

Workflow redesign at Department of Neuroradiology, NNI to improve service quality and efficiency through establishment of new Outpatient Imaging Centre

Dr. Wickly Lee, Tan Jau Tsair, James Tan Hock Guan, A/Prof Sitoh Yih Yian
National Neuroscience Institute

Chester Ong, Beatrice Low Soo Chin
Singapore Health Services

Introduction

Neuroradiology department at NNI started operation in June 1999, using a single workflow framework, serving both inpatients and outpatients. With the ever increasing demand for advanced Neuroimaging, the segregation of workflow to improve efficiency and patient expectations was undertaken through the establishment of a new Outpatient Imaging Centre. This re-design in workflow was done in conjunction with the replacement of an existing CT scanner and the addition of a new third MRI scanner.

The Outpatient Imaging Centre has its own patient workflow through a dedicated registration counter, waiting area and changing room. The siting of the two new scanners in the new outpatient centre successfully alleviates the strain on the present system, resulting in improved patient traffic, outpatient experience, and at the same time cutting down waiting time of the inpatients. Due to space constraints, critical steps had to be taken during the process of this redesign.

Objectives

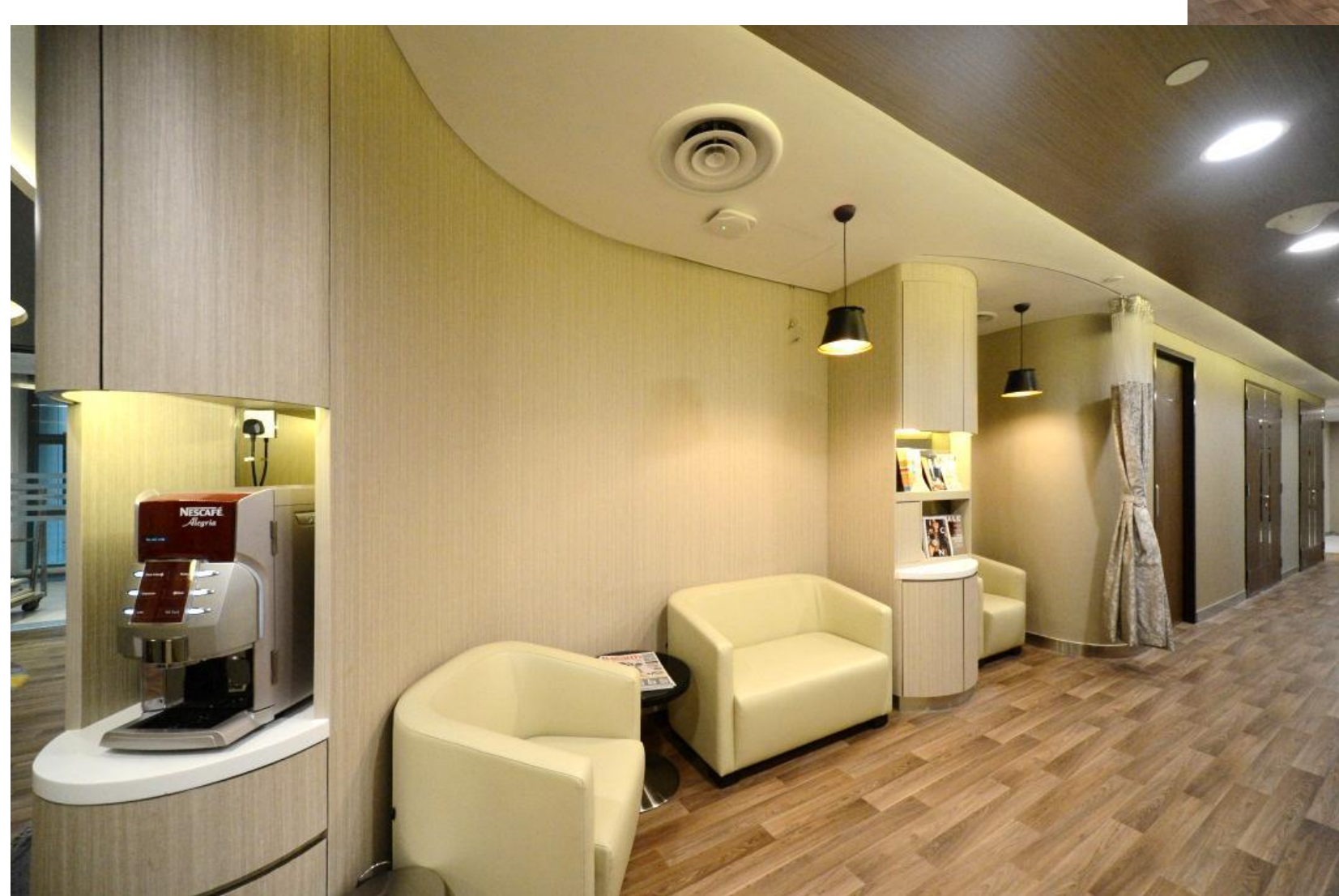
The newly set up Outpatient Imaging Centre will see substantial improvement to the way Neuroradiology run its imaging services. With this simple segregation process, it provides a totally refreshing and unique experience for our outpatients, being served with separate scan rooms and corridors. With the change of workflow and manpower deployment, reduced inpatient wait time could be achieved.



