

Connecting a Nation

Roshan Brings Communications Services to Afghanistan

Just as railroads opened up vast continents to development, commerce, and progress in the 19th and early 20th centuries, mobile technology today is a catalyst for economic growth and social development. Nowhere is that more evident than in Afghanistan. Roshan is proud to have played a leading role in bringing the benefits of wireless telecommunications to Afghanistan, while also contributing to the nation's reconstruction and economic development. When we began operations in Afghanistan five years ago, the nation had virtually no telecommunications infrastructure; simply placing an international phone call often required traveling hundreds of miles, leaving the country, and paying very high rates.

But this lack of existing telecommunication infrastructure—a seemingly insurmountable challenge—also posed a great opportunity, as it allowed us to use the latest wireless technology to leapfrog Afghanistan's telecommunications system into the 21st century.

I came to Afghanistan in April 2002 as a volunteer consultant for the Aga Khan Fund for Economic Development (AKFED), which wanted to install Afghanistan's first-ever telecommunications network. AKFED is part of the Aga Khan Development Network (AKDN), a group of development agencies whose man-

Karim Khoja has served in senior management positions in national and multinational telecommunications companies for over 15 years. He has led several GSM start-up companies into becoming major market players, including being the Founding CEO of Mobilink (Pakistan); Director of Marketing, Strategy and Sales for ERA GSM; Chief Operating Officer and member of the Board for Croatian Telecommunication HT; as well as Founding CEO of T-Mobile, Croatia. Mr. Khoja has been on the board directors and in senior positions focusing on sales, marketing and strategy for companies such as Exi Wireless Inc, Spectronics Microsystems Ltd., and RAM Mobile Data Ltd. His involvement in the Afghan telecommunications sector began in 2002 as a volunteer consultant for the Aga Khan Fund for Economic Development (AKFED). In 2003, he was appointed as the Chief Executive Officer of Roshan. Mr. Khoja is also Chairman of the Board of the Afghan Investment Climate Facility (AICF) and an Advisor to the GSMA Development Fund.

dates range from health and education to architecture and culture, and from microfinance, rural development, and disaster reduction to promoting private-sector enterprise and revitalizing historic cities. While working for Hrvatska Telekomunikacije in Zagreb, I took a three-month sabbatical to help AKFED set up mobile contracts in Kenya and Tajikistan; my work then took me to Afghanistan to assist in bidding for a mobile contract.

From the start it was obvious that there was a real need for a reliable and accessible mode of communication. People had gone so long without speaking to family members both within and outside the country.

Having spent over ten years in the telecom industry, I was shocked to hear that Afghans—who today are our customers—once had to walk 700 miles to place an international call. We learned early on that we could be part of this revolutionary time in Afghanistan's history, completely changing the way people communicate.

That was a time of abundant changes. Under the new and active government, we could see growth and progress. Many NGOs had come to Afghanistan to help

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rebuild. With changes occurring at all levels, we wanted to play our part in driving the reconstruction effort.

But life was dangerous in this post-Taliban era. To be honest, when I first came to Afghanistan I was scared. My life in Zagreb had been safe and stable; we never worried about security. But here we faced constant threats of kidnappings and suicide bombings. Even today, security remains a major challenge and has always had an impact on our operational costs: we spend approximately 10 percent of our budget on security to ensure that all our employees and customers are safe at our 700-plus sites around the country.

Few aspects of life are untouched by the ability to communicate easily and cheaply, which mobile technology makes possible. Families that have been displaced or dispersed by conflict can remain connected. Commerce can grow when business owners have the tools to search for the best prices, can predict when goods will arrive, and need not close down their shops to meet with suppliers. And then isolated villages and communities can be better integrated into the fabric of the nation and the economy.

When I came to Afghanistan, the minister of communications had already put out a license for an operator. We worked with the government to formalize a transparent tendering process, the first of its kind in the country. The International

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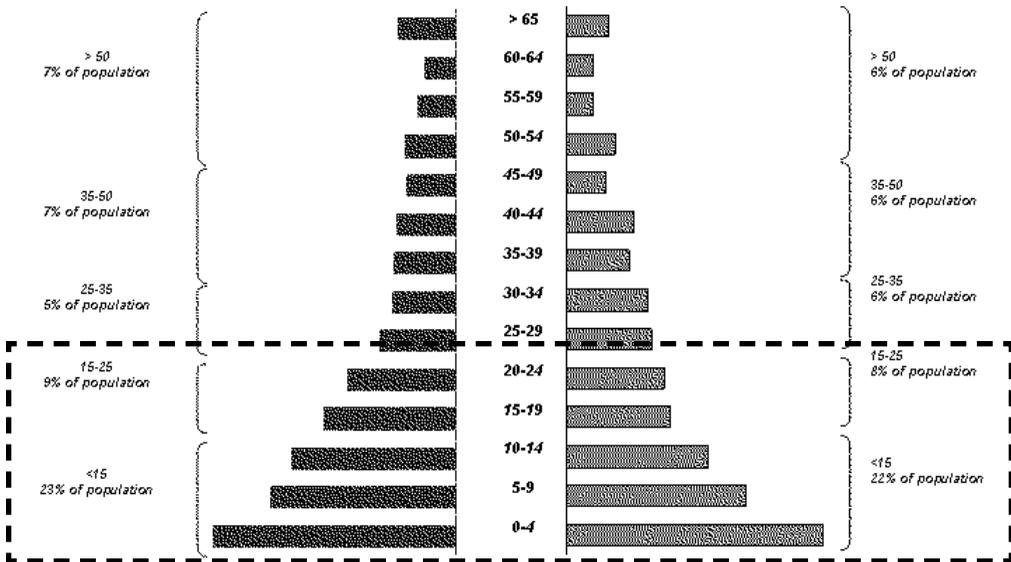


