

# PERFORMANCE AND COMFORT PLAY ON THE SAME TEAM

Honeywell helps Johan Cruijff ArenA in Amsterdam enhance building performance and visitor experience

## Case Study



**Henk van Raan**  
Chief Innovation Officer,  
Johan Cruijff ArenA

"At the Johan Cruijff ArenA, we foster innovation and we are constantly looking to unravel new ideas. How can we improve upon operations, safety and fan experience? The answer lies, among other things, within data. As a data-driven organization, we aim to become a leader in new IoT driven solutions. Honeywell has helped us take an important step in this journey, which will benefit our stadium but also, in the long term, smart cities alike."

**Honeywell**

# OVERVIEW

The Johan Cruijff ArenA (JCA) in Amsterdam is one of the world's most sustainable stadiums and home of the AFC Ajax and the Dutch national football team.

Besides sports, this location is one of the most celebrated stages for big concerts, dance events and business meetings — putting visitor experience at the core of its vision. The stadium operates an Innovation Center, which acts as a living lab for optimizing stadium management and event experience through state-of-the-art technology. As one of the ArenA's innovation partners, Honeywell was chosen to provide an integrated building solution that would optimize the stadium's central database.

The Johan Cruijff ArenA is one of the most sustainable stadiums in the world. For example, the multifunctional stadium uses residual heat to keep frost off the playing field, is powered by more than 4,200 solar panels on its roof and one wind turbine and processes waste as cleverly as possible.

The main building comprises an impressive energy-generating escalator and the stadium has also installed an energy storage system powered by second-life batteries from used electric vehicles.

The Storage Building system, made from used Nissan LEAF batteries, not only provides backup power for the stadium but also distributes energy to the surrounding neighborhood when needed, to alleviate pressure on the grid.

