Superior Control Solutions

Case Study:
Gungahlin Leisure Centre

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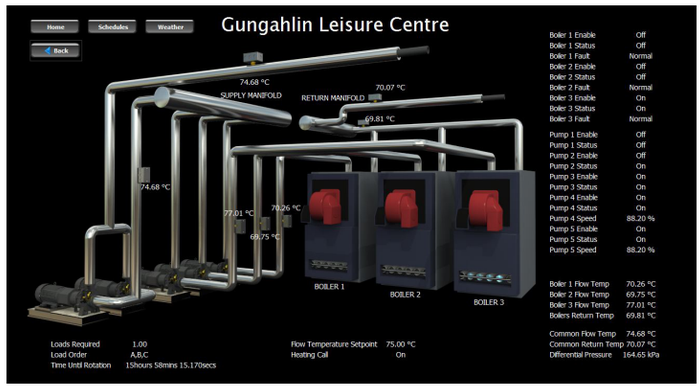
Gungahlin Leisure Centre

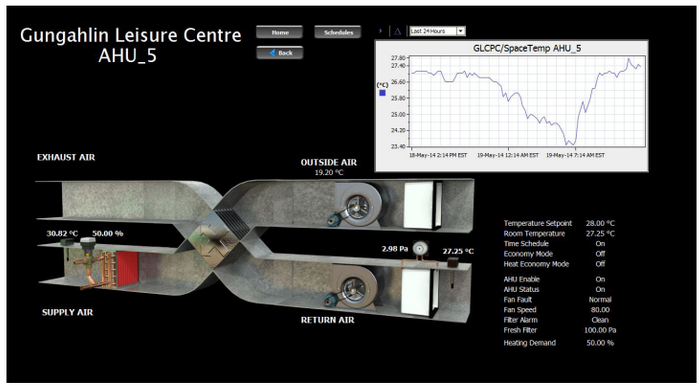
Gungahlin leisure centre provides a long awaited swimming pool to the Gungahlin area, the centre provides an Olympic pool, toddler pool and water feature play area as well as a crèche, gym and circuit rooms.

The mechanical services include heat exchange air handling units, heat exchange roof top package units, Mitsubishi VRF systems, 3 boilers, primary and secondary pumps and pool heating hot water heat exchangers.

A total of 8 VSD's serve the heating hot water pumps and general fans, all VSD's are connected via a BACnet MSTP LAN to the building management system to give total control over all aspects of the VSD's.

The heat exchange units are fitted with standalone BACnet controllers for interfacing to the building management system, the building management system controls the temperature setpoints, schedules, warm up and economy cycles as well as monitors all internal points.



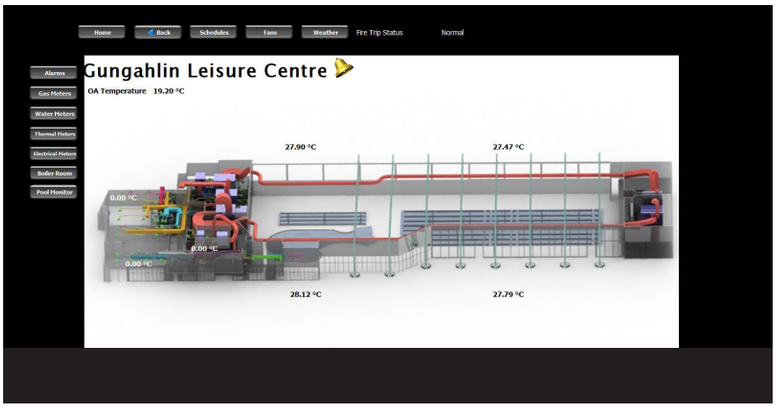


Energy Monitoring

A combination of 19 water, 9 electrical, 5 thermal energy and 5 gas meters have been installed across the site and monitored via the building management system. Full graphics display shows current accumulated consumption as well as monthly totals. The system provides the occupants to closely monitor all aspects of energy usage in order to reduce cost and carbon footprint .

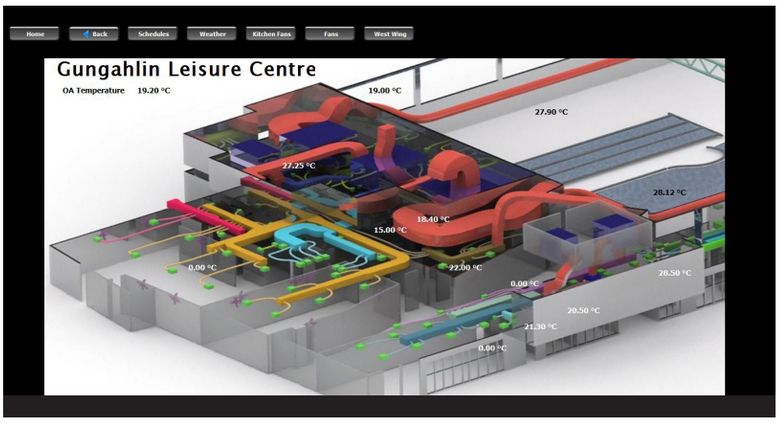
User Interface

A web based graphical user interface including 3D graphics and 3D floor plans gives the occupants and service technicians both onsite and remote monitoring over the operation of all plant as well as graphical representation of the energy meter installed. An alarming system notifies users and service technicians via emails with a detailed description if any system falls.



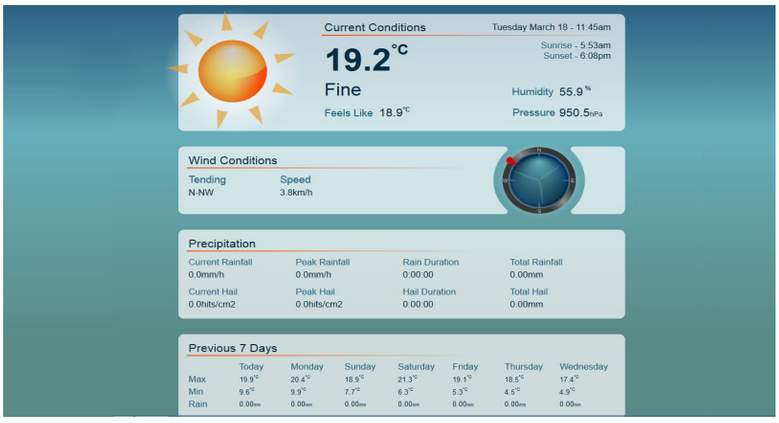
Network Topology

The building management system consists of a front end PC with AX Supervisor, a Jace-600 network controller, five easy IO 30p DDC controllers, one Easy IO FG 32 as well as BACnet and MODbus networks for monitoring and control of the air handling units, rooftop package units, VRF system, weather station and electrical meters.



Third Party Interfaces

As well as the energy monitoring the building management system monitors the pool equipment and provides alarming information to the users, a Viasla weather station with BACnet interface monitors outside air temperature, outside air humidity, wind direction, wind speed and rain fall amount. All of the information displayed via the BACnet webserver.



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