Figure 1. Age distribution of Afghanistan's population.

Telecommunications Union (ITU), World Bank (WB), and Ministry of Finance (MoF) also played useful roles, ensuring that all parties were accountable.

Telecom Development Company Afghanistan (TDCA), operating under the name of Roshan, was awarded the second license for GSM (Global System for Mobile communication), and at 11:30 a.m. on June 3, 2003, His Excellency Mr. Mohammad Masoom Stanekzai, the former Afghan Minister of Communications, made his first call: from his office to me. Thus, a three-month volunteer assignment developed into more than six years of work in the country.

We entered Afghanistan with the mandate to provide all Afghans with access to mobile telephony, as well as to play a key role in the country's economic development and its reconstruction and redevelopment process. From the start, we have sought to be a driver of progress and a change agent in the country. Our shareholders instilled a sense of corporate social responsibility into the company's vision; today it continues to be a driving factor. These are my themes in the rest of this paper, as I tell this story in more detail.

Afghanistan has just under 32 million people, of whom 70 percent are illiterate. Living mostly in rural areas, they belong to very diverse and still feuding religious and tribal groups. In 2002, it was the world's third poorest country, with 53 percent of its population below the poverty line, and ranked last on key social and health indicators. Because of these conditions, one child out of four dies before reaching the age of five.¹ Still, Afghanistan is Central Asia's most populated country; by 2050, it will have an estimated 60 million people. As Figure 1 shows, it is also among the world's youngest countries; 50 percent of its population is under 15 and 60 percent is under age 25.

Afghanistan is recovering from over two decades of war; indeed, many regions are still at war. The basic infrastructure has been devastated, and the country's roads, transportation, and power structures have always been limited. The unstable security makes the environment even more difficult.

Before 2002, Afghanistan had virtually no telecommunications infrastructure. Roshan was only the second GSM licensee in the country; when it began operations in July 2003, there were only 80,000 subscribers nationwide. Today, five operators provide coverage in all 34 provinces, reaching over 50 percent of the population, with a total of 6.65 million active subscribers. Figure 2 shows this remarkable growth.

A UNIQUE BEGINNING

Beginning operations in Afghanistan was not easy. We faced many hurdles in our quest to bring the people of Afghanistan access to affordable, reliable phone service and a range of previously unimaginable services that directly enhance their quality of life and well-being.

We had to create an identity for Roshan that would speak to all Afghans, especially in an ethnically diverse country. We conducted market research to learn the best way to reach people, using over 30 focus groups to ensure we had a representative sample of what Afghans really wanted in a company. We showed participants a bottle of Coca-Cola and spent an hour explaining the idea of a brand. Then we asked, If Afghanistan had a telephone company, what should its name be? They chose Roshan, which means light (a new beginning) in Dari and Pashto, the two national languages. Later focus groups also helped us select our slogan: *Nazdik Shodan* (Bringing You Closer). This phrase resonated with the Afghan people, who had never had a way to connect with their families. Roshan would give them one.

In creating an identity, it was important for us to meet with the community members where we wanted to begin operations. Kabul is not Afghanistan. When we went outside of Kabul, we realized that the ethnic groups and cultures were very different and that we had to respect them. We could not just go in and start building a tower in a city; the Pashtuns in the south did not like that idea because we might look into their houses and see their wives. For us, doing business meant meeting with leaders and elders in various villages and in towns throughout the country, drinking *chai* and smoking a *sheesha* (water pipe). We would send out scouting teams who would explain to community leaders what mobile technology could do for their town or city. We would tell them we intended to bring jobs and communications, but it would take some work. We learned that once we had a vested interest within a community, we could in fact succeed in the country. We even looked at ways to create jobs for individuals in villages by using local people to build sites, provide security, and run shops. This community investment is still critical to our ability to operate safely in the country.

