Eskom
Remote monitoring and diagnostic center

Client profile
Eskom is a vertically-integrated South African utility. With over 42,000 megawatts of capacity, Eskom is the tenth largest utility in the world in terms of generating capacity, and produces 95 percent of the electricity used in South Africa.

Business challenge
In line with global energy trends, Eskom is challenged by increased demands for energy, an aging energy generation infrastructure, an increasing shift towards environmentally-friendly power sources and the availability of scarce industry-specific skills.

Due to the increased demand for energy, Eskom also faces a number of unique challenges associated with returning older plants to active service. As these plants, part of Coal 3 an Operating Unit in the Generation Division of Eskom, are brought back into service, the processes, methodologies and tools supporting their reliability and optimization can vary considerably—as well as the level of experience and skills required to operate them—resulting in inconsistent levels of performance.

This is further compounded by limited capabilities within the utility in terms of knowledge management and the sharing of leading practices. As a result, the ability to extract maximum asset performance and reap the benefit of investments in resources and technology is constrained. Moreover, the ability to sustain performance and support long-term growth is reduced.

How Accenture helped
Eskom selected Accenture to help it implement a Remote Monitoring and Diagnostics Center (RMDC) solution due to its global experience and specific knowledge in developing performance monitoring and diagnostic centers. Accenture also brought skilled professionals and a demonstrated, field-tested delivery approach and methodology to the project.
Accenture analyzed, designed, implemented, and tested a solution based on Microsoft Office SharePoint Server and OsiSoft PI and ProcessBook technologies. The comprehensive solution blueprint comprised all the individual components and systems required to improve the reliability of the power plants and reduce unplanned outages.

Implemented in a phased approach, each phase of the RMDC project introduced additional, logically-grouped sets of functionalities and technologies. The first phase, consisting of basic operator support, went live on May 1, 2009 and the second phase went live in September 2010, bringing an alarming system and advanced support capabilities.

Delivered through a portal, the solution displays role-based functionality and intuitive navigation, integrating seamlessly with Eskom’s SAP and Hyperwave systems for processing work orders and access to relevant information and collaboration respectively. In addition, Accenture developed a multi-monitor application to simultaneously display the individual pages of the solution on any of four screens connected to a workstation. In this way, operators are able to monitor of multiple pieces of equipment on individual screens connected to a single workstation.

High performance delivered
Accenture’s demonstrated project management skills on large and complex implementations, coupled with its core assets and toolsets allowed the team to kick-start the building of Eskom’s solution and to leverage collective experience from other similar engagements, delivering on the project on time and within budget.

The implementation of the RMDC solution allows Eskom to gain financial benefit through the reduction of unplanned maintenance, improved operator efficiency, procedural support during unit start-ups and shut-downs and knowledge sharing to leverage throughout its Coal 3 Operating Unit.

Specifically, the solution helps Eskom:
• Improve the reliability and availability of its Coal 3 power stations through real-time monitoring of data, improved visibility of equipment performance, early warnings of emerging issues and faster, more insightful decision making.
• Enhance its knowledge management capability by enabling effective sharing of information and leading practices between power stations, channeling the right information to the right people and retaining knowledge capital.
• Enrich its operational and technical support by assisting with the day-to-day monitoring and diagnostics activities of the plant operations group, providing experienced support to new personnel and effectively leveraging the experience of skilled employees across all power plants.

By teaming with Accenture, Eskom has created a firm foundation from which to become a high-performance business.

About Accenture
Accenture is a global management consulting, technology services and outsourcing company, with more than 249,000 people serving clients in more than 120 countries. Combining unparalleled experience, comprehensive capabilities across all industries and business functions, and extensive research on the world’s most successful companies, Accenture collaborates with clients to help them become high-performance businesses and governments. The company generated net revenues of US$25.5 billion for the fiscal year ended Aug. 31, 2011.