

GRID LINES

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Transforming telecoms in Afghanistan

Expanding affordable access by introducing competition

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A fghanistan has transformed its telecommunications from a fragmented system serving few people to a modern one putting Afghans in touch with one another and with the global economy—all in just a few years. After the war in 2002 there were only 2 telephones for every 1,000 Afghans, and communicating between provinces was almost impossible, even for the government. Today there are more than a million mobile subscribers with national and global access. The credit goes to the government. Recognizing that telecommunications would be crucial to rebuilding the country, the government acted quickly to promote private entry—and mobile operators responded. This experience demonstrates that even in a poor, war-torn environment the right policy and regulatory framework can lead to rapid roll-out of competitive wireless services.

Today in Afghanistan people are using telecommunications to offer new services and to do business in new ways that boost income and productivity. A female journalist in Kabul hosts a phone-in radio program, fielding calls from women all over the country seeking counseling. A carpet merchant in Kabul uses his mobile phone to coordinate the delivery of carpets produced in remote corners of the country. A brick seller relies on the country's wireless network and the local public calling office to track his shipments. A mechanic in one of the poorest parts of Kabul comes to the aid of drivers in distress, summoned by calls on his new mobile phone.

None of these things would have been possible just a few years ago. After the war in 2002 Afghanistan's telecommunications system was small, fragmented, and dilapidated. The five major cities had a mere 57,000 lines. The capital city, Kabul, had fixed analogue, fixed digital, and wireless digital networks—but none was connected to another. Even the government had difficulties in communicating: poor communications links with the provinces meant that central ministries had to transmit most information by paper or in face-to-face meetings.

Recognizing that telecommunications would be critical to rebuilding the country, the government made developing the sector a high priority. It took early steps to promote private entry, focusing on getting the policy and regulatory framework right. Its efforts appear to have paid off.

Converting policy into action

The government moved quickly to approve a Telecommunications and Internet Policy in 2003. Aimed at modernizing and rapidly expanding telecommunications networks and providing universal access to a range of affordable services across the country, the policy centered on legal, institutional, and regulatory reforms to accelerate the sector's development. It strongly endorsed private sector participation and transparent, market-based competition (box 1).

But implementing the policy did not prove to be easy. A key challenge for the government was its extremely limited institutional capacity and understanding of technical, commercial, and regulatory issues in telecommunications. Donors and other

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BOX 1**KEY POLICY OBJECTIVES**

The government's Telecommunications and Internet Policy, adopted in 2003, set out key objectives for promoting the sector's development:

- Create a legal and regulatory environment that nurtures and accelerates industry growth.
- Corporatize the telecommunications network and operations of the Ministry of Communications.
- Engage private investors as much as possible.
- Establish a level playing field to support competition.
- Encourage the use of Internet, information, and communications technologies.
- Create a national development fund to meet the universal service obligation.

Source: Afghanistan, Ministry of Communications.

agencies responded with support for government initiatives aimed at improving the sector (box 2). To help tackle the immediate need of reconstructing the telecommunications network, the Afghanistan Reconstruction Trust Fund financed investments to rehabilitate the satellite earth station in Kabul and expand and improve transmission links to neighboring countries. This early support, along with the government's strong commitment to reform, became critical to the substantial progress made in just the three years from 2003 to 2005.

With public investment and technical capacity in limited supply, the government recognized that participation by the private sector would be essential for expanding access and improving service delivery—and also for demonstrating the potential for private sector-led development across the economy. The government also recognized, very early on, that Afghanistan's ability to attract successful private investment in telecommunications would depend on a strong institutional and regulatory environment—and it moved rapidly to convert policy into action.

The government took early steps to develop the regulatory framework necessary to mitigate regulatory risks perceived by potential investors—an effort that proved to be a key factor in promoting private sector entry and competition in telecommunications. In May 2003 it created an

interim regulatory unit, the Telecommunications Regulatory Board (TRB), within the Ministry of Communications. The regulatory board undertook several important initiatives, including awarding licenses to new mobile and local fixed service providers through a competitive process, facilitating interconnection agreements between service providers, and establishing a national numbering plan. It also established regulatory procedures and processes, including stakeholder consultation on all important regulatory decisions.

