

Energy Giant Gets Charged Up with Asset Management Solution

Growth from electricity production, oil trading and desalination demanded an Enterprise Asset Management (EAM) system overhaul for one of the Lion City's leading energy suppliers, which achieved some surprise extra benefits.

PowerSeraya is, arguably, one company without which Singapore would be hard-pressed to function. The organization, whose business is in the production, wholesale, trade and retailing of energy, with a core focus on electricity, is one of the island state's largest electricity generators. It supplies 30 per cent of the country's energy needs.

In addition to electricity, the company also recently expanded its footprint into two other forms of energy: oil and water. The company's investment arm last year ventured into the trading of physical oil, with the setting up of a sister company, PetroSeraya. Also, spurred by the value that water-scarce Singapore places on the commodity, PowerSeraya recently became self-sufficient with regard to water, with the addition of a new seawater reverse osmosis desalination plant located at its power station on Jurong Island, a man-made island located southwest of mainland Singapore.

This desalination plant has the capacity to produce both industrial and potable water, but PowerSeraya currently uses only industrial water for its own business operations. The plant is also expected to provide additional revenue streams for the PowerSeraya Group in future, with plans in the works to sell water to potential industrial customers on Jurong Island.

Oil and power expansion

This expansion into both oil and power forms part of the PowerSeraya Group's strategy to become a 'fully integrated energy company based in Singapore',

according to Quek Khai Hor, senior vice president, utilities group, PowerSeraya. Quek's duties include the management of plants and assets for the generation of electricity; he is also responsible for the execution of major engineering projects.

Such rapid growth of the company's business, as highlighted above, requires the support of a solid IT infrastructure, and it soon became clear to Quek that the company's existing legacy system for managing assets was no longer sufficient for the smooth running of its business processes.

"In PowerSeraya, IT is used primarily as a tool to automate and hence, accelerate business processes. It provides a platform for users to analyze data in order to gain deeper insights into the business," said Quek. "The previous IT system our company worked on was too old, and could not provide additional support for server maintenance. Furthermore, there weren't sufficient features built into the old system to meet our current growing business requirements."

Legacy limitations incompatible

According to Quek, the previous legacy system's various limitations proved incompatible with the company's growth plans, which required more in-depth reporting functions.

"The response time of the old system was slow, and there was a lack of management reporting features and capabilities. In addition, there were conflicts between the old system and our safety management system," said Quek. A safety management system oversees the issuance of a permit for any work that requires safety isolation from energy sources, to prevent potential injury to persons working on the project. "The previous system also offered limited operational reports to the users, and made detailed analysis difficult and more time consuming."



Clearly, a new Enterprise Asset Management (EAM) system was needed. EAM refers to applications deployed by organizations to facilitate the management of high value assets and work processes. Armed with a \$1.5 million budget, the vendor selection process began. Eventually, the company decided on a vendor with which it was familiar. According to Quek, the conclusion was a fairly straightforward one.

"Global PTM had been supporting our old system for the past year and they have since acquired an excellent understanding of our business processes," said Quek. "We worked with the same project manager who had supported the old system, so we knew he understood our requirements well. Besides, Global PTM also had a proven track record in implementing like systems."

Faster response, increased efficiency

The new EAM solution purportedly brought with it a significant increase in efficiency. Quek described the new solution as being "faster, thus leading to a much better performance overall. The new system guarantees a response within three seconds, which is much faster than its predecessor, which had a response time that ranged between five and 10 seconds." Other perks of the new solution include a more accessible and user-friendly interface.

"Being browser-based, the new solution provides easier navigation for users, compared to the old system. Being built in one package, it also eliminated the problem of integration," said Quek. "Furthermore, new functionalities such as interfaces compatible with SAP applications and our Hazard Identification and Risk Assessment (HIRA) application were built in. These features were not found in the previous system." HIRA forms part of the safety management

system, and is required to be carried out before any project is embarked upon, to assess the risk involved in that particular piece of work. Risk mitigating measures can be implemented once risks are identified and assessed, to ensure workplace safety.

Fuss-free transition

According to Quek, the transition from the old system to the new was relatively smooth, due in part to the prior experience of its users.

"The system's users consist mainly of operation and maintenance staff. Not much change adjustment was needed as most of the users are adept at the EAM system," said Quek. "We also invested heavily in training, to prepare every user for the adoption of this new system."

"So far, the users are happy with the new system's performance," Quek adds. "They will also benefit from the new management reporting system that will be put in place for analysis of their respective work performances."

The project's implementation will be split into three phases. Phase one, which started early this year, took three and a half months to implement, and was completed in April. It involved the replacement of obsolete hardware infrastructure and the migrating of data from the old system to the new. The project is currently in Phase two of implementation, which includes the development of the safety and HIRA modules, as well as the integration of the system to the enterprise inventory systems. The final phase, which is scheduled for completion by year-end, will involve advanced analytics and the addition of more system interfaces.

For information on PowerSeraya, visit PowerSeraya.com

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