Planned City Deploys Integrated Communications Systems

Energy City Qatar uses Cisco Advisory Services to incorporate communications technologies into real estate master plan.

EXECUTIVE SUMMARY
Energy City Qatar
• Real Estate Development
• Doha, Qatar, Middle East
BUSINESS CHALLENGE
• Develop services plan for a master-planned business park for the oil and gas industry
• Transfer knowledge about the nature and uses of IP communications technologies, and shape the development of a digital city
• Prepare and deliver high-level IT budget and technology roadmaps
NETWORK SOLUTION
• Consulting for high-level planning and design phases, including budgets, roadmaps, and timelines for incorporating IT in a real estate master plan; Knowledge transfer training
• Collaboration with other project consultants
• Cisco Connected Real Estate design input consisting of preliminary IT network designs and operational plans for the centralized master operational control center
BUSINESS RESULTS
• Customer prepared for incorporating information and communications technologies into the next steps in the detailed design and construction of a business park
• Cisco established relationship as trusted advisor throughout the development processAllows for real-time interdepartmental communications and well-informed decision making

Business Challenge

Energy City Qatar (ECQ) is developing a master-planned business and residential city that will be built in the newly developing north district of Doha, the capital of Qatar. The project is the cornerstone of the Lusail project, a 35-square-kilometer city to be completed by 2010. Rising from the desert sands at a major shipping port, Energy City Qatar is one of many "intelligent" cities planned by Gulf Finance House. The future headquarters of Qatar Petroleum will be located next to Energy City, and the Lusail development will accommodate 200,000 people. ECQ will be built from the ground up, with fully integrated communications and building management systems.

"Energy City Qatar is a vision of His Highness the Emir Emir Sheikh Hamad bin Khalifa Al-Thani to be the city in the Middle East that's tailor made for the oil and gas industry," says Hesham Al Emadi CEO for ECQ. "It's going to be a place where oil and gas companies can come in and focus on doing their business without having to worry about any other aspects of operations."

Gulf Finance House formed the ECQ company to oversee the creation and operations of the city. The ECQ vision leverages the many political and economic advantages of Qatar. Considered by many to offer the pre-eminent business climate in the Middle East, Qatar has a thriving financial sector with the fastest-growing economy in the region. Government ministries strive to learn and follow best practices for their many concerns, with progressive, modern approaches that streamline bureaucracy and phase out regulation that could stifle progress.

Under the patronage of His Highness the Emir of the State of Qatar, Sheikh Hamad bin Khalifa Al-Thani, the ECQ project seeks to build efficient, best-in-class infrastructure and facilities that will attract and retain growth-oriented companies with talented employees. As the world's first "City with a Brain," ECQ hopes to become the energy hub of the entire Middle East. It will be built in two phases:

- **Phase 1:** US$1.6B business park with 92 buildings
- **Phase 2:** US$1B, 2000-unit residential community for the employees of the business park,

along with two marinas, retail commercial districts, two golf courses, and an entertainment district.

The ECQ leadership is working to attract tenants and buyers throughout the energy industry, including international and national oil companies, oil field services and infrastructure, secondary oil and gas companies and related business solutions, and advanced technical training and simulators.
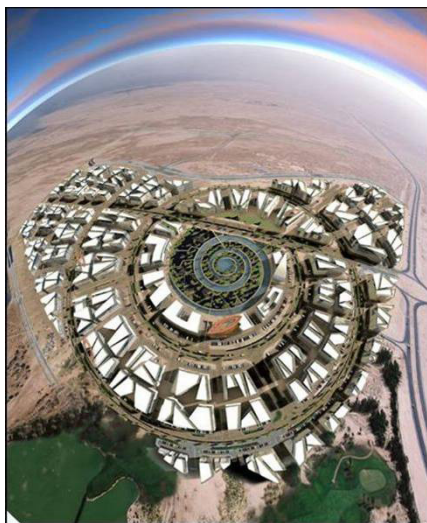
Network Solution

Because the ECQ project is both complex and innovative, the ECQ leadership sought to gather expert guidance from proven leaders in all aspects of design and technology. Cisco® quickly emerged as a trusted advisor with the experience and expertise in IP-based, converged communications as the foundation of the ECQ IT infrastructure.