## JOHAN CRUIJFF ARENA

### Facts and Figures

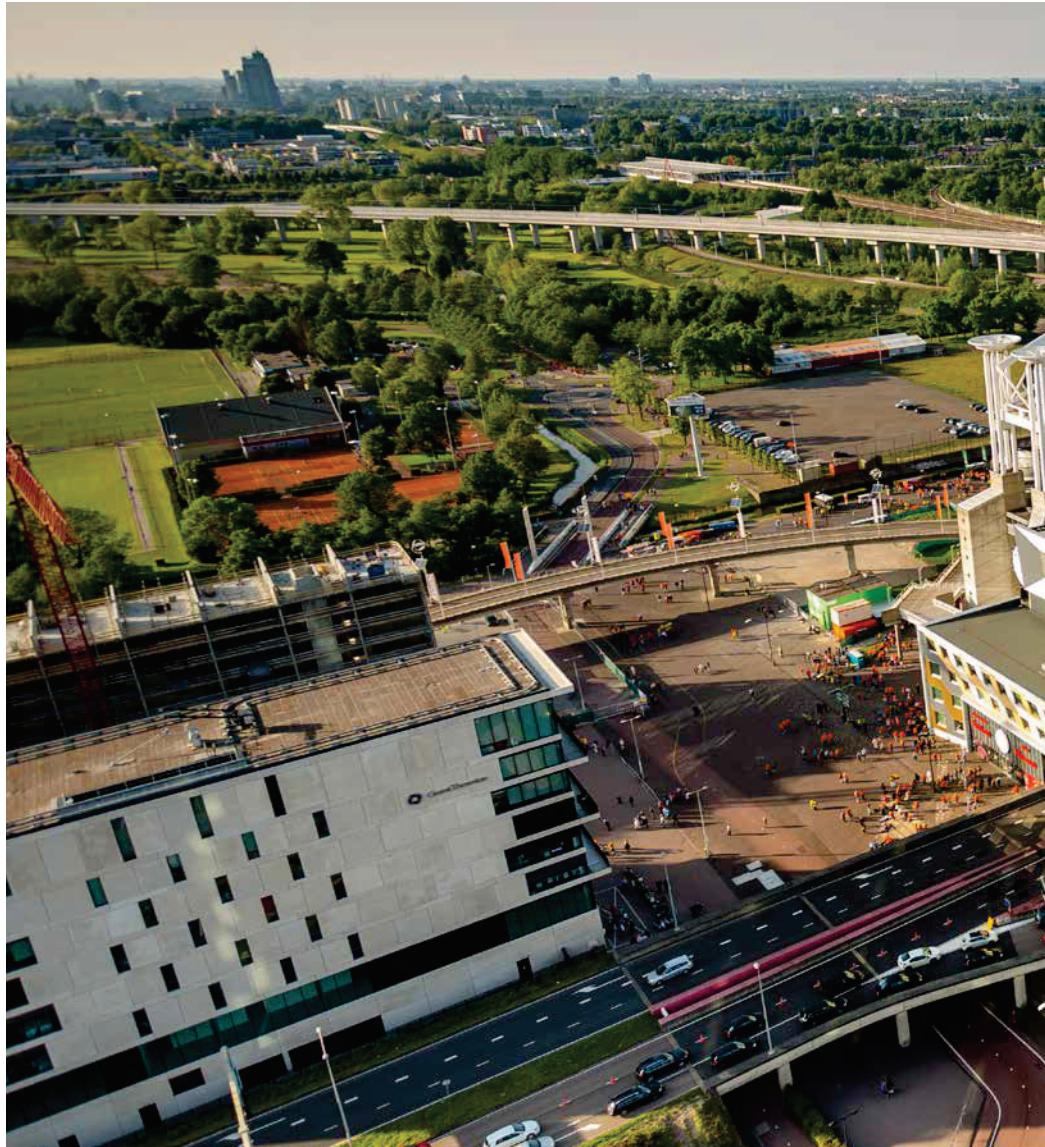
5-star UEFA status

0 CO2 emissions

4,200 solar panels on the roof

Capacity 57,000 people

2 million visitors annually



## THE NEEDS

Flawless project execution, without disturbing or interrupting ArenA events

Upgrade the ArenA's central database and Building Management System (BMS)

Continue to improve visitor experience and building performance

## Extensive building sensors enable monitoring and analyzing building performance 24/7

## THE SOLUTION

The JCA used a central database for gathering and processing data from facility systems such as ticketing, safety and security, and more. Because of this, stadium officials wanted a BMS solution that would integrate this technical data and then further improve both visitor experience and building performance.

The Honeywell team implemented an integrated building solution based on its “digitized maintenance” solution – the next generation of Honeywell service, driven by analytics and IoT integration. The solution taps into extensive building sensors that enable monitoring and analyzing building performance 24/7. This is enabled by Honeywell Forge for Buildings – an integrated platform that connects technical operational data from

assets, processes and third-party applications with machine learning to help customers improve building performance and productivity using actionable insights.

Assisted by sensors, the Honeywell Building Management System collects data from the connected equipment, controllers, and spaces. Based on data analysis, failures can be detected earlier so that maintenance can be carried out before any inconvenience arises and impacts stadium operations. The Honeywell BMS supports the Johan Cruijff ArenA to achieve its goals of becoming a flagship in the field of data-driven operations – where regular preventive maintenance transforms to predictable, data-driven maintenance.

