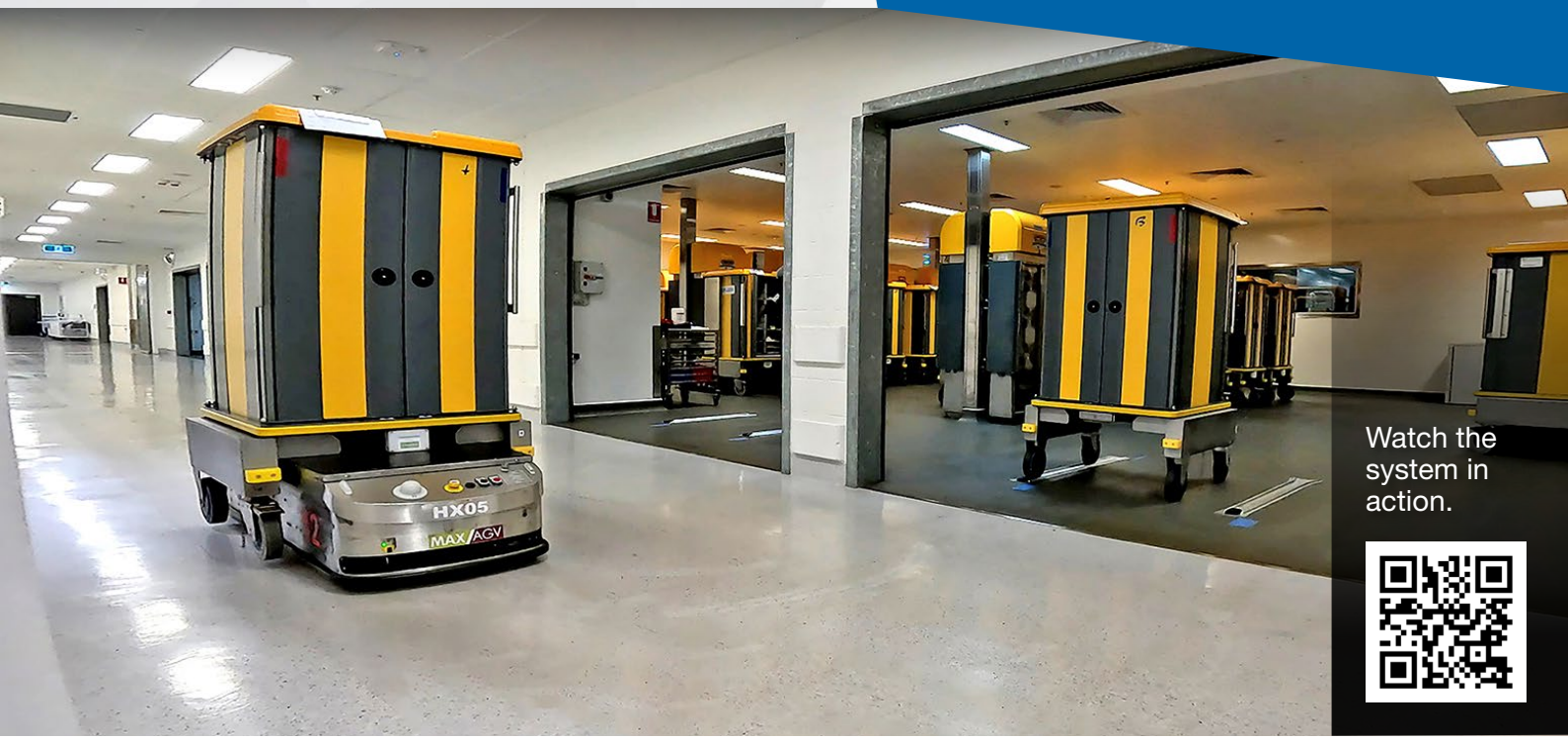
RA Health

Hospital Delivery System Case Study



Watch the system in action.

