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# Improved energy efficiency and a user-friendly HVAC control system

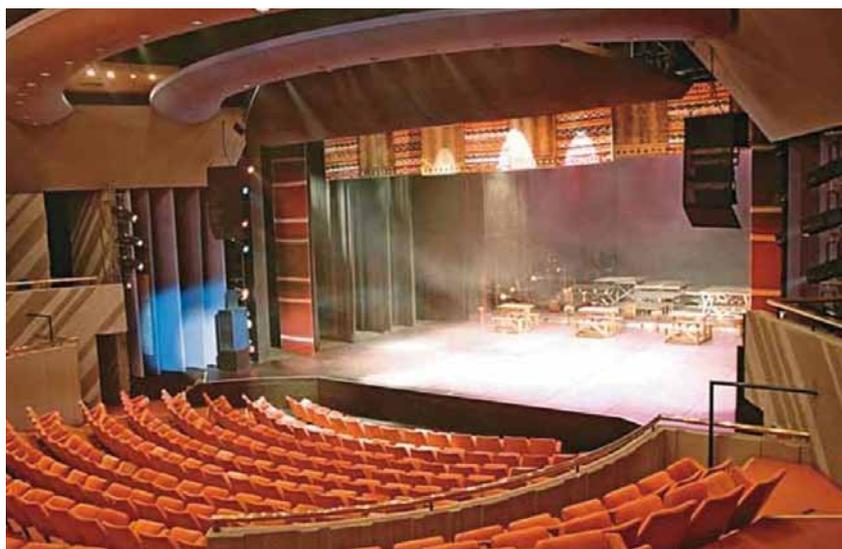
Playhouse Theatre, Durban/South Africa

The Playhouse Company is the premier theatre organization in the city of Durban, South Africa. Siemens provided advanced HVAC equipment to modernize the existing electro-mechanical control system of the Playhouse Theatre.

Durban's Playhouse complex links the city's present with its past. The current theatre facade preserves two of the city's most famous landmarks, the glamorous Prince's Theatre, which originated in 1926, and the grand, Tudor-styled Playhouse, which opened its doors to public in 1935. Nowadays, these two celebrated enter-

tainment venues are a state-of-the-art, multi-venue theatre complex that faithfully preserved many of the buildings' original characteristics and architectural features. The building automation and control system had to be upgraded and adapted to the new and increased demands.

Answers for infrastructure.



### Playhouse Theatre, Durban

The existing HVAC system included:

- An electro-mechanical control system
- 3 chillers and chilled water pumps
- 1 fresh air plant
- 17 air handling units

### Upgrading to the communicative Synco™ 700 system

The existing control system was updated with the communicating Synco 700 system. Control panels equipped with RMU universal controllers were installed for the air conditioning systems. They provide accurate climate control, according to operator requirements, effected by the use of three-port cooling valves, and modulating dampers.

### Effective control

The production of chilled water is regulated through the use of an RMS705 modular controller which, according to demand, sequences the respective plant to achieve the required water temperature. Chillers and chilled water pumps are duty rotated to ensure equal usage.

### Energy efficiency and usability

The system was designed to enable the supervision and the remote control of air conditioning systems, provide more operating convenience and simple yet effective energy savings. Commissioning was carried out through a PC installed with ACS service and operating software, permitting the programming and parameterization of the controllers including the control loop setting and testing.

### Reliable operation

The system provides centralized control and monitoring using the ACS graphical operating station. Alarms generated by the controllers are visualized by alarm windows on the ACS operator station and are signaled locally by a red indicator on the operator unit.

### Future renovation plans

The customer is highly satisfied with the Synco 700 system. A more extensive renovation phase is planned with further products from Siemens.

### Highlights

- Precise climate control for increased comfort
- Enhanced efficiency due to demand-controlled production of chilled water
- Cost-savings thanks to more effective use of energy
- Remote control and centralized supervision for enhanced operating convenience
- Fast and easy commissioning and testing with ACS