The country's mountainous terrain and its lack of infrastructure, including roads, water, and power supplies, makes it hard to build out and maintain net-

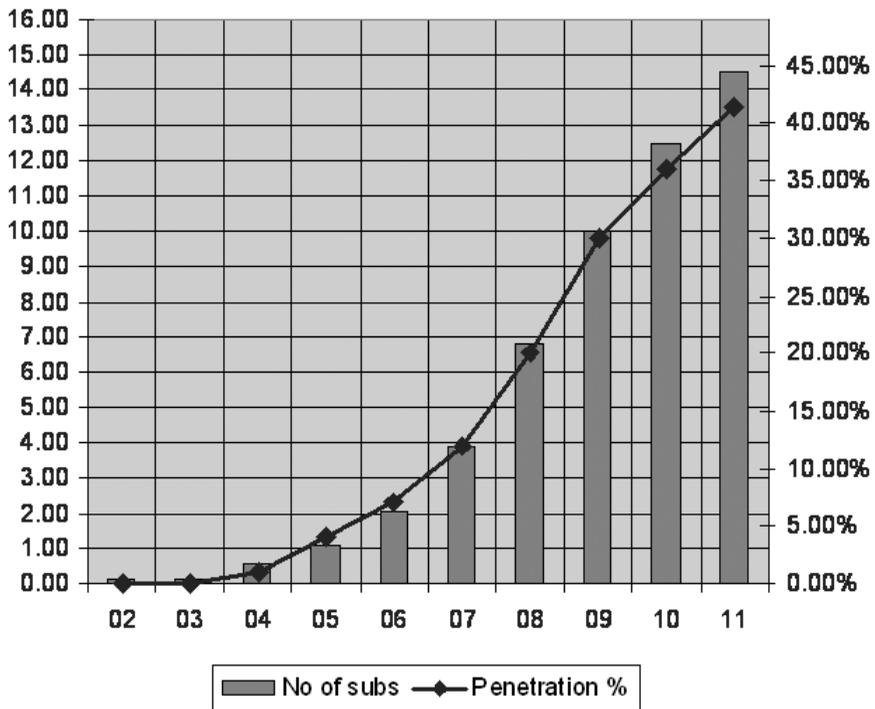


Figure 2. Mobile Penetration and Subscriber Growth Rates² in Afghanistan (numbers of subscribers in millions, penetration in percentages).

works; this has not changed. To build a typical site, we have to clear land mines and then build an access road up to one kilometer long. The electricity and other power infrastructures are minimal, so we have had to install two generators at each of our sites. But this didn't deter us.

After the first six months, we only had services functioning in six cities: Kabul, Herat, Mazar-e-Sharif, Kunduz, Jalalabad, and Kandahar. Because we wanted to provide all Afghans with access to mobile telephony, we made it a point to expand further into the rural areas. Today we provide the largest coverage in the country, serving approximately 56 percent of the population in more than 225 cities and towns in virtually every province (see Figure 3). For Afghans, we satisfy one of the most basic human needs—the need to speak to one another.

Initially, I don't think any of us on the management team foresaw the huge demand for wireless services. In our business plan we estimated we would have 150,000 subscribers in five years, but after our first month we had over 30,000 subscribers. We had to revisit our initial plan to ensure that we had the resources to expand operations that quickly. Now, five years later, over three million people in Afghanistan are using the Roshan network.

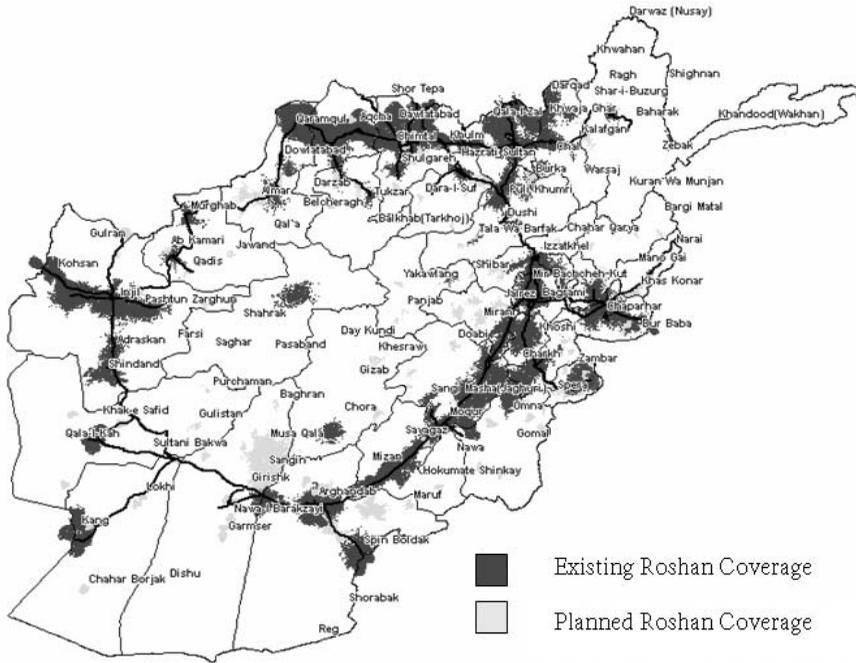


Figure 3. Mobile telephone coverage in Afghanistan.

