

Building the Future

The Kingdom of Saudi Arabia invests in its future by making a bold, innovative vision—the construction of fully networked “smart cities”—a reality.

By Dr. Badr AlBadr, Managing Director, Cisco Saudi Arabia Operations

Countries with oil-driven economies such as the Kingdom of Saudi Arabia realize that with only a finite supply of natural resources, economic diversification is crucial to continued prosperity in the future.

As the world begins in earnest to make bold strides in developing viable alternative energy sources, Saudi Arabia is also building a bold new future that will help it thrive for generations to come.

Saudi Arabia is in a strong economic position that affords it the ability to address future needs with innovative and visionary projects. The country, for example, has embarked on a multiyear initiative to build several “smart cities” spanning up to 65-square-miles to serve as hubs for business, tourism, and research. Saudi is banking on the smart cities, in part, to deliver revolutionary societal and economic benefits for its future generations.

By embedding the latest networked communications capabilities into the foundation of these smart cities, the country aims to empower itself to diversify the opportunities for its citizens and businesses alike by creating jobs and enabling access to new markets, as well as attracting talent and investors from around the world. The ability to directly impact the productivity within these economic cities will be paramount to the success of the smart city concept, and increase the attractiveness of the city to both businesses and residents alike. Cisco is Saudi Arabia’s strategic technology partner, having a \$265-million investment plan.

Four smart cities are currently at various stages of planning and development—King Abdullah Economic City at Rabigh, Prince AbdulAziz bin Mousaed Economic City at Hail, Knowledge Economic City at Madinah, and Jazan Economic City at Jazan. Construction began in early 2007 on King Abdullah Economic City, which is located on the coast of the Red Sea and will serve as a portal for transportation and tourism; it should welcome its first residents in 2009. Construction has now also begun at both

Knowledge Economic City and Jazan Economic City, which should both be ready for their first residents by the end of 2010. Prince AbdulAziz bin Mousaed Economic City is now in the final planning stages.

What is a “Smart City”?

A smart city is one that has been engineered, from the ground up, with a broadband communications infrastructure comprising very fast fiber connections and ubiquitous mobility services delivered by wireless networks. The communications networks in each city, along with a wide variety of integrated applications, invisibly tie together people, buildings, public places, and transportation centers to enable information exchange and automation never before possible. For example, the smart city network will provide the ability to deliver world-class safety and security services by taking advantage of the many Internet Protocol surveillance cameras distributed across the city. In addition, all citizens in a smart city are automatically integrated into the digital population, effectively eliminating the “digital divide” that has resulted in uneven education and employment opportunities for people in different socio-economic strata in some areas of the developing world.



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Smart cities, in part, comprise smart buildings that use automated monitoring and sensor systems and networked security. These capabilities, along with radio-frequency identification (RFID) inventory tracking and intelligent traffic and public-safety systems, are being woven directly into the fabric of the smart cities from their inception.

Similarly, unified electronic medical records, intended to help boost the quality of patient care, will be the norm. Having a single accurate patient history and the ability to correlate a patient's current and past symptoms, illnesses, and medications contributes greatly to accurate diagnoses and error reduction. A brand new smart city can create electronic records and correlation databases from the outset and, as a result, will leapfrog cities and countries with decades of manual records still requiring electronic conversion.

Because of the broadband communications capabilities among citizens, and between Saudi Arabian cities and the rest of the world, the country stands to gain new product, service and educational opportunities.

Proven on a Smaller Scale

The smart city concept has already been piloted on a smaller scale to attract residents in Busan, South Korea; Taipei, Taiwan; and Ichikawa, Japan. Busan, for example, is serving as a logistics hub, in part by becoming a next-

generation RFID-enabled port that automatically tracks imported and exported goods. The system has boosted efficiency, while an intelligent traffic system in the city has reduced congestion by about 30%.

In Taipei, the data systems of 300 hospitals and clinics are integrated. In addition, technology business parks employ 85,000 knowledge workers, producing annual revenues of \$53 billion.

Networked surveillance cameras in Ichikawa allow citizens to report crimes through mobile phones. The three cities all report a boost in job opportunities, in part enabled through electronic education and electronic government services. Saudi Arabia hopes to build a superset of these same capabilities and economic gains by fully outfitting smart cities with embedded communications networks and collaborative applications.

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How to Get There

Such advances enhance a country's competitiveness, standard of living, skills, and GDP, largely by bringing the possibility of new industries to old geographies and including all sectors of society in the digital capabilities. Getting there requires several things. First, it requires the government undertaking the project to be willing to innovate and to take calculated risk. It also requires strong public-private partnerships among government, public network operators, capital investors, landowners, developers and strategic technology partners.

Small and medium-sized businesses (SMBs) account for about 80% of any market, so an incentive path for such entrepreneurial-spirited organizations is required. A significant portion of Cisco's investment in Saudi Arabia will be directed toward funding SMBs and incubating the innovation that so often stems from smaller, agile businesses.

Successful smart city projects also require preparing and educating its citizens to transition to, and thrive, in the new environment. Demand for networking skills in Saudi

Arabia is expected to exceed supply by 33% in 2009, potentially leaving a shortage of nearly 34,000 skilled people. Cisco NetVersity in Riyadh, however, is a focused attempt to generate the supply to fill that demand by bringing the global networking expertise and leadership to establish an advanced knowledge society.

Cisco NetVersity is a collaborative effort between Cisco and Prince Sultan University (PSU). The school will educate citizens and workers about information and communications technologies. Perhaps even more importantly, however, it has been established to also cultivate leaders and innovators who can direct others with the enthusiasm and creativity required to make the most of the cities' foundational capabilities into the future.

The NetVersity program, and the smart cities at which its students may someday work, are designed with an eye the future—a diverse future full of prosperity for the Kingdom of Saudi Arabia and its citizens alike.

