

- > **Controlling different conditions for visitors and the collection**
- > **Looking back and comparing temperatures at any time**
- > **Temperature, humidity, air quality and lighting defined per (group of) objects**

Tough warriors, masterpieces of aviation, beautiful themed rooms and glass walls thirteen meters high. You scarcely know where to begin at the National Military Museum (NMM) in Soesterberg, which was built on the spot where over a hundred years ago the Aviation Group of the Royal Netherlands Army was founded.

The museum, which houses the collections of both the former Military Aviation Museum in Soesterberg and the former Army Museum in Delft, demonstrates the links between the armed forces and society in an entertaining and informative way. Children can make their own gunpowder, fly in an F16 simulator and learn all about uniforms. In addition, there are remarkable stories about people from the armed forces. And in the garden of contemplation there is an opportunity to think about the people who gave their lives for freedom.

Together with the NMM, the Central Government Real Estate Agency drew up an output specification defining the functionalities that were required. Arco Seton, Collection Manager at the NMM: "An important topic in the output specification was that this concerned the construction of a museum, in which the proper management and maintenance of the museum collection is an important factor."

Especially when it comes to exhibiting, you are dealing with specific and diverse requirements in terms of such things as temperature, humidity, air quality and lighting. In the output specification, these were

defined per object, or sometimes per group of objects. This was necessary because we are talking about different materials and different sizes, with various degrees of vulnerability. Requirements were also specified in terms of safety – you are dealing with firearms, for instance – and usage: was the material being exhibited, or was it in storage?”

## Objects and people

Tinus Egelmeers, measurement and control project manager at Heijmans, points out another important distinction in the output specification: the difference in climate specifications between objects and people. With regard to the lighting, in some cases opposite interests had to be accommodated.

When Heijmans started work on the control systems for the climate installation, they chose Priva Blue ID and engaged the services of Quintess, a firm specializing in setting up and installing automatic control technology for climate installations. Paul Caspers, director of Quintess: “The strength of Priva Blue ID is that the hardware is set up with communications technologies that are completely different from the old systems. For example, the complete Internet Protocol is embedded in it, so you can also use web server technologies. This makes it a future-oriented platform, cloud-ready and able to be applied in an integrated manner.”

And it is precisely this integrated approach that was important, given the sometimes contradictory interests mentioned above – differences between the objects themselves, between people and objects, between the different types of room and between daylight and no daylight – which had to be accommodated within the building in a single automatic climate control system.

Heijmans also used Priva to gather information on the non-climate installations. Egelmeers: “We created hardware and communication interfaces, so that any malfunctions, alarms, measurements and messages from other systems – security systems, fire safety systems, electricity systems etc. – are reported and displayed in a single Priva system. Thanks to this management ‘control room’, it is possible to regulate areas such as the main exhibition room and, for instance, meeting rooms on special occasions and at special times.”

A special component of the Priva system is the TC History package. Egelmeers: “This includes every recording of temperature in the building, so that we can look back and compare at any time. Because we have also introduced limit values, we can always keep our finger on the pulse.”