It was imperative that our business model have a framework that would enable us to enter other cities and towns that were not then economically viable. In these places, we felt, mobile telephony could make the greatest impact and invigorate the community. For example, we launched service in Bamyan, a city that once housed a thriving market, a hospital and a vibrant tourism industry, until the Taliban attacked. We knew we would lose money in Bamyan but we went ahead anyway. Today the market is flourishing again, the hospital has reopened, and tourists have returned. Financially, offering services turned out to be a good decision. More important, providing telecommunications has been a catalyst in building civil society.

How do you build a world-class network in a country with a limited pool of technical expertise? When we began, we needed a plethora of engineers to build our network. Initially, over 10,000 people applied for jobs, but none were qualified. Given his limited options, our chief technology officer hired anyone who could speak some English and turn on a computer. So we learned that we would have to provide on-the-job training. Today, our engineers are regarded as the best in the country.

During our first two years it was extremely difficult to move cash around the country in a secure way; we were constantly worried, as we counted and transport-

ed funds and monitored for counterfeit currency by ourselves. Anyone would get nervous transporting large amounts of cash around the country through unsecured areas. In 2004, when the first bank opened, we made our first deposit of \$500,000. It shut down the bank for two days.

Since 2003, we have invested more than \$370 million to bring in the latest technology and build a world-class network to connect the people of Afghanistan to each other and the world, in ways that meet their individual needs and aspirations. Whether through M-Paisa, our mobile banking product, or through BlackBerry service, we bring the latest, most innovative technology to improve lives and connect the people of Afghanistan.

Working in Afghanistan has taught all of us the importance of development in people's lives and the impact of giving back to the community. This makes the business far more fulfilling. We see that we are changing lives. We also show that a company can operate in Afghanistan in an ethical way, though the environment is hardly conducive to doing so. Roshan is proud to operate ethically in one of the world's five most corrupt countries without paying *baksheesh* (bribes).³ It is also crucial that we have the support of our colleagues, employees, and board members in order to be successful in this difficult operational environment.

Our values center on maintaining commitment and focus on the customer, conducting business with integrity, and respecting the customs, cultures and traditions of Afghanistan while engaging in corporate social responsibility to give back to, and develop, the country.

A SUCCESSFUL AMALGAMATION

Roshan aims to develop trust, friendship, cooperation and hope, all necessary to bring the country out of a troubled past into a bright future. Roshan is owned by an international consortium made up of three key shareholders:

- The Aga Khan Fund for Economic Development (AKFED): 51%
- Monaco Telecom International (MTI), a subsidiary of Cable & Wireless: 36.75%
- TeliaSonera: 12.25%

The Aga Khan Development Network, operating in Afghanistan since 1996, works for the common good of all citizens, regardless of gender, origin, or religion. Its underlying impulse is the ethic of compassion. Its programs in Afghanistan operate under a comprehensive development agreement signed by His Highness the Aga Khan and President Hamid Karzai. The AKDN is involved in several programs throughout the country; while each agency pursues its own mandate, they all work together within the overarching framework of the AKDN so that their different pursuits can interact and reinforce one another. The AKDN agencies, therefore, make a long-term commitment to the areas where they work, guided by the philosophy that a humane, sustainable environment must reflect people's own choices about how they live and wish to improve their prospects in harmony with their environment.

The Aga Khan Fund for Economic Development, part of the AKDN, is the majority shareholder of Roshan; it promotes private initiatives and builds economically sound enterprises in the developing world. AKFED seeks to operate in parts of the world that lack sufficient foreign direct investments, making bold but calculated investments in situations that are fragile and complex. The organization has five components: tourism promotion services, industrial promotion services, financial, media and aviation Services. AKFED operates as a network of affiliates with more than 90 separate project companies employing over 30,000 people, with annual revenues in excess of US\$1.5 billion. The fund is active in 16 countries in the developing world: Afghanistan, Bangladesh, Burkina Faso, the Democratic Republic of Congo, India, Ivory Coast, Kenya, the Kyrgyz Republic, Mali, Mozambique, Pakistan, Senegal, Syria, Tajikistan, Tanzania, and Uganda.

AKFED seeks to create profitable, sustainable enterprises through long-term investments that result in strong equity positions. This in turn allows AKFED to take a hands-on approach by providing managerial and technical expertise.

Although it is a for-profit entity, Roshan has always been focused on social development and corporate social responsibility. It is part of our DNA. Our corporate social responsibility arm, Roshan Social Programs, seeks to be a driver in the reconstruction of Afghanistan, reducing distress and providing opportunities such as education to build human potential and capacity.

AKFED reinvests the profits from its entities into its various projects, in the areas of health, education, culture, microfinance and humanitarian aid, and also into Roshan's own social programs. Given the genesis of AKDN, Roshan focuses on social development and a long-term commitment to Afghanistan, continuously looking for ways to improve the economic and social aspects of life for all Afghans.

