



SUCCESS STORY

PROFILE

- Subject : SCADA
- Process : BMS/FM
- Client :
CHU Amiens-Picardie
- Prime contractors :
AART FARAH
ARTELIA
- Integrator :
Neu Automation
Missenard Climatique
- Date : 2014
- Installed facilities :
 - 4 HMI terminals
 - 2 redundant servers
 - 1 terminal
 - 25 000 variables
 - BACnet IP
 - Modbus IP

Amiens-Picardie University Medical Centre (CHU), achieving hospital excellence



AIMS

Non-proprietary open system

Upscalable, sustainable application

BENEFITS

Flexible in use

Lower operating costs

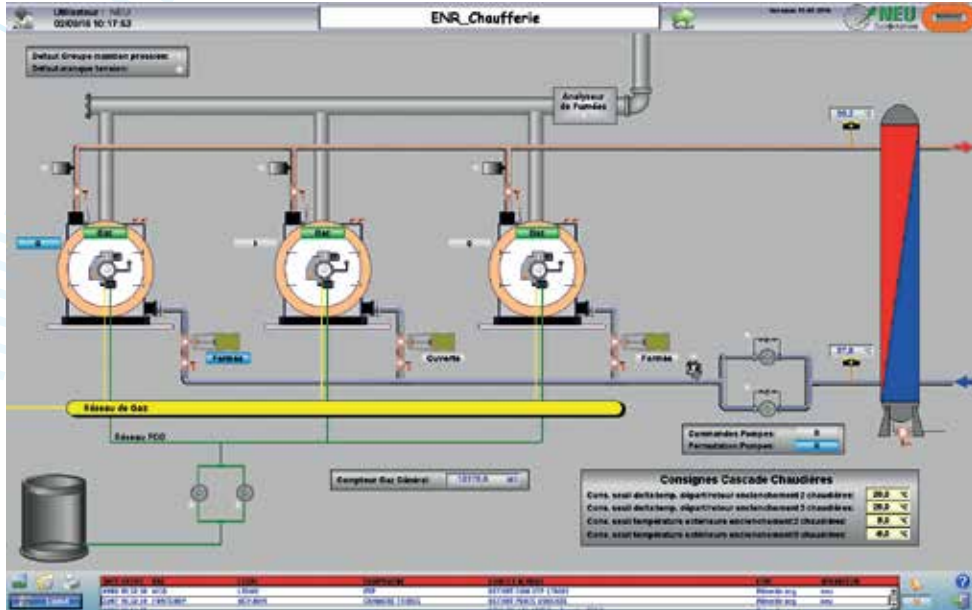
Industry 4.0 Hospital

The Amiens-Picardie CHU is the public health referral facility of first resort in the Picardy region. The new CHU building constructed on the South Amiens site was inaugurated in 2014. The new 122 000 m² hospital's BMS/FM is based on the Panorama E² SCADA solution developed by Codra.

Following a study of the Picardy population base that pointed to adverse regional health indicators and the need to modernise a number of the hospital's centres – namely the supply of healthcare services, medical training and research – the Amiens-Picardie CHU decided to construct a new 122.000 m² building on the existing South site.

Once the new building has been constructed and the former South Hospital has been refurbished, all the Medical, Surgery and Obstetrics activities of the four Amiens-Picardie CHU sites (the North Hospital, the Gynaecology & Obstetrics Centre, the Saint-Victor centre and the Southern Hospital Group) will eventually





Choosing the Panorama E2 solution

While Amiens-Picardie CHU chose the SCADA software in agreement with the prime contractor and the engineering office, the choice for the facilities management was left to the companies awarded the work packages. It was vital that the CHU could have its input by choosing the solution early on in the day as the hospital operators needed to use the BMS/FM application on a daily basis. "Our project is a true partnership; we all aimed to succeed together. It's a joint success!" asserts Bernard Claeys, General Engineer, Head of the Amiens-Picardie CHU Support and Engineering Functions Centre.

Three software providers were considered and Amiens-Picardie CHU decided on the Codra Panorama E2 solution. "Choosing the Panorama E2 software was first and foremost technology-driven" explains Christophe Pierre, Hospital Engineer - Technical Services Maintenance Officer of the Amiens-Picardie CHU Support and Engineering Functions Centre. Codra's solution addresses all the points in

Hot Water boiler monitoring

come together on the South site (the Saint-Victor site will retain its medium- and long-term geriatric stay and palliative care activities).

