



PHILIPS

Sustainability

Rijnstate Hospital, the Netherlands

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Driving sustainability at Rijnstate through green healthcare services

An increasing number of hospitals around the world are running green sustainability programs while recognizing that public health and a healthy planet go hand-in-hand. In doing so they are acknowledging that cutting back on waste and driving for responsible use of scarce resources can help achieve significant cost savings.

Philips is supporting Rijnstate Hospital in Arnhem, the Netherlands with a green healthcare program. One of the outcomes so-far is that Philips has been able to determine that Rijnstate is saving about 64,000 kWh of electricity annually by powering imaging systems off after hours.

The saving is the equivalent impact of a one-off 135,000 Euro* investment in solar panels.

Annual energy savings
equivalent to a one-off
135,000 Euro* investment
in solar panels



Need

Rijnstate wanted to make cost savings to its organization focusing on its medical equipment and energy usage.

Goals

To collaborate with Philips and realize its sustainability ambitions with services such as reducing the electricity consumption of medical imaging equipment, take-back and recycling of used equipment and sustainability project management.

Facts and figures

- About 64,000 kWh of electricity saved on an annual basis
- Used systems parts harvested for reuse in Switzerland
- Energy savings made throughout Rijnstate
- Raised awareness with Rijnstate's sustainability contributions
- Multi stakeholder alignment on priority sustainability initiatives
- Linking Philips healthy living expertise to opportunities in the hospital setting

*Estimates based on Netherlands government data

With the global population expected to increase by more than 2 billion by 2050 new pressures are being exerted on the world's resources. Research suggests that Europe's resource productivity could grow by 3% annually through the benefits of a circular economy.

Many hospitals have started to find ways to make adjustments which will enable them to function in a long-term, sustainable way. A significant part of each hospital's environmental footprint is the use and upkeep of medical devices. Decision makers are now actively pursuing actions to limit waste and save costs to their operations.

Green Healthcare collaboration

Rijnstate hospital in the Netherlands has partnered with Philips for 10 years. It runs an active sustainability program and is the first fair trade hospital in the country, with an ambition to cut its CO2 emissions in half by 2020 compared to 2006.

Philips has expanded its service portfolio for Rijnstate with new Green Healthcare services: assessing energy saving opportunities for medical imaging equipment; take-back and repurposing of medical imaging equipment; and, sustainability project management. These services add a new dimension to a 10-year partnership agreement that Rijnstate and Philips started in 2010 for the delivery, installation and implementation of imaging equipment.

In 2016 Rijnstate and Philips started a Green Healthcare collaboration with an analysis of possibilities for reducing electricity consumption of medical imaging equipment.

“Strategic partnerships between care providers and innovative health technology companies is key to improve healthcare and to make it more affordable and sustainable. The collaboration with Philips is giving a new boost to our sustainability program”

Carolien Kock, Environmental Advisor at Rijnstate

Promoting medical device reuse

Back in 2001 Philips installed a Magnetic Resonance Imaging (MRI) system in the radiology department at Rijnstate hospital. This advanced system was operational until early 2015, by which time it had been used to examine more than 50,000 patients. Thanks to regular maintenance and interim upgrades carried out by Philips, this system was in full use for approximately 14 years.

In 2015, Philips replaced the system with a new-generation system that is better suited to Rijnstate's present-day clinical needs. Philips took back the old system and, in accordance with the principles of the circular economy, harvested as many parts as possible for reuse.

Philips has set up a systems refurbishment plant based in Best, the Netherlands, specifically designed for this purpose, giving it a competitive advantage over its competitors. Some parts of the obsolete system from Rijnstate will be used as spare parts, others have been used to build a refurbished MRI system that is now in operation in a private clinic in Switzerland.

Focusing on energy savings

Philips supplies a large proportion of the imaging systems at Rijnstate hospital. As well as MRIs, the CT, ultrasound and X-ray systems that the hospital deploys consume the same amount of electricity as around 250 households per year.

As part of the Green Healthcare collaboration Rijnstate and Philips looked for ways to save energy when using these systems, holding interviews with users and technical experts at the hospital. It became clear that employees were willing and keen to focus more on saving energy, and that they are currently not able to see how much energy is being consumed by the systems and the hospital. Philips is able to provide insight in energy use of the systems, by combining technical specifications of the systems and utilization data and also by temporary metering.

It is already common practice for medical systems to be switched off – where possible – at the end of the working day, especially when these systems are used all day long by small, regular teams. The investigations also showed that it is not always clear to employees how and when systems can be switched off and that there is no attention devoted to this in training.

Real-time energy consumption

An evening control round showed that employees in the radiology department at Rijnstate are very disciplined when it comes to switching systems off at the end of the working day.

If the findings of this control round are representative of the year as a whole, then switching the systems off is saving the department about 64,000 kWh of electricity on an annual basis, which is an equivalent impact of a one-off 135,000 Euro* investment in solar panels.

Philips has decided to devote more attention to energy savings in its operating manuals and to continue implementing energy savings through its product designs.

Together with Rijnstate it will also be investigating smart ways to enable users to see in real time how much energy is being consumed and will now explore possibilities for circular lighting in Rijnstate hospital corridors, pay-for-use models for small equipment such as ultrasound transducers and IV pumps and promoting the healthy use of escalators for visitors, patients and staff instead of energy consuming elevators.