The two other shareholders of Roshan are Monaco Telecom International (MTI) and Telia Sonera, which bring their international telecommunications expertise to Roshan and Afghanistan. MTI, part of Cable & Wireless, operates in Algeria, Kosovo, the Maldives, and the Caribbean; Telia Sonera³, through its Fintur Group, operates in eight markets in Central Asia, in countries including Uzbekistan, Tajikistan, and Kazakhstan. This makes Roshan one of the largest operators in the region.

MULTIPLE INNOVATIONS: JOBS, CUSTOMER SERVICE, AND PRODUCTS

Our success as a telecom provider has allowed us to extend our innovations into several areas. As mentioned earlier, we have created employment, introduced the notion of customer service, introduced several new products, and probably most important, developed several programs that attest to our sense of social responsibility.

First, we are committed to developing jobs for Afghans and to helping develop the country's future leaders. This commitment is a core component of our commercial success: we focus on developing our employees through training and skill-

building programs. We have had to constantly train on the job, investing at least \$1,500 a year to train each employee in English, computers, diversity and cultural awareness, and health and safety. As we have grown, we have intensified our focus on skill-building, empowering employees to reach their potential and cultivating leadership within the company. We train all of our employees, at all levels. For instance, we offer English classes to members of the cleaning staff; several of them have moved into administrative positions throughout the company. We have also promoted some of our drivers to positions in various departments, including logistics and customer care.

Over 93 percent of our staff members are Afghan nationals. With an average age of 23, most have only a high school education, and most are their families' sole breadwinner. Given that the average Afghan household has 13 people, our average employee earns enough money—and through honest means—to feed a family of 13.

We currently provide direct employment to over 1,000 people, of whom 20% are women, another pioneering step in enabling better lives. Women are especially vulnerable and marginalized in the rural areas of Afghanistan, and have little or no opportunity to earn an income. We faced several issues in getting women to work for us: we had to guarantee to their parents that we would pick them up, bring them to work, feed them a nutritious meal, provide a safe working environment, and then drop them home in the evening. We recognize that empowering women by providing them with employment opportunities is vital to rebuilding the Afghan economy.

Our second set of innovations is in customer service. We aim to reach all Afghans and build an entrepreneurial spirit. We believe we have maintained our market leadership in Afghanistan because of our focus on customer service. This emphasis is unique in a war-torn country like Afghanistan, where it is hardly common practice to address customer needs.

Our greatest innovation in this area may be in pioneering the country's first western-style call center, in Kabul; it is fully automated, including a multi-lingual voice-activated menu we call the interactive voice response (IVR) system. It allows us to be available to our customers 24 hours a day, 7 days a week: "live" representatives are available from 6 a.m. to 10 p.m. daily, with self-directed IVR support after hours. Our representatives explain our services, answer questions, activate accounts, and troubleshoot. In 2008, we had an average of 2.8 million calls to the IVR system, and over 690,000 calls were routed to a live agent monthly.

Initially, people reacted with suspicion to the notion of customer care, and we had to work through an enormous set of social challenges. Afghans had no experience with the concept of serving the customer, nor did they expect it themselves. In addition, our employees had little experience with the skills and fundamentals of customer support. Therefore, we have had to train them, which is helping develop new skills and grooming the next generation of the country's leaders. Training includes ongoing product training as well as soft-skill development.

Our focus has been to make all our products and services accessible and available to the Afghan people. Our sales and distribution strategy gives us wider dis-

tribution and a competitive advantage through several elements in addition to the call center: flagship shops, a sales team dedicated to corporate customers, a dealer network, an extensive kiosk network, and a network of public call offices (PCOs).

Our eight flagship shops, built to Western standards, and our dealer shops across the country give us many touch points where we can provide support in the cities, towns, and villages, and thus be as close as possible to the customer.

We have also built the country's largest distribution network, indirectly contributing to the employment of 25,000 people. In addition to the eight company-owned stores, we have 50 kiosks and nine national scratch-card (prepaid card with mobile airtime credit) distributors with a presence in over 2,300 outlets. This lets us meet two goals: to create new jobs and to provide accessibility and ease of purchase in the most remote regions.

In addition, our PCOs provide a place for people to make a call if they do not have access to their own mobile phone or telephone services. Roshan has established over 3,900 PCO businesses to provide jobs to Afghans, and 95 Women's PCOs (WPCOs) that provide jobs for women. WPCOs offer women the opportunity to earn an income while learning to run their own business. Our PCOs create new jobs, and with a significant reach nationwide, these offices spur entrepreneurial spirit and economic development, enabling the underprivileged to launch small and sustainable businesses.

Our third area of innovation is in introducing products that meet the needs of the population. In a country where over 70 percent of the people cannot read, introducing new products presents the challenge of user education and support. But this has not deterred us from introducing innovative and relevant products that meet the basic, yet unique, needs of the geographically dispersed, ethnically diverse, local population. For instance, our mobile banking product M-Paisa fills an important void in a country with inaccessible financial services.

