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In the **kitchens** of the Institut universitaire de gériatrie de Montréal
Modernizing equipment and **generating savings**

The Institut universitaire de gériatrie de Montréal (IUGM) is a specialized care centre for seniors and a research centre affiliated with Université de Montréal. To feed the 450 people who receive the Institute's services and provide cafeteria services to its visitors and some 1000 employees, an impressive number of meals are made in the Institute's kitchen—about 2,600 per day over a five-day period!

Efficiency is key for institutional kitchens like the one at the IUGM but they are also required to meet food safety regulations. The growth and spread of potentially harmful bacteria is closely linked to a food's internal temperature, so it is vitally important that the food be cooled to a temperature between 0°C and 4°C within a specific time period. The Institute uses three roll-in blast chillers for this purpose.

iugm
Institut universitaire
de gériatrie de Montréal

The devices, which were installed in 1998-2000 at a cost of tens of thousands of dollars each, were no longer functioning adequately. In fact, their sensors had become defective and were impossible to replace given that the manufacturer was no longer in business and no other companies offered that type of product. The Institute therefore asked the Regulvar team if it could design a reconditioning solution to avoid the expense of replacing the equipment.

In 2012, Regulvar therefore built customized sensors and replaced the automatic control device to provide the IUGM with a more modern and user-friendly system equipped with an automatic cooling control function, a defrosting management feature and a manual operating procedure. Each blast chiller has four independent sensors, an enteliTOUCH screen and a controller. With the touch of a finger, the user activates one or several sensors, chooses a set point and starts the cooling cycle. An alarm goes off when

the food's required internal temperature is reached. The result is satisfactory given that food management, work logistics and energy savings are improved.

What about building automation?

Another advantage of Regulvar's solution is the fact that it can be integrated into the Institute's building automation system. Indeed, the independent devices could be networked with the existing energy management system to access the data and store the recorded information for statistical purposes. As a result, it would be possible to know, for instance, how much time it takes for a given food to reach a defined temperature and to optimize food management activities. It would also be useful to monitor the operations of the blast chillers and to follow up on energy expenses.

Conclusion : a successful reconditioning project that helped the customer avoid the expense of replacing devices that were still functional.

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A **blast chiller** is a device used to control the speed at which hot foods placed inside are cooled. The device works by circulating cold air at high intensity. Sensors inserted into the foods are connected to a controller, which sounds an alarm once the required internal temperature has been reached, which means less time wasted and guaranteed food safety.

The Albert at Bay Suite Hotel
Greater comfort and increased savings

Built in 1985, this 13-floor Ottawa hotel offers its customers 197 spacious suites with one or two bedrooms, a living room and a kitchen. The hotel underwent extensive renovations in 2011-2012, resulting in an upgraded heating, ventilation and air conditioning (HVAC) system designed to enhance customer comfort and optimize energy efficiency.

The renovation involved centralizing the HVAC system control, automating certain functions and offering an occupancy-based management option. The challenge? Dealing with several physical constraints, namely concrete floors and ceilings, insufficient wall space for the electric wires and wallpapered walls that couldn't be altered.

As a result, Regulvar's solution had to be innovative, particularly given how important it was that the work be carried out while minimizing any impact on room reservations and therefore any loss of income. Consequently, Regulvar opted for wireless technologies, which represented another challenge for the team—orchestrating the operations of both wireless and wired devices within the same network, even though each device communicates via a different protocol.

The system that was implemented can be described as follows. Each suite was equipped with a CAN2GO controller and a heat pump housed in a wall, in an identical space on each floor. The space constitutes a riser through which the necessary wires can pass from the bottom to the top floor without damaging the architectural structures in any way. About 20 controllers were installed on each floor and the controller on the top floor plays a liaison role with the control station. Each controller communicates with a main thermostat and a wireless motion sensor located in the central room. The motion sensor provides the system with occupancy data. What's more, each room in the suite contains a wireless temperature sensor and an electric baseboard relay, also wireless, which occupants can use to adjust the heating according to their comfort level.

The integration of all of the wired and wireless components of the solution in the building automation system was a resounding success, particularly given that the wireless thermostats communicate via the EnOcean protocol, the baseboard relays via ZigBee, the main thermostat via Modbus, the controllers via CANbus, the switch via Ethernet and the building automation system via BACnet.

Our solution helped the Albert at Bay Suite Hotel implement its energy efficiency strategy, including the option of reducing its consumption when the suites were unoccupied, while minimizing any disruption in operations.

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We'll be there!

CONTECH
Building Event Quebec
Centre de Foires
250, boulevard Wilfrid-Hamel
Québec (Québec)
November 8, 2012 • 9 a.m. to 5 p.m.

CONTECH
Building Event Montreal
Palais des congrès
1001, place Jean-Paul-Riopelle
Montréal (Québec)
November 29, 2012 • 9 a.m. to 6 p.m.
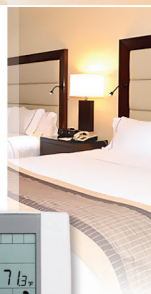
TBIX
Place Bonaventure
Niveau 200 Nord
800, rue de la Gauchetière Ouest
Montréal (Québec)
October 24, 2012 • 10 a.m. to 7 p.m.
October 25, 2012 • 9 a.m. to 6 p.m.

L'ASSOCIATION DES CADRES SCOLAIRES DU QUÉBEC
Manoir St-Sauveur
246, chemin du Lac Millette
Saint-Sauveur (Québec)
November 15, 2012

UPCOMING TRAINING

Laval (French): — 2013

ORCAVIEW
intermediate level
February 4•5

ORCAVIEW
advanced level
February 6•7

GCL + PROGRAMMING
February 11•12•13

CREATION OF GRAPHIC INTERFACE
February 20•21

Ottawa (English): — 2012

ORCAVIEW
intermediate level
October 9•10

ORCAVIEW
advanced level
October 11•12

GCL + PROGRAMMING
October 15•16•17

CREATION OF GRAPHIC INTERFACE
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