In 2005 the president approved a telecommunications law establishing an independent regulator, the Afghanistan Telecommunications Regulatory Authority (ATRA), by merging the Telecommunications Regulatory Board and the State Radio Inspection Department of the Ministry of Communications. The new entity now has full responsibility for all regulatory functions in the telecommunications sector. The government also approved a decree to transfer the Ministry of Communication's network and operations to a corporatized public company, Afghan Telecom, now responsible for providing basic telecommunications services across the country.

Rapid gains through private entry

The government identified telecommunications as one of the two lead sectors (the other being hotels) for attracting private and foreign investment. Investors showed considerable interest. By April 2002 the first private GSM operator, Afghan Wireless Communication Company (majority-owned by the U.S.-based Telephone Systems International), had already launched operations in the country. The government signed a 15-year contract with the company and also contributed 20 percent of the equity in the joint venture.

The government introduced competition in wireless mobile service quickly, awarding a second GSM license through a competitive process in July 2003. The winning bidder was the Telecom Development Company Afghanistan—known as Roshan—a consortium of the Aga Khan Fund for Economic Development, Monaco Telecom International, and the U.S.-based MCT Corporation.

Pursuing its policy objective of expanding competition in the GSM market by January 2006, the government initiated international competitive bidding for two more GSM licenses in May 2005. Seven bidders expressed interest, and five

The right policy and regulatory framework can enable rapid rollout of competitive services even in a poor, war-torn environment

submitted proposals. In September 2005 one license was awarded to a consortium formed by Investcom (a Lebanese company incorporated under the laws of Dubai) and Alokozai FZE (a company based in the United Arab Emirates). The other license is being signed with Watan Telecom (Afghanistan) in consortium with Etisalat (United Arab Emirates). These two new licensees have yet to commence operations.

The government also launched international competitive tenders for local fixed service provider licenses in May 2005, with the aim of speeding the rollout of services to small towns and rural areas. This is expected to provide investment opportunities for local firms across the country.

These initiatives have led to rapid gains, improving services for citizens and supporting trade, banking, and the government's own operations. Driven by a competitive market and private investment of more than US\$300 million, the coverage of mobile services has grown to as much as 50–60 percent of the country's population. Services are provided in 23 provinces and 40 cities, and plans call for extending coverage to 50 cities in the short term. The two GSM service providers now in operation provide roaming facilities with access to 175 networks in 74 countries worldwide.

The number of mobile subscribers has surpassed 1 million, reflecting growth of more than 100 percent a year since 2002. Fixed and mobile connections together increased from a mere 2 per 1,000 people in 2002 to 35 in 2005, ranking Afghanistan ahead of many other low-income countries—and the Ministry of Communications aims to raise this number to 200 by 2009 (figure 1). Prices for mobile service dropped by about 70 percent between September 2003 and March 2005.

Afghan Telecom is well on its way to establishing a presence in all 34 of the country's provinces and its more than 100 districts through two networks. The Government Communications Network connects ministries, including through videoconferencing facilities, and the District Communications Network connects all provinces. These satellite-based networks offer voice, data, and video connectivity to anywhere in the world. Through its fixed wireless-based system (CDMA), Afghan Telecom now provides services to more than 65,000 customers in 11 major cities, and the

BOX 2

HOW DONORS SUPPORTED THE TELECOM SECTOR IN 2002–05

- **The Afghanistan Reconstruction Trust Fund**, administered by the World Bank, supported rehabilitation of the satellite earth station in Kabul and improvements in transmission links and the billing system.
- **The World Bank**, through the Emergency Communications Development Project (ECDP), supported the establishment of an emergency Government Communications Network; capacity building and technical assistance for the regulator; establishment of a spectrum management and monitoring system; technical assistance for the corporatization of Afghan Telecom and institutional capacity building of its staff; and postal sector reforms.
- **The Public-Private Infrastructure Advisory Facility (PPIAF)** supported development of the initial regulatory framework and regulatory capacity building in the Telecommunications Regulatory Board through a technical assistance grant of US\$468,800.
- **The International Telecommunication Union** supported the preparation of early drafts of the telecommunications law and the management of spectrum.
- **The U.S. Agency for International Development** supported capacity building in engineering, formulation of sector policy, and preparation of a corporatization strategy and Internet policy.
- **The Asian Development Bank** provided investment support for digital fixed switch lines in Kabul.

