Quality and Safety in the Martini Hospital Safeguarded in Ultimo

The Martini Hospital is a specialised clinical teaching hospital where 2900 employees, 170 medical specialist and 350 volunteers are working together on the quality of health care in a safe and hospitable environment. In an interview with Ultimo, Ingo Vos (Manager Technology and Housing) and Meilof Feiken (Project Engineer and Functional Application Manager) explain how they contribute to the best health care in the Martini Hospital.

Even though Ingo Vos and Meilof Feiken are not directly involved in the health care, they do influence the quality of health care and the environment indirectly. This mainly concerns the management of buildings, facilities processes, (medical) equipment and medical tools. To maintain grip on the different processes, the Martini Hospital utilises different modules of the Ultimo software.

NO STANDARD ULTIMO USERS

For now, the Martini Hospital is the only hospital that, in addition to the frequently used modules like Medical Technology, Facilities and Building Management, also uses the 'Process functions' functionality for managing medical gases. In addition, the Martini Hospital is the first hospital that uses the Health, Safety & Environment (HSE) Suite. These standard modules and functionalities were initially developed in collaboration with the industrial sector to safeguard the safety of equipment and the people working on this equipment. However, the agreements between the hospital sector and the industry are broad, and so is the applicability of these modules within the hospital.

Facility Management

The 'Process functions' functionality is used in the Martini Hospital for managing critical systems that have been built up of multiple objects and are spread over multiple rooms, such as the medical gases equipment. Oxygen is one of those medical gases. Meilof Feiken: "The starting point of the equipment is the central bulk tank on the hospital terrain, in which oxygen is stored in a liquid state at a temperature of -180 °C. The end point of the equipment is with the patient in, for example, the operating room, the intensive care or a nursing ward. The oxygen equipment consists of over 9 kilometres of pipes and over 800 objects." All these objects have to be maintained. By managing the oxygen equipment like a process function instead of separate pieces of equipment, the mutual connection becomes very clear. Reports provide insight into the state of maintenance of the entire equipment, from start to end point.

The proverb 'the chain is only as strong as its weakest link' certain applies here. Oxygen is a medicine and the availability is vitally important for the patient. Therefore, the process has been set up so that the pharmacist always has to give permission prior to the activities. The pharmacist is even involved in releasing the equipment. Thus, the medical impact of technical activities is clear and the risk of errors is diminished.

ULTIMO
SOFTWARE SOLUTIONS

SOFTWARE FOR A SAFER HOSPITAL

The Martini Hospital also has Ultimo's Health, Safety & Environment (HSE) Suite at its disposal. The HSE Suite offers different functionalities for realising a far-reaching relation with activities and equipment, such as work permits and Management of Change. The hospital will soon start using these safety modules for ensuring an even safer environment, both for patients, employees and external service providers.

WORK PERMITS

The Work Permits module will offer support in managing and issuing work permits. There are different pieces of (medical) equipment that only certified people are allowed to work on. Ingo Vos: "As manager, I am responsible for the building and the equipment. Which is why I want to know who is working on our equipment, who is releasing a piece of equipment and which one of the Martini employees is supervising. You have to know who you have working for you and how safety is safeguarded.

TASK-RISK ANALYSIS

With the Work Permits module also comes the Task-Risk Analysis (TRA) add-on. With this functionality, potential risks are mapped beforehand, and measures are taken to prevent these risks. The Martini Hospital can see many advantages in this module; for larger projects, for example. Recently, the new medical practice was connected to the existing water pipe installation of the hospital. The entire pipeline network had to be drained. Because all pipes had to be cut, all of them had to empty. This had a major impact on the hospital and so they did a risk analysis for it.

Soon, this will also be done in Ultimo. For large projects, all involved parties are asked to participate in considering potential risks and the consequences these have for their department. If the nursing ward is being renovated, it might mean that the MRI cannot be used. If there is no MRI available, it also means that no patients who were involved in an accident, for example, can be treated. This is how close the Technology and Housing department is to health care. So it is incredibly important to have the health care department contribute to these types of projects so that the right measures can be taken beforehand.

MANAGEMENT OF CHANGE

With the Management of Change module (MoC), it is possible to request modifications and to process them in a structured manner. Soon, reports can be bundled and a change can be implemented in a structured manner. A risk analysis can then also be done for it so that the impact of a change is also clear to the patients. If a change to the climate system is implemented, it is clear to everyone that a patient should not be in a room if the change requires removing ceiling tiles to reach the system.

LOCKOUT TAGOUT

The unexpected commissioning of installations and equipment during maintenance- and repair activities can be prevented by using the Lockout Tagout (LOTO) module. This way, incidents while working on dangerous equipment are prevented. Soon, the functionality will make sure that the power in high-voltage areas can only be started up when all locks and tags have been removed from the equipment. The Martini Hospital already uses some type of LOTO, but this is currently done with a separate form. In Ultimo, the locks and labels that have to be placed when executing maintenance activities or repair work can be defined, the labels can be printed, and it can be indicated when and by whom the locks and labels were placed and removed.

SAFETY IS IMPORTANT

Safety, in all its different facets, is very important to the Martini Hospital. This is already taken into account now. A lot of people have been working here for over 20 years and know which procedures they should follow. By digitising these procedures, they have to consciously go through certain steps, which puts even more emphasis on the effect their actions have on health care and safety. After all, situations that no one has ever thought of will continue to arise. Ingo Vos: "By making employees aware of safety, situation can be prevented before they arise. This is how we contribute to quality and safety."