



A Modern Integrated Hospital

Client: A large, state of the art hospital in Australia.

Project: Managing 14 FM services, in Australia's largest, busiest and most technologically advanced hospital, supported by a best-of-breed technology solution, including robotics and specialised software to ensure efficient service provision, seamlessly coordinated through QFM's centralised helpdesk solution.

FM and Healthcare Integration

14 FM services are delivered around the clock across the hospital by over 500 full-time equivalent staff including critical support services that are integrated to support the State's model of care.

The managed non-clinical services are key to the daily operations of the hospital. An FM service provider has been appointed for this task, and holds key responsibilities for achieving food safety, patient satisfaction and other general compliances within the hospital. A best of breed technology solution has been set up which includes robotics and specialised software to ensure efficient service provision, seamlessly coordinated through a centralised helpdesk solution.

QFM facilities management software from Service Works International (SWI) is used to record and manage all service requests. The system provides real-time, detailed management reporting, and notably incorporates a PPP payment mechanism module, providing a seamless link between normal helpdesk operations and the requirement for fully audited performance metrics inherent in PPP projects. QFM controls a broad range of business activities at the hospital including:

- Helpdesk management and service requests
- Reactive maintenance management
- Asset management
- Service management and service schedules
- PPP payment mechanism management and reporting.



Through SWI's integration engine, a large number of other systems have been integrated with QFM. This is the primary conduit of information between the numerous systems, and also manages the allocation of tasks to FM operatives throughout the hospital. As electronic service requests are received via the ICT systems, they are transmitted to QFM which prioritises and tracks the performance in delivering the service.

Integrated systems include:

Building Management System

The building management system (BMS) monitors all equipment within the facility and is interfaced into QFM to automate service requests. The BMS will raise an alert when a maintenance activity is required (e.g. if a device is malfunctioning, or a component has exceeded an operational limit such as run hours). This request is sent via the Integration Engine to QFM to raise the service request for prioritisation and monitoring.

Nurse Call

A nurse call panel is located in each patient room, which provides a status display for the room and can be used by patients to request assistance. These are monitored and managed by the nurse call system. If a request is made via the panel, for example to clean the room, a signal is sent via the Integration Engine to QFM software to raise a service request.

If a request to clean the room is made via the helpdesk, QFM will additionally notify the nurse call system that a clean inpatient room request is pending for the

nominated room. This signal is sent from QFM via the Integration Engine onto the nurse call system.

Security

The security system, while working autonomously for its prime functions, also integrates with QFM to provide the logging of service requests, the prioritisation of the request, and the subsequent monitoring. Numerous types of jobs can be raised; from access card issues through to the removal of unauthorised vehicles.

Tag Tracking

The tag tracking system provides active monitoring of RFID (radio-frequency identification) tags used throughout the facility for monitoring patient and asset locations. Since QFM is used for asset management, it provides the ability to tag an asset with its assigned RFID. During the asset tagging process, the identity and details of the asset are sent from QFM via the Integration Engine to the tag tracking system.

Patient Administration

The State's new patient administration system provides the foundation for delivering the State-wide electronic health record. It transforms the model of care by providing health care professionals and administrative clinical staff with real-time access to comprehensive patient information at the point of care. The type of information available includes details of a patient's treatment plan, their test results and information about medications they may be taking.

The integration with QFM enables the raising of service requests upon the movement of patients, admissions, and discharges, for services including cleaning of rooms, orderly assistance, and equipment requests.

IT Helpdesk System

Whilst QFM is used to manage all service and failure events for the purpose of response and reporting, some events will fall outside of the service provider's responsibilities and need to be triaged to the State. The Health ICT team within the government use a specialised IT helpdesk system to manage service requests. If the helpdesk at the hospital determines that a service event should be managed by the State, it notifies the State's service desk of the job details. The notification includes the QFM reference number, category and type, plus the name of the person who raised it.

Meal Management System

The meal management system, in conjunction with the automated guided vehicles (AGV) and the patient support service assistants (PSSA), allow delivery of a broad array of catering services including participation in the food safety program, patient catering services, grocery services and meal management. All meals can be ordered either by the patient (perhaps with assistance), through a bedside terminal. Menu selections are collated and appropriate meals produced in advance of service, in-house. These meals are transported in trolleys, via the hospital's AGV system, to the required floors, for distribution by a PSSA. Integration with QFM ensures that the correct meal is delivered to the right location in the building.

Automated Guided Vehicle Management System

The automated guided vehicles (AGV) enable delivery of many of the agreed FM services through the physical transportation of goods within the hospital. The AGVs are a primary means of transport, freeing resources for improved assistance with patient support services. Meals, linen, bulk stores, pharmacy and waste management are transported between the source and each collection point automatically. Arrival notifications come from the AGV system through the Integration Engine to QFM, which automatically sends a request for a PSSA to collect the goods.

In many instances, the AGV collection will be a bi-directional process. Fresh meals and clean linen trolleys delivery missions will in turn then return with a completed meals and spoiled / dirty linen trolley mission. Waste will be collected and empty receptacles will be returned.

Active Directory & Infrastructure Services

QFM provides an intrinsic Active Directory mode that allows preauthentication of the current Windows users without the need to challenge the user for a security token. It also synchronises user and personnel tables with selected data within Active Directory, to ensure complete data security. The synchronisation is one way, with Active Directory being the source and QFM being the destination.

Future Focus

Prior to the hospital project completion, a number of other possible interfaces were also being considered to further streamline operational management of the facility. These may include:

Dynamic Displays

A number of dynamic displays will be located throughout the hospital to provide dynamic signage, event information, and wayfinding kiosks. The dynamic display system monitors and manages these displays and it is currently being assessed whether this should interface to the FM system, to provide room booking information on the display devices.

Room AV

The Room AV system at the hospital includes touch screen panels on meeting rooms that allow user lookup and booking of rooms. In the future, this may be interfaced to the FM application to ensure both the AV system and FM software have the same view of current room bookings. Also considered are a room booking interface to AV system and / or Public Information Display system, and a catering interface for meeting room catering requests.