Source: Afghanistan, Ministry of Communications.

In just three years the number of Afghans with a telephone connection grew seventeenfold and prices for mobile service fell by 70 percent

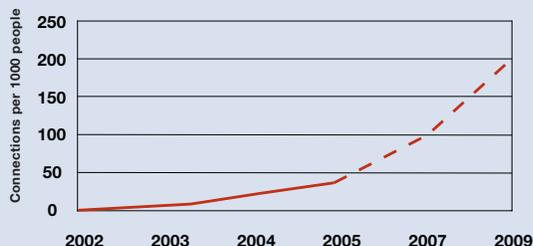
hope is that this number will surpass 600,000 by June 2007.

The Ministry of Communications has set up “telekiosks” in nine post offices in Kabul, offering basic computer training and Internet and email service to customers. There are plans to open similar facilities elsewhere in the country soon. Nor are these gains the only benefits for the country. Estimates suggest that the telecommunications sector today directly or indirectly employs as many as 20,000 people in Afghanistan. And the revenues of the Ministry of

FIGURE 1

Broadening access to telecom services in Afghanistan

Fixed and mobile connections per 1,000 people



Source: Afghanistan, Ministry of Communications, "Penetration" (www.moc.gov.af/Documents/Statistics/Telephone%20Penetration.pdf), Five-Year Development Plan (2005–09), and press reports.

Communications have been increasing at a phenomenal rate, growing by an average of almost 200 percent a year in 2002–05 to reach US\$66.3 million.

The keys to success

The experience in Afghanistan shows that wireless communications can play a critical role as the primary telecommunications infrastructure in a postconflict country. It also provides valuable lessons about how the right policy and regulatory framework can enable rapid rollout of competitive private wireless services even in a poor, war-torn environment. What have been the key factors in Afghanistan's success in developing its telecommunications sector?

- **Strong government commitment.** The government moved rapidly from policy to action, demonstrating its commitment to developing telecommunications through quick decision-making in implementing key policy reforms.
- **Pro-competitive reform agenda.** A clearly articulated agenda for pro-competitive reform, backed by strategic government investments supported by donors, has led to rapid improvements in access, service quality, and tariffs.
- **Early focus on regulatory reforms and capacity building.** Quick attention to regulatory issues helped

to minimize regulatory risks perceived by potential investors. Particularly effective was setting up an interim regulatory board with dedicated staff to work on critical regulatory issues and establish basic systems and processes, including stakeholder consultation on key regulatory decisions. In parallel, the government moved quickly to pass the telecommunications law, which established an independent regulatory authority while recognizing policymaking as a key role of the government.

- **Transparent bidding process.** The transparent, competitive bidding process, ensuring timely and successful award of licenses, has been the most important factor in keeping the sector reform program on track.

Even with the remarkable progress in telecommunications, big gaps remain. In a World Bank Investment Climate Survey in December 2005, 60 percent of businesses in Afghanistan rated the quality and coverage of telecommunications as a serious problem, ranking it behind only access to land, water, and electricity.

By 2010 the government aims to ensure that more than 80 percent of Afghans have access to telecommunications services and that the sector can contribute more than US\$100 million a year in public revenues. That will require continued efforts to strengthen institutional and regulatory capacity. Some issues are particular priorities: privatizing Afghan Telecom and introducing competition in basic services, putting the Telecommunications Development Fund to work in rolling out services in rural areas, and developing secondary regulations for interconnection and spectrum policy.

References

Afghanistan, Ministry of Communications. 2003. *Telecommunications and Internet Policy*. Kabul.

———. 2005. *Five-Year Development Plan (2005–09)*. Kabul.

———. 2005. *Telecommunications Services Establishment Act* Kabul.

———. Media briefings and other background material. www.moc.gov.af and www.trb.gov.af.

President of Islamic Transitional State of Afghanistan. 2004. *Afghan Telecom Decree*. Kabul. April.

World Bank. Various years. Aide-mémoire. Telecommunications and Informatics, Policy Division, Washington, D.C.

World Bank, Emergency Communications Development Project (ECDP). 2003. *Project Information Document*. Telecommunications and Informatics, Policy Division, Washington, D.C.



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