



Africa Tier-1 Case Study

THE BUSINESS

With fixed-line service often patchy and unreliable, cellular networks have exploded across Africa over the past years. Delivering a much-needed modern telecommunications infrastructure to residents of the region, the cellular boom has produced both excellent opportunities and cutthroat competition for the region's cellular providers.

A tier-1 African provider, running a self-built and self-owned 2G network that provides voice and data services to over one million subscribers, turned to Celtro to help increase backhaul capacity. The provider's backhaul infrastructure was based primarily on microwave links, and most remote rural BTS hubs were fully cascaded.

THE CHALLENGE

Facing a burgeoning market, the provider's transmission infrastructure was barely able support subscriber growth, and was a bottleneck to the introduction of new GPRS, EDGE, and 3G services. The provider's large geographical span over challenging transmission conditions and terrain was further impeding its ability to maintain competitive edge – especially vis-à-vis local ISPs in the provision of data services.

The provider was seeking a carrier-class backhaul solution to facilitate network expansion through the growth of existing cell sites and the addition of new sites – without adding to the existing microwave infrastructure. The solution would need to help ensure network 3G readiness, support multi BSS vendor topology in both 2G and 3G, and also guarantee smooth interoperability over existing network architectures like star, multilink or ring.

To keep OpEx in check, the provider was seeking turnkey solution including deployment, integration and maintenance. The backhaul solution needed to interoperate smoothly with the provider's NOC (Network Operations Center), and be fully remotely-manageable without consuming dedicated bandwidth.

THE SOLUTION

The tier-1 provider turned to Celtro to enhance revenues from voice and data traffic, raise network capacity, lower costs and streamline backhaul network management, and enable rapid rollout of new and lucrative advanced services.



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In choosing Celtro's **DynaMate DMT40**, the provider received a carrier-class, fully-redundant, hot-swappable, modular solution that could easily grow capacity on demand. The **DynaMate DMT40** offered the operator especially high optimization performance - 3:1 Abis optimization - in addition to cross connect functionality that enabled network expansion to support both subscriber base growth and new service introduction. The **DynaMate DMT40** also allowed the provider to uncork microwave bottlenecks – alleviating the overload of cell sites cascading over the same microwave links.

THE BENEFITS

With Celtro, the tier-1 provider was able to increase subscriber base by almost 60%.

Celtro's DynaMate-based solution allowed the provider to multiply capacity of existing microwave links, avoiding the expenses associated with installation, maintenance, and licensing of additional microwave capacity.

Today, the provider is able to offer new business and residential GPRS and EDGE service to existing subscribers – raising ARPU and customer satisfaction, while lowering churn.

Fully designed, deployed, implemented and maintained by Celtro network experts, the Celtro solution facilitated network expansion by freeing up a total of 58 E1 and 922 Time Slots (TS) for 11 cell sites – saving on average 5.3 E1s and 84 TS per site.

DynaMate enabled the provider to raise overall network efficiency and flexibility, future-proofing it in preparation for inevitable expansion in a high-growth market, and readying it for migration to 3G and HSDPA.