 20% from 2020 to 2023 through optimized supplier deliveries and a reduced vehicle fleet. Moreover, the hospital has promoted an active and environmentally friendly commuting system for employees by building a bicycle shelter, with all 20 places consistently in use.

After energy consumption and transportation, the consumption of medicines is one of the main environmental impacts of a healthcare facility. Between 2022 and 2023, NÚSCH, a.s. managed to implement a system for exchanging un-consumed medicines between departments of the hospital. Through weekly checks of medicine expiry dates and subsequent replacement by individual pharmacies, the hospital has successfully reduced the volume of discarded medicines by nearly 6%. This represents a reduction of 111 kg of discarded quantity in 2023 compared to 2020.

Digitalisation is increasingly transforming the health sector by reducing the need of documents and forms. However, this potential is not fully realized due to legal requirements mandating that patient records must be kept in physical form. Despite this constraint, the hospital achieved a 20% reduction in paper consumption per employee in 2023 compared to 2021. Unwanted paper is collected, shredded and handed over to a recycling company which uses the recycled paper to produce hygiene products. Waste separation takes place directly in the rooms of patients, with patients receiving instructions upon admission. The hospital has seen an upward trend in recyclable waste due to the increasing categories for recyclable materials.

Recognizing the growing evidence of the health benefits of nature, the organisation carries out activities that foster connection with nature and raise awareness about the relevance of biodiversity. On International Children's Day, NUSCH, a.s. organises a gardening event for children and parents in collaboration with a gardening partner. It has also contributed with other partners to local reforestation projects. To enhance the limited space of park greenery, the hospital has introduced portable containers in areas unsuitable for natural planting. Efforts such as creating a vegetated roof on the children's cardio centre, establishing a herb garden and adding greenery of the inner area exemplify the hospitals initiative to provide green spaces to patients, staff and visitors. The organic waste from the gardening activities is shredded, composted and re-used as fertilizer in the gardens.

Improving its environmental performance and proactively managing risks and opportunities through EMAS, NUSCH, a.s., is better prepared to tackle future challenges, including those related to climate change.



What do you have in mind for the future?

In the near future, NÚSCH, a.s. expects to further reduce its environmental impact through two key projects. First, the installation of photovoltaic panels between 2025 and 2026 to increase energy autonomy and promote the use of renewable energy. The project will meet approximately 30% of the current energy demand and significantly lower greenhouse gas emissions associated with electricity consumption. Second, the hospital plans to recover its own biodegradable kitchen waste using an electric composter. The processing will result in a sanitized compost that will be used in the garden. This will help to circulate the flow of waste and avoid transporting waste for processing. On average, the hospital generates 4.000 - 4.500 kg of biodegradable kitchen waste per month.

NÚSCH, a. s., in cooperation with the Ministry of Health, wants to go beyond its borders and extend its medicine exchange system to other hospitals throughout Slovakia. This ambitious initiative aims to address this issue with a global perspective, aiming to significantly reduce the volume of discarded medicines across the country. By optimizing the availability and distribution of medications, the project aims to strengthen the entire healthcare system, making it more resilient and efficient in managing medical resources.

In order to make progress in reducing the environmental impact of the sector, it is crucial to share information, experiences and good practices.

How to exchange on best practices:

<https://greenbestpractice.jrc.ec.europa.eu/>

How to join EMAS:

https://green-business.ec.europa.eu/eco-management-and-audit-scheme-emas/join-emas_en#join-emas

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