

ANNEX A

Details of TTSH CTC Grant Projects

1. PreSAGE Smart Predictive Patient Monitoring System

The PreSAGE Smart Predictive Patient Monitoring System deploys thermal imaging and smart analytics to predict falls with extended response windows and minimal false alarms.

Nurses are better able to manage both ward and non-ward duties while ensuring patient safety. The system provides advance alerts of up to 15 seconds, enabling timely responses to patient needs and reducing stress and unnecessary rushing, particularly for senior nurses.

By significantly reducing false alarms, it minimises alarm fatigue and allows nurses to focus on meaningful care rather than constant interruptions. Incidents are recorded for continuous learning and analysis, strengthening workflows, training and patient safety, while enabling senior nurses to continue contributing their expertise with confidence.

2. Smart Scheduler

The Smart Scheduler is an AI-enabled flexi-scheduling system featuring nine shift types, micro-specialisations and hybrid roles to enhance workforce agility and career development.

It reduces duty rostering time from 90 minutes to 15 minutes (83% reduction), allowing nurse managers to focus more on staff development, quality improvement and patient care.

It also enables predictable and flexible scheduling for nurses, including mature and senior workers, helping them meet required hours while balancing work, health and family needs. AI-powered demand forecasting matches 6-, 8- and 12-hour shifts to patient care needs, reducing last-minute changes and improving manpower deployment for an ageing workforce.

The system also supports skills and competency matching, enabling senior nurses to be deployed where their expertise is most needed through job redesign and modular roles, while reducing physical strain.

Both systems were designed to be scalable, privacy-preserving, and adaptable across various care settings.