

TELECOMMUNICATIONS: A dynamic revolution

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By David White

The mobile telephone, many people reckon, is the biggest change to have hit Africa in the past 100 years.

The telecommunications revolution is the continent's one great example of private-sector dynamism. In a sector previously dominated by dormant state monopolies, it is the area of infrastructure that has shown the greatest advance and made the greatest impact.

Reaching into regions without proper roads or mains electricity supply, and deep into the informal economy, mobile telephones have transformed the habits of small business.

They have also spawned their own entrepreneurial sector – telephone booths, kiosks, “télécentres” and “umbrella operators” re-selling air-time, stalls offering handset repairs or battery-charging, and students and hawkers selling scratch cards.

Cellular technology has frog-marched African communications into the 21st century. In 2002, Celtel, a mobile group with operations in both Congos, launched a microwave link between the two capitals, Kinshasa and Brazzaville, within sight of each other on opposite banks of the Congo river. Before that, telephone calls from one to the other were routed via the two countries' former colonial powers – from Kinshasa to Brussels, Brussels to Paris, Paris to Brazzaville.

World Bank officials estimate that \$14bn has gone into telecommunications in Africa in the past five years. Overwhelmingly, the growth has come from pay-as-you-go mobile services, a model guaranteeing up-front revenues and avoiding the tariff-collecting difficulties besetting African utilities. In most countries, more than 90 per cent of mobile custom is prepaid.

According to the Geneva-based International Telecommunication Union, the number of mobile telephone lines in Africa rose to 135m last year from 15.6m in 2000, a compound annual growth rate of almost 54 per cent, compared with 24 per cent globally.

Mobile penetration, however, was still the lowest of any region at 15 per cent, ranging from almost 72 per cent in South Africa to less than 1 per cent in Eritrea.

Main telephone lines have also expanded but at a much slower rate, less than 7 per cent a year, rising to 27.3m compared with 19.7m in 2000, and achieving a penetration rate of just 3 per cent. Chad, for instance, has one fixed line for 700 people.

Mobile subscribers now make up 83 per cent of all Africa's telephone subscribers, a higher proportion than any other region. Most of the expansion has come from big international operators – mainly South Africa's MTN and Vodacom (in which Vodafone has a 50 per cent share), Celtel, France Telecom's Orange and Egypt's Orascom group. Most countries by now have at least two operators, and competition has made prices for start-up packs plummet. There are still problems of interconnectivity, however – the reason African business people may often be seen wielding two or more mobile telephones.

The exceptionally high proportion of mobile to fixed has left most of Africa lagging, however, in data and internet services. Efforts are being made to harmonise networks and put continental structures in place. But there have been delays in fixing plans for a fibre-optic submarine cable down the coast of East Africa.

Liberalisation of services is being pursued through privatisation and the introduction of second operators. Transcorp, a Nigerian conglomerate, finally took control of the country's Nitel telephone group from the state this year, planning a massive deployment of fixed lines with BT as a technical partner.

Papi Molotsane, chief executive of Telkom, South Africa's 38 per cent state-owned telecommunications group, part-owner of Vodacom, is considering acquisitions in fixed-line services in Africa, but only if linked to mobile operations, which bring quicker returns. “We've got the capital to

invest, but we're also very meticulous about our valuation process," he says, adding: "We will only go in if we have both."

Olivier Picard, executive vice-president at Alcatel, the French-based telecom equipment group, expects the high pace of expansion through mobile licences to slow.

"I don't expect to see many more licences because the business case won't fly," he says. Average revenue per user in Africa has fallen since mobiles were first introduced, to between \$5 and \$10 a month, he says, and fixed-line operators lack the financial resources to provide the transmission backbones that are required. Low literacy rates, meanwhile, limit the potential for building up data services.

Africa will have to follow a different business model from Europe or the Asia-Pacific region, he says. Further expansion will rely on mobile operators using new technologies to provide wireless broadband at low cost. "There will be growth," Mr Picard predicts, "but there are now bottlenecks."

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