Roshan offers three kinds of prepaid SIM cards that offer different rates. As Figure 4 shows, they provide Afghans with a variety of calling options, each tailored to a specific segment of the population. In fact, we were the first company to segment the telecom market in Afghanistan.

In August 2008, we launched Yaraan, which focuses on the youth market; 200,000 people purchased SIM cards in just the first month. Yaraan, which means "best friend" in Dari and Pashto, offers youth a product targeted more towards their needs, including inexpensive call and text messaging rates in the evening.

Roshan has also looked at ways to serve the bottom of the pyramid: how can we access those potential customers who are traditionally more difficult to reach? One approach is to lower the entry barriers to phone ownership. We offer products and services that appeal to younger people who buy telephones as status symbols. We bundle our services in ways that let us target the historically oppressed customer groups, including women and youth, to attract more customers.

Another area of product innovation is mobile banking; its benefits are particularly important in a developing country like Afghanistan, where less than 3 percent of the people have a traditional bank account, and therefore access to finan-



Figure 4. SIM cards for various market niches.

cial services is very limited—and very expensive. Development experts agree that microfinance is a key tool for providing greater financial resources to farmers, artisans and struggling entrepreneurs around the world. The volume of total microfinance loans has risen sharply in recent years from an estimated US \$4 billion in 2001 to around US \$25 billion in 2006. Total foreign funding is expected to increase to roughly US \$25 billion by 2015.⁴ Mobile phones can serve as a catalyst for that growth by opening up the benefits of microfinance and other financial services to countless more people.

In 2008, Roshan partnered with Vodafone to launch M-Paisa in Afghanistan. It provides consumers, businesses, local banks, and employers with an accessible, safe, and cost-effective way to transfer funds, replenish airtime, pay salaries, conduct microfinance transactions, and travel without cash. Roshan has experience in understanding the local and technical environment of Afghanistan, and Vodafone has technical experience with mobile banking; together we can bring banking services to the great mass of Afghans. This is a significant development for our customers who need a way to conduct financial transactions, and also a catalyst for Afghanistan's economy as the service facilitates business transactions, loan repayments, and the movement of money nationwide.

M-Paisa reduces people's dependence on traditional financial institutions; Roshan airtime dealers serve as the cash-in, cash-out points where people can transfer money. Currently, M-Paisa has 150 trained dealers in ten provinces across the country, and over 10,000 subscribers.

In our initial soft launch, we learned that we needed to simplify our customers' overall experience. If users cannot read, they find it difficult to use SMS to transfer funds. In response, we developed a voice-activated menu in three languages: English, Dari, and Pashto. Customers dial a short code, and are then directed to an intuitive voice menu that guides them through the steps they need to complete a transaction. The inclusive IVR system, built on Roshan's customer-centric philos-

ophy, makes it easy for anyone to use M-Paisa, regardless of their level of education.

This year, Roshan will continue to expand its M-Paisa service nationwide, in order to provide all Afghans with access to banking service. M-Paisa has the potential to boost economic growth by eliminating common financial barriers, especially in remote areas and in particular for women, who are often their families' sole supporters. Thus M-Paisa, combined with Roshan's robust mobile network coverage, provides an important vehicle for the economic regeneration of Afghanistan.

Because we have an extensive range of data products, we were the first to introduce both General Packet Radio Service (GPRS) and BlackBerry services in Afghanistan. With the services, many individuals working in businesses, NGOs, and government bodies can access "virtual office" connectivity while on the move. Globally one of the fastest growing trends in mobile communications, it will contribute to the economic growth and development of the business sector in Afghanistan.

In a country where Internet access is limited, GPRS brings connectivity and access to the masses all through a mobile phone. Subscribers can use GPRS services to browse the Internet, check e-mail, and connect to the outside global village.

INNOVATIONS IN CORPORATE SOCIAL RESPONSIBILITY

In addition to providing the innovations described above, we aim to be a change agent in Afghanistan's development. Our determination to provide technology solutions that meet the nation's needs is matched by our commitment to building its human capacity. Our success in mobile telephony has allowed us to create a social responsibility arm, Roshan Social Programs (RSP), which is developing and supporting a wide range of social programs that make a difference in people's lives. RSP concentrates its efforts in four areas:

Health. We piloted a telemedicine project in conjunction with the French Medical Institute for Children (FMIC), the Aga Khan University Hospital (AKUH) in Karachi, and Cisco Systems.

Education. We are rebuilding schools, supporting sports and playgrounds, and helping with educational programming, including the One Laptop per Child program.

Commerce. We help women set up businesses through the WPCO project, in partnership with NGOs and USAID.

Social Development. The ASCHIANA soup kitchens provide over 50,000 meals a month.



The Telemedicine link provides real-time, high-speed access that lets medical personnel transmit data in several forms: medical imaging, video, data, and voice.

