SMARTER MINES EMPOWERED PEOPLE

CETel
SES Networks

Case Study

Industry
Mining

Location
Sub-Saharan Africa

CETel GERMANY

Powered by SES

German-based global satellite provider CETel, enabled by SES Networks' end-to-end managed connectivity solutions, has transformed mining operations in one of the most remote, land-locked sites in the world with access to cloud-based systems.

CHALLENGES IN A CHANGING INDUSTRY

Scarce resources, uncertainty around commodity prices, and the need to stay competitive—these are just some of the challenges faced by today's mining operations.

CETel's customer with gold-mining operations in remote areas of sub-Saharan Africa was challenged with a decline in gold prices and revenues, along with the need to increase productivity. Additionally, any potential solution CETel presented would have to deliver reliable around-the-clock network connectivity without being impeded by the challenges of being far removed from urban infrastructure

TAILORED CONNECTIVITY SOLUTION FOR REMOTE REGIONS

CETel wanted to deliver an innovative solution that would enhance its mining client's operational efficiency and profitability. It partnered with SES Networks to ensure it could access robust reliable network connectivity, and empower its client to be operational and productive around the clock in any condition. They delivered an advanced solution that included:

- **Managed end-to-end communications over Internet and network connectivity** to overcome the geographical challenges presented by the land-locked region of Africa.
- **Satellite- and fiber-based connectivity** that improves productivity by encompassing all applications used by miners, including administrative, operational and welfare applications.
- **Tailored approach** that integrates with multiple locations, including European corporate network and exploration sites.

INCREASING EFFICIENCY, AGILITY AND PRODUCTIVITY

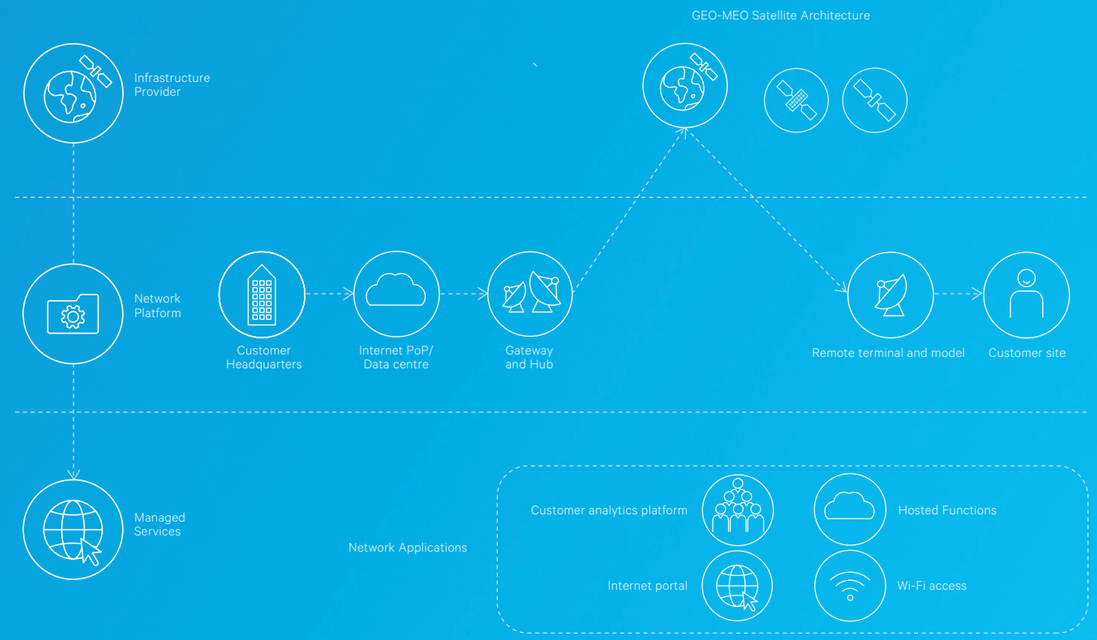
Improved planning, control and decision making

The mining industry seeks forward-thinking solutions in a rapidly changing market. This means the ability to organise, manage, and process data, as well as use cloud-based applications to boost productivity is becoming a competitive differentiator.

Thanks to SES Networks' multi-orbit capabilities comprising our low-latency O3b Medium Earth Orbit (MEO) constellation, Geostationary (GEO) wide-beam and GEO HTS (High Throughput Satellites), CETel's mining customers now have expanded access with tailored, managed data services capable of transcending remote locations. This means they can bring together data across the entire mining value chain in order to improve planning, control, and decision-making, as well as increase safety in even their most hard-to-reach operations.

The O3b solution allows end users to benefit from top cloud services like IBM, Google, Microsoft Azure and AWS. It also enables usage of various administrative applications miners need for operational efficiencies and crew safety:

- Access to Enterprise Resource Planning (ERP) systems
- Operational applications such as Supervisory Control and Data Acquisition (SCADA), or Machine to Machine (M2M)
- Crew Welfare and Corporate Social Responsibility (CSR) projects



Seamless, fully-managed connectivity service

The solutions were tailored to our customers' unique requirements. This meant adding five large trunks to their digging areas, based on the geostationary capacity. The capacity of the fully managed service, based on 'carrier-in-carrier' technology with compression appliances, leads to a 250Mbps-integrated connection to their European headquarters.

In addition to the GEO-based solutions, they added a MEO solution to several mining operations in Africa. Each site is capable of transmitting and receiving of up to 100Mbps. The deployed SD-WAN chooses the available and adequate transmission channel, dependent on what the application requires. This was an ideal utilization of GEO, MEO, and fibre.

Agility that meets mining's ever-changing needs

CETel also provided the same integration to their exploration sites network, with another geostationary bandwidth pool shared between the sites. These sites all have specific requirements, as there is a lot moving around involved and the soil samples have to be examined at their headquarters on the fly.

The small VSAT equipment makes it easy to move from place-to-place and the bandwidth pool allows them to easily relocate a committed data rate to corresponding sites. All sites can then burst their data rate to the maximum available resource of the entire pool.

CETel deployed a true hybrid network that serves their client's mining operations efficiently and effectively, increasing their productivity and ability to grow.

"Thanks to our long-term partnership with SES, we are capable of delivering the kind of tailor-made solutions that meet our customers' ever-increasing connectivity demands. What makes our solutions unique is the combination of GEO and MEO constellations, offering a state-of-the-art future proof network design. At the end of the day, it's end-to-end connectivity that empowers our mining customers to increase their productivity and achieve higher results through effective data processing—all powered by CETel and SES Networks solutions."

SERGEY RABER
COO, CETel

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