The Cisco Advisory Services team contracted with ECQ to deliver high-level planning and design services along five solution tracks: Connected Real Estate, program management office, network infrastructure, service provider, and operations solutions. Deliverables were designed to help ECQ with high-level design that incorporated IT into the construction process and schedule.

The Cisco Connected Real Estate vision gives ECQ a framework for designing and integrating IT throughout the entire city from the earliest planning stages. Connected Real Estate uses IP technologies as a "fourth utility" (alongside power, water, and gas) to transform how operators manage buildings and communities, enabling them to differentiate themselves through the services that they deliver to occupants.

This framework has three components:

- **Convergence:** The foundation of the Connected Real Estate framework is a converged IP network infrastructure. An IP network foundation enables interconnection of connected buildings into intelligent communities, smart cities, and ultimately, the transformation of countries and their people.

- **Systems Integration:** In the IT world, convergence combines data, voice, and video onto an IP network. In the real estate world, convergence extends to integration of all building systems, communications systems, and wired/wireless IT systems into a single entity. The IP foundation normalizes the languages of each system, allowing them to share controls, rules, and protocols to enable innovative, transformational services.

- **Transformation and Service Creation**:The ultimate value of the Connected Real Estate vision, the network enables` transformation of buildings into intelligent converged environments that lead to new user experiences. The IT platform enables the creation of new services and experiences that present new revenue sources and support core businesses. Enhanced building performance reduces both capital and operational expenditures.

The Connected Real Estate framework suits the ambitions of the ECQ leaders for building a "smart" city where services are available to anyone from anywhere. To enable this capability, the IT

infrastructure is incorporated into initial construction planning and design. The planners wanted high-level designs for an optical network that connects all buildings, and operational guidelines for service providers, located in the central ECQ operations center, that administrate both communications and building operations services for the entire city. Centralized building automation systems management shares the same IT backbone as communications, enabling information sharing among systems for enhanced comfort, security, and operational efficiency. Tenants and owners can activate and pay for communications services that are already available in every building and home.

In ECQ, Connected Real Estate enables physical security applications including IP cameras, access controls, and security monitoring applications; and centrally managed Unified Communications solutions such as IP telephony, messaging, telepresence, and collaboration tools.

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>
> **—Hesham Al Emadi, Head of Technology & Products, Energy City Qatar**

Cisco rapidly established itself as a leader among the many technology consultants hired for the ECQ project. The ECQ personnel needed help to develop best practices and effectively budget for design, implementation, and operations throughout the city's technology lifecycles. To meet this need, Cisco Advisory Services scheduled day-long knowledge transfer sessions with ECQ staff every two weeks throughout the project. Cisco experts presented basic concepts and design options, then assisted in defining a customized solution for ECQ.

Business Results

Throughout the planning and high-level design stages of the project, the Cisco Advisory Services team completed all of its phased deliverables on time and submitted the final set of deliverables one week before deadline.

The team provided budget planning aimed to minimize total cost of ownership and enhance productivity throughout the design-build process. They developed business cases for selected services, identifying the evolution of service offerings to tenants and the revenue potential through the sale of services over time. The team also demonstrated best practices for improving service delivery and customer satisfaction, streamlining operations, and sharing real-time business intelligence. For the project, the team enhanced collaboration and interaction among Cisco, ECQ, and other consultant partners involved in the project (such as Microsoft and Accelerator Technology Holdings), creating a hub for innovation and new development opportunities. Finally to plan the infrastructure, the team developed a high-level IT roadmap, helping ensure alignment among design teams to build a secure, flexible network infrastructure. ECQ wanted an IT platform that would allow it to readily incorporate new technologies, applications, and services over time.

Knowledge transfer was critical to success, and ECQ personnel were eager to learn. Cisco project leader Barbara Sullivan says, "Knowledge transfer, helping ensure that ECQ could assimilate our deliverables, was as important as the deliverables themselves. Fortunately, ECQ knew what they

didn't know, and their management made the commitment to have both ECQ and its consultants participate in these enriching workshops. The result was that Cisco could partner with the entire team, assisting each functional team in the development of their vision, and providing step by step roadmaps that would get them to their goals."

For More Information

To find out more please go to http://www.cisco.com/go/RealEstate.