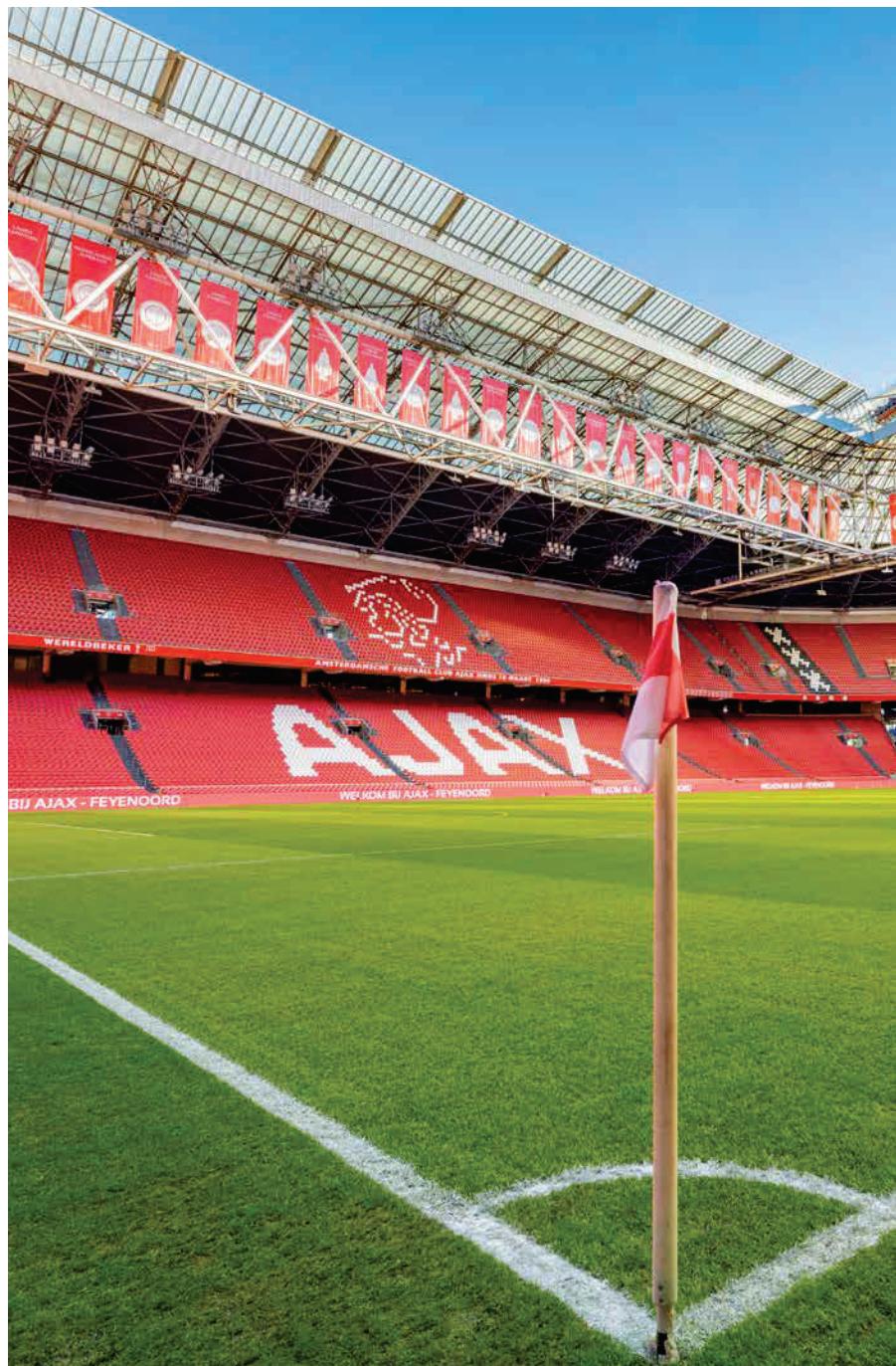


## THE BENEFITS

- Improved database functions and building performance thanks to data-driven solutions
- Increased day-to-day operational efficiency and sustainability
- Replace BMS controllers without any disturbance to ArenA events
- Enhanced visitor experience and cost savings
- Optimal system integration that increases comfort and lowers energy consumption

**“Ever since it was opened, the Johan Cruijff ArenA looked into the future and became Europe’s state-of-the-art stadium. Honeywell is proud to be the trusted partner of a unique, emblematic stadium where mobility, sustainability, safety, and security are combined into an open innovation platform that creates the best experience for visitors in and around the stadium and the city.”**

**John Brussel**  
Regional General Manager  
Projects Benelux, Honeywell



### For more information

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