Two-thirds of the Amiens-Picardie CHU's activities were transferred to the new building in 2014, accounting for about 800 patients, including 80 critically ill patients. Incidentally the relocation volume exceeded 15.000m3, including 3.500 tonnes of equipment.

The project

A number of consortia started construction work in 2009 and the project took 47 months to complete excluding weather-related downtime.

The first tranche encom-

passed three main buildings:

the MCO Bldg. (Medical Obstetrics Surgery) involving Bouygues Bâtiment Ile de France, ETDE, NORPAC and BREZILLON, the CBH Bldg. (Human Biology Centre, Central Pharmacy, Logistics Platform) involving SPIE Batignolles, SPIE and MQB, the Energy Centre (Main boiler house, back-up generating sets) involving SPIE Batignolles, SPIE, MQB and IDEX.

The second tranche to renovate the former Fontenoy building is currently underway.

the specifications and in particular the following specific requirements: open architecture, being a non-proprietary product that could run on all kinds of off-the-shelf equipment; native BACnet IP, a specific communication protocol for facilities management; flexible usage; customised HMI.

“We are in for the long haul with the Amiens-Picardie CHU project. The SCADA software must be able to integrate new buildings, new sub-systems and so forth. The Panorama E2 application will parallel the project’s development thanks to its open architecture along with object programming” confirmed Christophe Pierre.

Financial considerations also came into choosing Panorama E2. Attention was focused on both the investment and operating costs. Panorama E2 is an upscalable, sustainable solution that optimizes the facilities management, energy usage and equipment maintenance.

BMS/FM

The hospital operators control and monitor many facilities remotely in real-time:

HVAC (Heating, Ventilation, Air-Conditioning), HWS (Hot Water System), electricity, medical fluids, generating sets, emergency generating sets for operating theatres and engines (diesel-powered, with operating range of 48 hrs), alarms and events.

The personnel with access to the BMS/FM have three distinct user profiles: the manager: the CHU’s Technical Manager; the in-house operators: electricians, plumbers, security desk; outside service providers:

primarily the IDEX subcontractor that manages and maintains more than 200 ventilation units.

Feedback

The operators monitor the facilities in detail, and operation is safer thanks to the advanced alarm management features. “The SCADA system enables any temperature faults in the Hot Water System networks to be diagnosed at a very early stage and thus the risk of bacteria developing is avoided” comments Christophe Pierre. Panorama E2 thus contributes to improving the excellent Quality/Risk indicators achieved by the Amiens-Picardie CHU. Several lines of approach are being considered to

KEY FIGURES (2015)

- 5 832 employees
- 1 709 beds
- 386 700 outpatient consultations p.a.
- 85 002 emergency service visits p.a.
- 135 million laboratory tests p.a.
- 30 operating theatres
- 1.4 million meals served p.a.
- 2 125 tonnes of linen handled p.a.
- project investment: € 632 million



Security desk: monitoring and controlling a range of facilities



Heating capacity of 24 MW produced by 3 hot-water boilers

harness all the possibilities offered by the Panorama E² software to optimize the CHU running costs of more than 609 million p.a., by improving:
monitoring energy use,
monitoring equipment conditions,
machine usage rates,

equipment availability supported by predictive maintenance. With Panorama E², the Amiens-Picardie CHU teams are ready to rise to the challenges of a Hospital of the Future.

“ Panorama E² is an upscalable, sustainable solution that optimizes the facilities management, energy usage and equipment maintenance ”

Technical characteristics of the new Southern site

- ▶ 122 000 m² of new construction,
- ▶ 3 200 parking bays,
- ▶ 2 heliports,
- ▶ 200 ventilation units,
- ▶ 1 pneumatic conveyor system,
- ▶ 58 lifting devices (lifts, bed elevators and hoists),
- ▶ 27 PLCs providing internal logistic transport,
- ▶ 5 generating sets,
- ▶ 1 emergency generating set,
- ▶ 8 MW of electrical capacity powered by 2 different ERDF networks (each rated at 100% capacity) and also backed up 100% by a bank of generating sets,
- ▶ heating capacity of 24 MW produced by 3 hot-water boilers and provision for a 4th boiler in the energy centre,
- ▶ 8 MW of chilled water production,
- ▶ 3 MW of hot water production capacity.

From industrial SCADA to a global information system