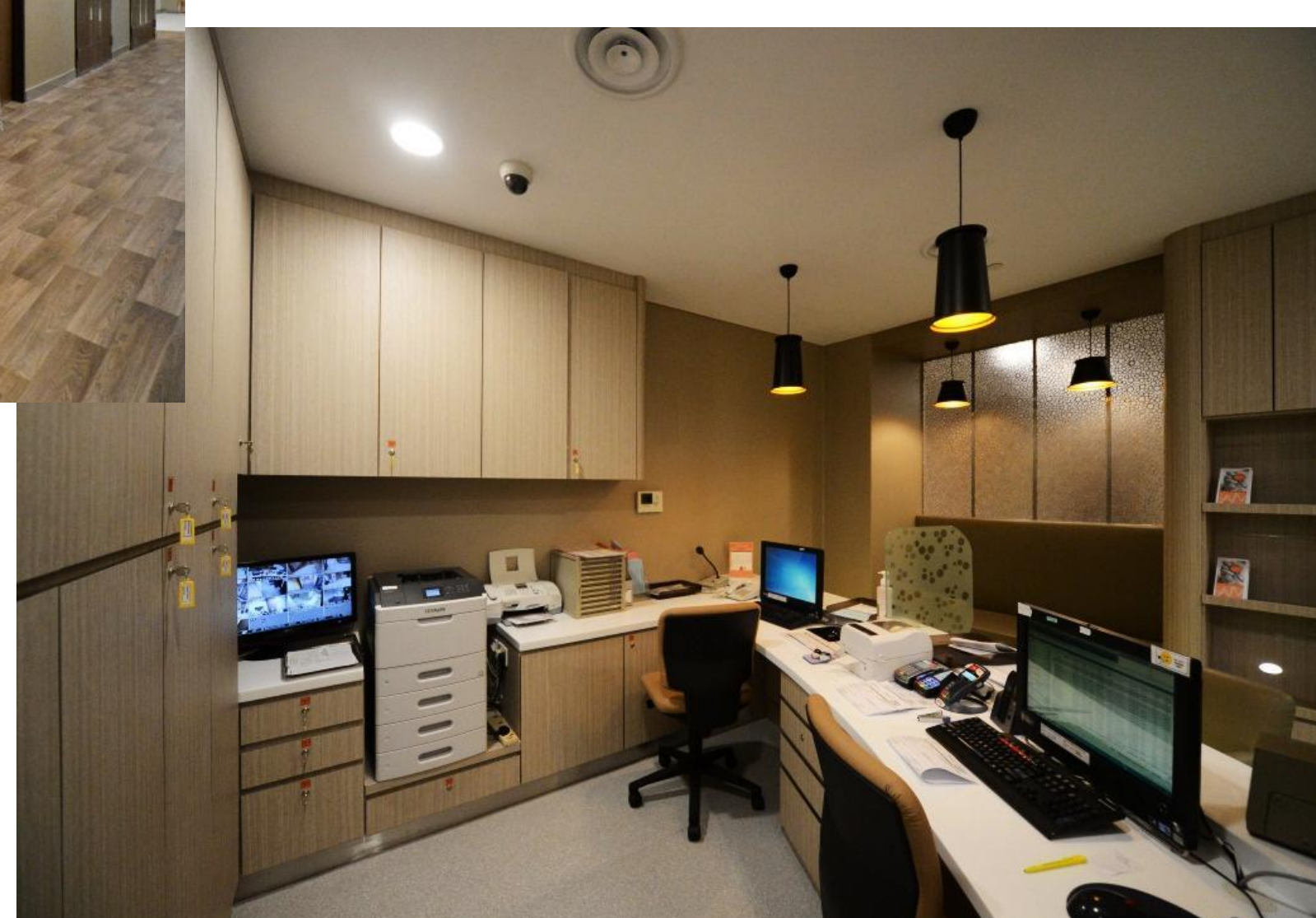
New Out-patient counter



New workflow corridor



New Out-patient waiting area



New In-patient counter

Methodology

Pre-design phase of this project aimed at the study of the present work-flow deficiencies to identify key areas of delay. An analysis of these data revealed a single bottle neck of workflow inefficacy at the level of scan slots allocation for both inpatients and outpatients. The segregation of these two groups of patients was found to have a major impact on the overall improvement on efficient use of scan slots.

The design phase of the new Outpatient Imaging Centre takes into account the throughput of outpatients in an efficient manner during office hours. With this simple segregation process, in-patients can also be scanned efficiently during office hours. The project was started in December 2014 and completed in March 2015.

Result

The newly established Outpatient Imaging Centre, re-configured from the Neuroradiology department, with separate areas serving outpatients and inpatients is now in operation. This enabled better usage of scan slots to minimise waiting times and improve patient experience.

