

# A WORLD-FAMOUS EVENT LOCATION: **JAHRHUNDERTHALLE FRANKFURT**

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What is it that links world-famous artists as diverse as Yehudi Menuhin, Jimi Hendrix, Herbert von Karajan, Janis Joplin, Frank Sinatra, Maria Callas, Kraftwerk, Katy Perry or Lady Gaga? - They're just some of the hundreds of big names from show business and the music world who have performed in the multifunctional domed hall at the Jahrhunderthalle culture and congress centre in Frankfurt since its opening in 1963.

With its round domed roof and modernist design, the centre sets new standards. – The hall has gained popular nicknames such as “igloo” or “Calimeros egg”. The premises currently owned by Deutsche Entertainment AG - DEAG - is one of the leading event locations in the Rhine-Main region, with around 300 major events and approximately one million visitors every year. And that’s not all: the Jahrhunderthalle building complex does not only house the central domed hall featuring a surface area of 4800 m<sup>2</sup>, suitable

for welcoming up to 4800 visitors - the “Club” provides another, integrated events area open to stand-ups, concerts, childrens’ theatre along with a wide variety of arts and concepts. The “Casino” is exhibitor space used for organising trade fairs and markets or as a function room for parties, weddings and banquets. In addition, the Jahrhunderthalle offers six varied conference rooms for seminars, workshops and business meetings in the “Conference area”.



## CHALLENGES

An events location at this level of complexity poses a number of challenges when it comes to building technology. Ultimately, an ideal and suitable room climate must be ensured in the long term, no matter how diverse the premises.

Niklas Krieger, technical manager of the Jahrhunderthalle, adds: “Once the large room volumes in question are cooled down or overheated, it won’t be long before the desired air conditioning is restored, but this also involves a high burden on regulating the building technology. - The energy use that results is disrupted by the necessary ‘lightning requirements’, and there is a risk that it will become inefficient”.

This issue led Niklas Krieger to formulate a clear requirement for the building management system: “The building automation system to be used must keep the temperature levels consistent and continuously readjust within upper and lower limits to maintain the ideal values”.

