

Case Study

Tech Mahindra Modernizes East African Utility Provider's Operations Across 400+ Sites Using ERP and Smart Metering

Overview

The client, a leading East African utility provider, faced significant challenges in meeting increasing energy demands, modernizing outdated infrastructure, and managing widespread operations with limited system visibility and fragmented applications. To address these challenges, Tech Mahindra implemented a comprehensive transformation that leveraged ERP, CIS, smart metering, and a robust data infrastructure. This strategic modernization enhanced grid visibility, reduced energy losses, improved billing accuracy, and enabled efficient scaling to support a growing customer base.

Client Background and Challenge

The client, a leading utility provider in East Africa, is responsible for delivering electricity across the region through a network of over 400 offices. Serving more than 4.5 million customers, indicating steady growth toward its goal of reaching 7.5 million customers by 2030 while overcoming infrastructure and operational constraints. Key challenges included:

- Managing distributed operations across a geographically dispersed network.
- Operating in a region where only 50% of the population has access to electricity puts additional pressure on scaling efforts.
- Dealing with ad hoc deployment of standalone systems and a lack of remote access.
- An outdated and insecure IT infrastructure resulted in poor asset data availability, inconsistent performance, and billing inaccuracies.
- Difficulty in addressing change management issues due to a largely non-IT-savvy workforce.

Our Approach and Solution

Tech Mahindra implemented a Meter-to-Cash system to reduce revenue leakage and an energy monitoring system that helped the clients manage their technical and commercial losses. Key components of this transformation included:

- **ERP and CIS Integration:** Implemented SAP ECC 6.0 covering finance, maintenance, procurement, HCM, and payroll. Introduced IS-Utilities and SAP CRM for Utilities to enable customer care, billing, collection, customer accounting, load forecasting, and audit functions.
- **Advanced Data Infrastructure:** Established a centralized platform to gather, store, and analyze operational data, featuring DSS capabilities like MIS, Business Intelligence, and Energy Data Management to enhance transparency and decision-making.
- **Smart Grid Monitoring:** Installed HT smart meters at each substation with Automated Meter Reading (AMR) for real-time energy parameter tracking.
- **Integrated System Architecture:** Enabled seamless connectivity using SAP PI as an Integration Service Bus to link MDAS, SAS, CA Identity Management, collection machines, prepaid meters, and contact center systems. A single sign-on solution ensured secure and unified access.
- **Infrastructure Modernization:** Provisioned new data center and disaster recovery (DC/DR) infrastructure along with non-IT infrastructure. Rolled out deskside PCs and networking across 400+ locations to enable field connectivity and remote access.

- **Call Center Enablement:** Delivered a software-based call center solution for improved customer service and interaction management.
- **Scalable, Future-Ready Design:** Built on an architecture capable of supporting future applications such as Distribution SCADA, GIS, Distribution Management Systems (DMS), and Outage Management Systems (OMS).
- **Phased Implementation and Support:** Followed a pilot-first approach before full-scale rollout, ensuring minimal disruption. The project included a one-year warranty and three years of post-warranty support for sustained operations.

Business and Community Impact

The transformation delivered significant results, both in terms of operational performance and community development:

- **Reduced Energy Losses and Power Theft:** The implementation of smart grid monitoring and AMR has reduced technical and commercial losses.
- **Improved Forecasting and Resilience:** Real-time data and analytics enhanced demand forecasting, outage management, and system resilience.
- **Precise Billing and Financial Reporting:** The end-to-end Meter-to-Cash integration ensured accurate billing, minimized revenue leakage, and improved financial transparency.
- **Optimized Energy Procurement:** The solution enabled a more cost-effective energy procurement strategy, resulting in operational savings.
- **Empowered Field Operations:** Infrastructure upgrades across 400+ locations enabled remote access and improved service delivery, especially in underserved areas.
- **Business Impact Recognition:** The client acknowledged Tech Mahindra's ability to scale capabilities effectively, while ISG recognized the engagement as a benchmark for strategic process improvement and transformation in the utility sector.



About Tech Mahindra

Tech Mahindra (NSE: TECHM) offers technology consulting and digital solutions to global enterprises across industries, enabling transformative scale at unparalleled speed. With 150,000+ professionals across 90+ countries helping 1100+ clients, Tech Mahindra provides a full spectrum of services including consulting, information technology, enterprise applications, business process services, engineering services, network services, customer experience & design, AI & analytics, and cloud & infrastructure services. It is the first Indian company in the world to have been awarded the Sustainable Markets Initiative's Terra Carta Seal, which recognises global companies that are actively leading the charge to create a climate and nature-positive future. Tech Mahindra is part of the Mahindra Group, founded in 1945, one of the largest and most admired multinational federation of companies. For more information on how TechM can partner with you to meet your Scale at Speed™ imperatives, please visit <https://www.techmahindra.com/>.

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