



McGill University Health Centre

Project: Software to manage FM helpdesk, reactive and planned maintenance requests, security and a range of other FM and specialist services. to ensure the highest quality maintenance and building services were provided from day one. In addition SNC-Lavalin were required to manage performance according to the terms of the PPP contract.

Results: One reliable platform for managing work orders, streamlining work processes, increasing service quality, customer satisfaction and service efficiencies. In addition to providing an integrated payment mechanism solution to manage contract performance and monthly performance reporting.

Supporting excellence at the new McGill University Health Center (MUHC) Glen site

The vision of a centralized, modern healthcare facility for the people of Montreal and Quebec, with quality care across the age spectrum, began over 20 years ago. In 2008, the Quebec government committed over \$1.343 billion to the onstruction of a new hospital complex on the Glen site, which will become home to the Royal Victoria Hospital, The Montreal Children's Hospital and the Montreal Chest Institute, as well as the new Cedars Cancer Center and MUHC Research Institute.

Construction began on the complex in July 2010; and was at the time one of the largest North American public-private partnership and Canadian hospital projects.

The Glen site includes 500 private patient rooms, two emergency departments and more than 50 specialized departments. The custom-design healthcare facility, with its cutting-edge equipment, sustainable initiatives, patient-focused care practices, and world-renowned innovation and research, was completed in November 2014 to meet the present and future needs of healthcare.

Building a healthy future

In 2010, McGill Healthcare Infrastructure Group, composed of SNC-Lavalin (SNC) and Innisfree Ltd, was awarded the contract to finance, design, build, operate and maintain the hospital complex in Montreal until 2044. At the time, this was one of the continent's largest construction sites, spanning an area greater than



seven American football fields. A total of 12,000 workers and around 900 professionals worked on the site, in management, operational and professional roles. The sheer size and complexity of the MUHC site is testimony to the team's contribution to the facility, which comprises:

- 12,500 rooms
- 56 elevators
- 92 roofs covered with white stones to help reduce the heat island effect significantly and comply with LEED criteria
- over 11,000 plantings on site that do not require watering
- 27,000 aluminum panels covering more than 255 building facades
- underground and multi-level parking for nearly 3,000 vehicles and 79 charging stations for electric vehicles
- 333 parking spots for bicycles.

Meeting the challenge of maintaining a huge hospital complex

After a little over four years of construction, on June 14th 2015, the final phase of the largest ever hospital move in Canada took place. The last 17 patients from the Montreal Chest Institute, of a total 273 patients from the three former hospitals, were transferred to the MUHC's Glen site.

When healthcare facilities are maintained to optimum standards, this contributes to service efficiency. Hospitals can run at their maximum capacity, and hospital staff are free to dedicate as much time and resource as possible to contributing to the quality of life and wellbeing of their patients.

SNC-Lavalin, a leading global engineering and construction group and major player in infrastructure ownership, uses FM software to support the hospital complex and demanding maintenance requirements of the Glen site, and to help meet key FM and MUHC strategies, operational goals and targets.

SNC provides reactive and preventive mechanical and electrical (M&E), security, and a wide range of soft services, including grounds and winter maintenance and pest control across 250 thousand square meters.

SNC staff on site manage the helpdesk with support from the 24/7 security team. M&E is subcontracted to Johnson Controls (JCI), which manages a team of plumbers, electricians, heating, ventilation and air conditioning (HVAC) technicians and building automated systems (BAS) technicians, as well as IT, telecoms and specialized services staff. The facilities and grounds services, including security, snow removal, elevator maintenance and pest control, are also subcontracted services. These external service providers, however, work with a dedicated team that is permanently based on site. Other external suppliers who provide specialist services with less demand, such as providing parking equipment and automatic door maintenance, do not need to be located on site.

SNC, JCI and the team of on and offsite subcontractors all work closely together to manage the challenge of providing maintenance and facilities services for the MUHC Glen site.

Supporting this are two Shared Services project teams, which cover corporate services through legal, procurement and financial services, and asset management, which includes energy and environmental specialists.

Supporting state-of-the-art facilities with technology

On the recommendation of JCI, Service Works Global's (SWG) QFM and P3rform software was introduced during the construction phase as a result of the company's extensive experience with P3 (Public-Private Partnership) contracts and the healthcare sector. Technology was required to help meet the challenge of providing a seamless transition from building site to working hospital and to ensure that the highest quality maintenance and building services were being provided from day one. More importantly, the technology was also required to fully integrate the specific Payment Mechanism underlying the monthly performance self-reporting requirements.

A project of this scale demanded efficient implementation with advance planning for the input of critical data. Bespoke software was introduced in October 2013, with the go-live one year later when the MUHC Research Institute was due to become operational. The rest of the campus became operational in November 2014 in preparation for patients arriving between April 26th and June 4th 2015. Nicole Bélanger, SNC-Lavalin Senior Operations Manager, comments: "SWG's experience was vital during the implementation period when we had to make sure that all the teams were working together. It was a huge challenge because we had to demonstrate that we were 100 per cent ready by October 1st, 2014."

"There was a huge surge of activity and call-outs during May and June when the patients arrived," explains Bélanger. The Project Co-owned contract with MUHC is particularly demanding because of the stringent SLAs, KPIs and penalties incurred for non-performance. On the previous hospital sites, the staff were accustomed to ringing through with a service request. At the new hospital, the jobs needed to be logged,

dispatched through QFM and sometimes approved because some of these were no longer free of charge. This created a cultural change and a challenge."

The FM software solution, QFM, has been welcomed on site, especially because it suited the P3 specific needs but also met the contractual requirements such as offering a bilingual functionality which caters for both English and French speakers.

Around 1,500 users have access to the FM software, either via the web or via a smart device, with having self-service access or their requests being processed by the helpdesk. The end-users and system administrators have commented that the software is reliable, accessible and simple to use, with information that can be easily tracked and reports that can be produced quickly.

Bélanger says, "The system creates complete transparency. The priority and progress of work can be easily seen and everything is documented. Pictures and documents can be uploaded to the system too, which helps demonstrate to the end-user if there is a problem which can be sent to other operatives to share expertise to solve the problem more quickly."

All the contractors on site have access to the system, apart from a very small number of the infrequent service providers, such as snow removal. QFM provides one platform for managing job requests, documenting the services provided and processing and billing the work under the particular requirements of the P3 contract. The latest additions of the preventive maintenance module and the time sheet management allow SNC to support a proactive maintenance strategy in order to increase efficiency and asset life, to provide added value to the service and ease the invoicing process. A new customer survey module will also enable the maintenance and building services team to identify problems, to be proactive in resolving these and to contribute to customer service excellence.

Future Focus

Under the 34-year public-private partnership, a key issue for McGill Healthcare Infrastructure Group (Project Co) will be ensuring that the hospital complex reaches the maximum life-span expected from the investment with optimum use of resources and full accountability to the public and private investors.

The centralized information and enhanced reporting capability of the QFM software already provides insight into the future maintenance and facilities management resource requirements that are needed to meet the organisation's commercial, budgetary and auditing requirements. McGill Healthcare Infrastructure Group is looking at technology to support the life cycle management strategy for MUHC, including the QFM asset management module which enables the management of assets and buildings by centralizing equipment data, streamlining audits and inspections, calculating asset depreciation, and identifying the most cost effective method for maintaining an asset.