HEALTH AND TELEMEDICINE

Improving Afghanistan's medical system is an urgent priority, as the health-care statistics paint a future of uncertainty. Afghanistan has one of the world's lowest average life expectancy rates: 43 years.⁵ Some districts have only one doctor for 50,000 people, compared to one for 303 in France and one for 356 in the USA.⁶ Some large districts do not have even one doctor. Afghans who need treatment must settle for mediocre care, or cross borders illegally to access health care at great expense, often equivalent to a lifetime income.

The medical system faces many obstacles. Decades of war have destroyed most of the hospitals, skilled medical expertise is scarce, and the country has no ongoing health training programs. A volatile security environment and language barriers keep expatriates from relocating to Afghanistan.

In response, Roshan initiated a twenty-first century solution: an innovative telemedicine project that leverages the company's nationwide telecommunications infrastructure to improve Afghanistan's health care system. It is designed to link hospitals throughout Afghanistan to the specialist diagnosis and training resources provided by international medical facilities. We reached out to a wide set of partners, including the government of Afghanistan, AKUH in Karachi, FMIC in Kabul, Aga Khan Health Services, and Bamyan Hospital, along with Cisco Systems and other telecommunication suppliers. The project will involve unprecedented cooperation between Afghanistan and Pakistan to improve health care delivery in the region.

Telemedicine takes advantage of the broad coverage of Roshan's secure, reliable, and trusted network to connect hospitals across difficult and remote terrain. It uses broadband technology to provide real-time, high-speed access that lets medical personnel transmit data in several forms: medical imaging, video, data, and voice. Because it facilitates the digital transfer of CT scans and other kinds of medical imaging, this technology will allow specialists to remotely diagnose many medical conditions that local health workers can then treat successfully. It will also provide video conferencing to help with training and to allow for the supervision of diagnoses and medical procedures. Together, these technologies can help develop Afghanistan's medical capacity and resources. In the project's first phase, FMIC was connected to AKUH. Each month, FMIC and AKUH evaluate forty teleradiology cases through the project.

In its second phase, in 2008, the project connected FMIC and AKUH with Bamyan Hospital, which was established to serve the remote and isolated populations in that region. The hospital was first connected to FMIC in Kabul and through FMIC to AKUH in Karachi. This link makes it possible for FMIC to perform four to five teleradiology evaluations for Bamyan every day.

The rugged terrain, vast distances, and cost constraints make it difficult to diagnose patients' ailments, especially in rural and remote regions. Bamyan Hospital will also be able to provide support to rural doctors and nurses in remote villages that are more than ten kilometers away. Without this link, people would only have access to medical care if they traveled vast distances on foot. In time, Roshan plans to connect other regional hospitals to the network.

We plan to expand telemedicine even further into rural areas, by using smart phones (a mobile phone with computer-like functionalities) and PDAs. Through this technology, nurses and doctors will be able to carry or send these images to a regional hospital, where a specialist can conduct further diagnosis.

EDUCATION THROUGH ONE LAPTOP PER CHILD

Today, Internet access and training in Afghanistan is limited by the high cost of connectivity and computers. Increasing the number of laptops in Afghanistan will create many opportunities for Afghan youth to learn and connect with their contemporaries in other countries. This is potentially a faster and far cheaper educational resource, compared to building and equipping schools and hiring teachers and administrators.

If today's Afghan youth are empowered to educate themselves, they will be better prepared to tackle the huge peace-building challenges in Afghanistan, as well as other issues including poverty, malnutrition and disease. The One Laptop per Child (OLPC) Foundation, a U.S. nonprofit organization dedicated to the design, manufacture, and distribution of low-cost laptop computers as a critical tool in eradicating poverty, is contributing 10,000 laptops to a public-private partnership in Afghanistan. In addition to Roshan and the OLPC Foundation, this partnership includes the Ministry of Education and the Ministry of Communications and



The OLPC project is designed to increase educational opportunities for the youth of Afghanistan and improve the country's information technology infrastructure.

Information Technology, as well as the United States Agency for International Development's (USAID) Afghanistan Small and Medium Enterprise Development (ASMED).

Roshan is also developing a small network of Internet training facilities, but the demand is huge and underfunded. These 10,000 laptops will provide a significant opportunity to showcase the educational and developmental impact of low-cost computing and communications access.

We are committed to this partnership to improve the information technology infrastructure of Afghanistan, with the ultimate goal of increasing educational opportunities for its youth. We donated 1,000 laptops to the project and will provide other management support as required. We have also supported and advised the installation teams that are responsible for implementing the networking infrastructure and Internet connectivity systems.

COMMERCE AND THE WOMEN'S PUBLIC CALL OFFICE

Decades of conflict have devastated much of Afghanistan's social and economic infrastructure and severely constricted the ability of many Afghans to provide for themselves and their families. Women are especially vulnerable and marginalized in rural areas, and have little or no opportunity to generate income. Recognizing how vital it is to empower women by providing opportunities to earn money, Roshan established the Women's Public Call Office (WPCO) initiative in 2007, working with AfghanAid. In 2008, this project was expanded in partnership with USAID's ASMED project.