When the Royal Adelaide Hospital approached us to update their AGV trolley delivery system in a live, 800 bed hospital, we were up for the challenge.

Customer requirements

A life cycle upgrade was required to the client's existing fleet of twenty-five (25) Automated Guidance Vehicle (AGV), located at the Royal Adelaide Hospital (RAH). The existing AGV Control System had limited support from the previous supplier, and had also been superseded by a more modern, Window based system with an easy to edit control software and hardware. RA Health provided project consultancy from initial concept, through to design, implementation, and closure stages.

MAXAGV confirmed the existing AGV could be converted to the MAXAGV control hardware and retain the existing essential hardware, drive etc.

Due to this the AGV system could be upgraded at minimal expense to provide an increased lifespan at a lower ongoing running cost.

After the tender was accepted RA Health commenced the project, converting the twenty-five (25) AGVs and the control system. Approximately eight hundred (800) patients continued to rely on the system each day and night as the upgrade was carried out.

Obstacles

The hospital was required to maintain business as usual while the work was performed with minimal disruption to normal operation. This challenging task was overcome by the RA Health and RAH project teams by developing a strategy to run separable portions in parallel during conversions to minimise manual labour support.

A risk assessment was carried out at the beginning of the project leading to all high-risk activities being mitigated through a pre-work strategy leading to almost no impact to the hospital's day to day operation and all targets delivered on time or earlier.

MAX AGV

AGV Hospital Delivery System

Smart – Intelligent – Versatile – Flexible – Intuitive

Royal Adelaide Hospital

The Solution

A 24 hour process was required to minimise the duration of the project and any inconvenience to normal hospital operation.

The solution was to convert twenty-five (25) of the existing AGVs with the new MAXAGV hardware and control system while removing EOL equipment during the conversion. The project was performed in two (2) separable portions to reduce overall risk to project CSSD and main hospital.

RA Health had a team of technicians from all over Australia, assist with the conversions and onsite commissioning assisted by MAXAGV either remotely or onsite during the duration of the project. This was a 24 hour process to minimise the duration of the project and any inconvenience to the hospital.

The control system and information were recreated using the MAXAGV platform with new communication to existing equipment (Lifts, WAGO I/O blocks and other devices).

To reduce the impact to the hospitals operations, half the AGVs were converted and commissioned by a night shift team while the existing AGV system was not being used. This meant there were two AGV systems running parallel with control methods implemented to allow this hybrid scenario.

The first step was to convert the five (5) AGVs that serviced the CSSD which was achieved successfully.

The project implementation was very successful with the cutover reporting no issues or impact to hospital operations. After the cutover the remaining AGVs were converted and introduced into the system.

The MAXAGV system also allowed user management via Windows credentials allowing client computer access by the company's users active directory account for added security and local policies.

The Factory Acceptance Test (FAT) and Site Acceptance Test (SAT) were successful on the first attempt with no issues recorded.

Royal Adelaide Hospital

"One of the best executed projects I have been involved in whilst working for Downer"

Andrew Elkin - Head of Technology & Innovation, Downer Group

AGV Hospital Delivery System

EQUIPMENT IN FOCUS

- MAXAGV Sonix V4 Controller with an MCU-5 manual hand control unit

KEY FEATURES AND BENEFITS

- **Increased Lifespan**
- **Flexibility and Capacity** – The system now can have stations adjusted or added, routes moved, and traffic optimised by the RA Health team.
- **Critical Support and Servicing** – Multiple technicians available across multiple states, and high-level support from MAXAGV.
- **Reporting Functionality and Analytics** – High use of standard graphic template.
- **Battery Charging Segments** – Live battery status
- **Transport Handling** – The new MAXAGV system automatically changes the destination of the AGV anywhere on the layout to minimise unproductive missions.
- **RFID Register Interface** - Setup within MAX client to review / edit / add tags into the register. A user-friendly GUI for AGV controllers.
- **Scheduled Queuing Interface**
- **Increased Control**

RA Health

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