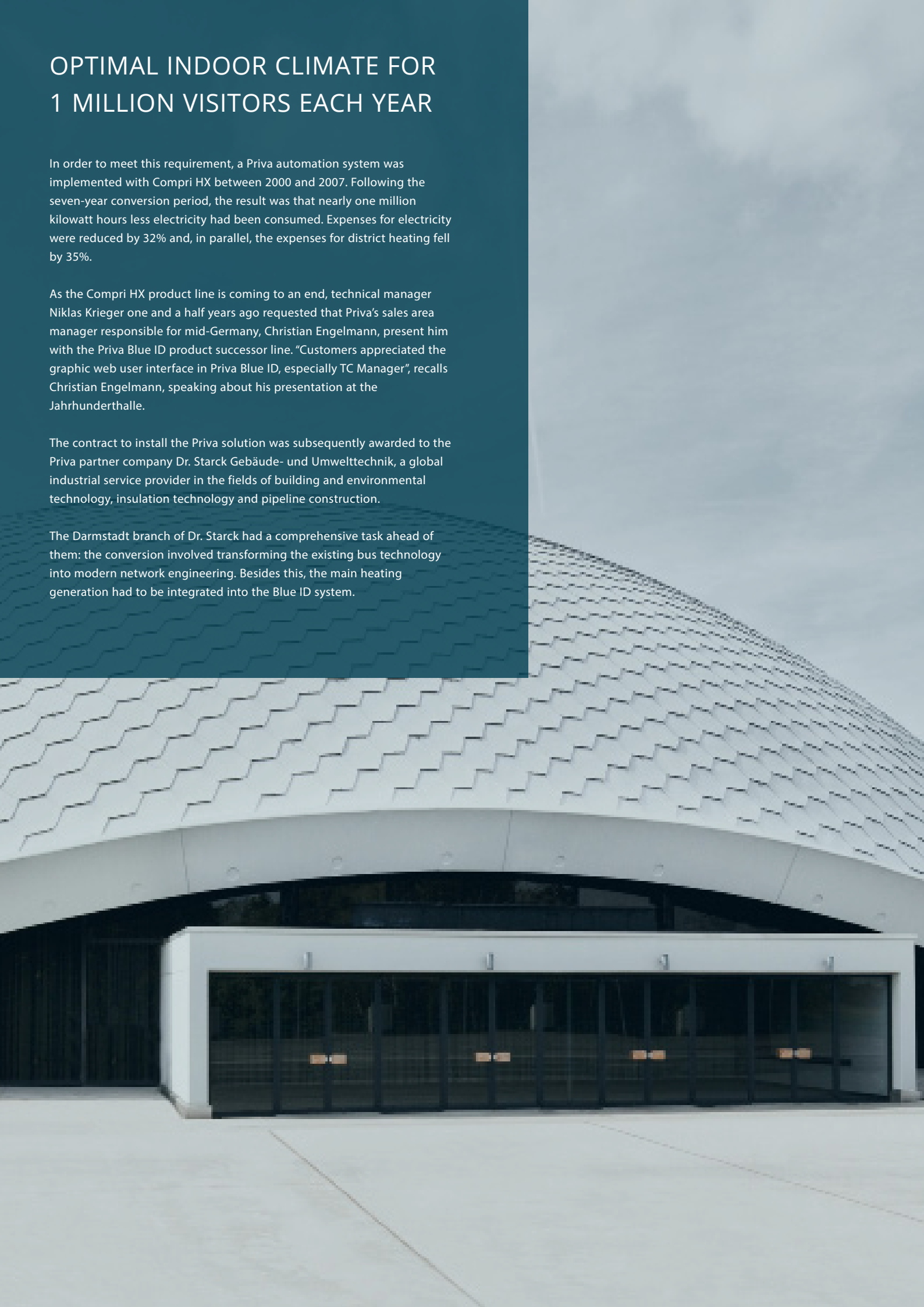
# OPTIMAL INDOOR CLIMATE FOR 1 MILLION VISITORS EACH YEAR

In order to meet this requirement, a Priva automation system was implemented with Compri HX between 2000 and 2007. Following the seven-year conversion period, the result was that nearly one million kilowatt hours less electricity had been consumed. Expenses for electricity were reduced by 32% and, in parallel, the expenses for district heating fell by 35%.

As the Compri HX product line is coming to an end, technical manager Niklas Krieger one and a half years ago requested that Priva's sales area manager responsible for mid-Germany, Christian Engelmann, present him with the Priva Blue ID product successor line. "Customers appreciated the graphic web user interface in Priva Blue ID, especially TC Manager", recalls Christian Engelmann, speaking about his presentation at the Jahrhunderthalle.

The contract to install the Priva solution was subsequently awarded to the Priva partner company Dr. Starck Gebäude- und Umwelttechnik, a global industrial service provider in the fields of building and environmental technology, insulation technology and pipeline construction.

The Darmstadt branch of Dr. Starck had a comprehensive task ahead of them: the conversion involved transforming the existing bus technology into modern network engineering. Besides this, the main heating generation had to be integrated into the Blue ID system.





## CONCLUSION?

"The switch to network technology means that access to the building technology system is quicker. This is now possible not only locally, but also at any location within the building. It is also a positive factor that TC Manager allows use of counter values, from electric meters for example, alongside the measurement control of ventilation systems. Data point management of the PRIVA controllers can therefore be utilised flexibly, both for monitoring and for controlling".



## SMOOTH CONVERSION


The conversion work took place over a period of six months. While the works were being carried out, the Jahrhunderthalle's air-conditioning systems had to continue running in order to allow constant operation at the event location. Electrical engineering expert Carsten Bock was Priva partner Dr. Starck's project manager responsible for the conversion. He recalls: "We managed to replace the existing system bit by bit. Most of the switch cabinets on hand could be used without major conversion works. The flexible, compact nature of Blue ID is especially suited to this type of modernisation process".

Carsten Bock was also responsible for the implementation of the Priva software and for the TC Manager user interface. He was struck by another advantage: "TC Manager's operating features are identical to those of TC Vision from the Compri HX product range. Because of that, users did not have to cope with any changeovers or learning phases".



**Priva Headquarters**  
Zijlweg 3  
2678 LC De Lier  
Netherlands

See [www.priva.com](http://www.priva.com) for contact information of a Priva office or partner for your region.

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