The WPCO project offers women the opportunity to earn an income while learning to run their own business. This model—of empowering women to establish PCOs by enabling them to access microfinance loans—has proven successful in other countries, demonstrating that the telecom industry can be a catalyst for social and economic development.

The WPCO project links women with microfinance loans, enabling them to start their own businesses. Our partner NGO, AfghanAid, has established relationships with communities; they refer female candidates to the FirstMicroFinance Bank (FMFB), which then provides the loans they need to establish a business.⁷

Each WPCO operator is supplied with a business kit at a subsidized rate. It contains a handset, a SIM card, an antenna, a charger, 12,500 units of talk time, and an official Roshan PCO business signboard. The woman uses a portion of her profits to pay back her microfinance loan and to buy more units of air time. Each time a woman from the project purchases more airtime, she receives an additional 60 percent credit. For instance if she purchases \$1.00 in credit, she will receive \$1.60. Roshan provides this supplement to ensure that women earn profits and therefore helps maximize their earning potential.

Roshan plans to set up 500 WPCOs, creating employment opportunities for 2,000 women, as each WPCO is managed by one leader and three women who support the business. This initiative will link women with business opportunities and with micro-finance; we hope to have an important long-term impact, and as such services expand for women in other enterprises, generating an entrepreneurial spirit among the women of Afghanistan.

SOCIAL DEVELOPMENT AND ASCHIANA

A United Nations study conducted in 2006 concluded that about 60,000 children are working on the streets of Kabul alone; many belong to families of returning refugees or are individuals displaced by years of conflict.⁸ These children must forego their education because they are forced into helping provide for their families. In addition, many children on the streets are orphans and must earn some income to survive. For example, we met an eight-year old girl who carries 35 liters of water each day for a total of seven Afghans, earning approximately 14 cents a day. There are a thousand more stories like this of children doing whatever it takes to secure an income.

We have partnered with ASCHIANA, a local nonprofit organization, to raise funds to support street-working children so they can attend school through an accelerated learning program, which then allows them to re-integrate into the formal school system. ASCHIANA provides children with basic education and additional courses in art, sports, tailoring, calligraphy, music, and theatre. Since 2007, we have sponsored 142 children each year and have also engaged our corporate partners, such as the Nokia Siemens Network, to do the same.

We also work with ASCHIANA's Hot Soup Kitchens Program to feed children in five returnee camps around Kabul, two centers in Mazar-e-Sharif, and one in

Parwan. The soup kitchens are imperative, as they provide basic nutritious meals for children who would otherwise not get them. Many of these children share the one meal with their entire family. Children attending the camps must also attend a half-day of school at the outreach centers. We have committed to provide over 50,000 meals each month and to date have served over 1.5 million meals.

CONCLUSION

Since its inception, Roshan has invested more than \$370 million in bringing the latest technology to Afghanistan and building the best possible network to connect its people to each other and to the world. This investment has dramatically expanded access to telecommunications for millions of Afghans. It has also created employment opportunities, directly and indirectly, for tens of thousands of people and created a reliable, state-of-the art communications infrastructure for the country.

Along the way, we have been proud of our many “firsts” that have benefited both Afghan consumers and the economy. Roshan was the first to introduce these eight ideas or services:

- Mobile banking. The recent launch of M-Paisa will open up access to financial services for many more Afghans.
- Telemedicine. I will improve healthcare by connecting hospitals in Afghanistan to international medical centers of excellence.
- International Roaming.
- International SMS.
- Interactive Voice Response and Value Added Services (VAS).
- General Packet Radio Service (GPRS).
- Innovative pricing to meet the needs of individual consumers.

Innovations are very important to Roshan, but what we are most proud of is our role as a catalyst in Afghanistan’s growth and socioeconomic development. We have developed and supported a wide range of programs to improve the well-being of the Afghan people. We will continue to invest in the communities where we operate and to provide people with opportunities for a better future and education in order to build human potential and capacity and ultimately improve the lives of Afghanistan’s people.

AWARDS RECEIVED BY ROSHAN

Roshan’s leadership has been recognized by several international awards:⁹

- Best GSM Marketing Campaign, March 2005 (GSM Association Awards)
- Best Telecom Brand of the Year, September 2006 (CommsMEA Award)
- Best Operator in Developing Market, November 2006 (8th World Communications Award)
- Special Recognition for Excellence in Corporate Philanthropy, March 2007 (Committee Encouraging Corporate Philanthropy)

- Customer Service Provider of the Year September 2007 (CommsMEA Award)
- Excellence in Leadership Award October 2008 (Frost and Sullivan)
- Best Corporate Social Responsibility Contribution November 2008 (Telecom World Awards Middle East)
- Most Innovative Non-Voice Service, December 2008 (CommsMEA Award)

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 6. AKDN: A Medical Centre of Excellence in Kabul
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