Merge Case Study
Singapore National Eye Centre
The ophthalmology industry is quickly evolving, shaped by factors such as increasing global demand and significant advancements in imaging technology. Staying on top of these changes and securing the best tools and strategies to address them is critical to the success of any industry provider, and Singapore National Eye Centre (SNEC) is no exception.

Incorporated in 1990, SNEC manages an annual workload that includes 300,000 outpatient visitors and 28,000 operations per year in its main center and two branches. As a designated national eye center, operating a network across five locations, SNEC serves half of the patients in the public sector. With a mission to deliver cost-effective, quality eye care to meet increasing demand, while expanding its role in ophthalmic education and research, it became clear that upgrading SNEC’s technology was a must.

**Siloed Systems Across Specialties**

“Historically, we stored images and data in native capture systems,” said Dr. Desmond Quek, Director of Medical Informatics for SNEC. “There were multiple systems used across all of our 10 subspecialties. We were lacking a single platform to integrate with our EMR and view all images.”

Further compounding the problem was the fact that different systems meant separate logins to re-enter patient information in order to retrieve images, and then required the physician to go back to the EMR to document those findings, explained Quek.

“We really couldn’t juggle so many different systems. There was no way the clinicians could be happy doing that, especially in a high volume environment like ours,” said SNEC’s Chief Operating Officer, Charity Wai.

It was apparent that a single PACS system that captures all ophthalmic related images and information, and fully integrates with the EMR, would help reduce errors and save a tremendous amount of time. “The whole idea of capturing every image and being able to seamlessly switch from the EMR to the image viewing system and back was our single most important requirement,” said Quek.

**Time for a New Image Capture System**

Once SNEC determined that it was necessary to upgrade its PACS system, a rigorous selection process began. “In the end, we decided on Merge for a number of reasons. Merge’s state-of-the-art technology, its implementation process, and support team were very impressive,” mentioned Quek.
Two main features of Merge Eye Care PACS™ stood out to the IT decision makers at SNEC: a drawing tool that was much more advanced than the current drawing tool packaged with its existing EMR system, and the ability to review multiple related images from separate systems. “Most vendors couldn’t deliver our biggest requirement, the one-click. We were quite fortunate for Merge to come along and provide this solution,” Quek noted.

From a technical competency and functionality perspective, all of the boxes were “checked off” with Merge, explained Wai. “What tipped the balance even further was Merge’s long standing track record as well as a local distributor who also has years of experience providing service support to SNEC.”

SNEC began the evaluation process in December of 2015, and in less than a year, completed the implementation process. The full roll out of the Merge Eye Care PACS was completed in under two months. “We had a very tight schedule, and with dedication from the Merge team, we were able to stay on track,” noted Quek.

**A Successful Start**

Just months after implementation, SNEC has already seen time saved from reduced printing and filing of results. “We are slowly going to phase out printing and insist that doctors use the electronic system. That is when we will see a huge increase in productivity,” said Quek. “That is where we will see a big difference.”

In addition, SNEC is hopeful that this will lead to a significant reduction in errors. “With paper and printing, there is always the fear of entering the wrong patient name or image. I am hoping that with the new image capture system, we will limit the number of steps needed to secure the results we present to doctors. Our goal is to not only cut down, but actually reduce the number of errors to zero,” said Quek.

With a more streamlined system in place, SNEC also aims to cut down the amount of time patients wait for both tests and results. “We are actually working on enabling patients to do tests at remote sites and have images electronically transferred back to our center to conduct remote consults so patients don’t have to travel down to the main location and take up space in an already very crowded, busy center,” said Quek. With a single system, physicians will also have the tools to make smarter, quicker decisions about whether an onsite appointment is even necessary.

**Looking Ahead to the Future**

SNEC is excited to continue collaborating with Merge over the next few years and with over 64 service stations and extensive equipment in just the main building alone, this has been an enormous undertaking. “Obviously, you need a very solid partner for such a large scale implementation and Merge was able to understand our requirements and provided the support we needed,” said Wai.

“I am excited to have one system where everything is captured in one place, and to enable all caregivers at all levels to have access to the same information instantaneously, so they can make the right clinical decision—whether it’s to escalate treatment or detect diseases early on before they progress,” said Quek. “Improving the care we provide and ultimately saving patient lives is the end goal. We are thrilled to partner with Merge to make that happen.”

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Desmond Quek, Director of Medical Imaging, Singapore National Eye Centre (SNEC)