Home to nearly 8.5 million people, Bangalore is India’s third-largest metropolitan area. Called the Silicon Valley of India due to the many IT, aerospace and biotech companies located in and around it, the city owes its success to an advanced infrastructure that’s also driving progress across the entire state of Karnataka, which has a population of more than 60 million.

Bengaluru International Airport, which was built with the help of an innovative public-private partnership initiated and supported by Siemens, is part of this impressive infrastructure development. Close, trust-based collaboration ensured the huge project’s success. As Managing Director of the international airports in Bangalore and Mumbai, G.V. Sanjay Reddy is ideally positioned to understand the subcontinent’s infrastructure requirements. In the report that follows, he talks about his experiences.
The challenge for Bangalore

Population growth of roughly 50% between 2001 and 2011
AERIAL – Bangalore’s growth continues unabated. To meet the needs of its booming population – which already totals about 8.5 million – the Indian metropolis needs a high-performance infrastructure.

The challenge for Bangalore

8.5 million inhabitants in 2011

India’s third-largest city

High levels of air pollution

Aerospace industry

Overburdened transportation infrastructure
"Our vision: Bangalore – The Gateway to South India"

G.V. Sanjay Reddy has a vision: to make Bangalore – or, as the local people call it, Bengaluru – the Gateway to South India. And he and his company, the Indian conglomerate GVK, are doing everything in their power to make that vision a reality. In 2011, GVK acquired a majority stake in Bangalore International Airport Limited (BiAL), the company that owns and operates Bengaluru International Airport. For Reddy, Vice Chairman of GVK and Managing Director of the airport, this transaction was much more than just a business venture. “Our plans are very ambitious and far-reaching,” he says. “In building and operating the airport, we have the interests and expectations of the city and the entire region before our eyes.”

The potential is endless. India is one of the world’s fastest-growing countries. Since 2004, its economy has expanded at an annual rate of over 8%. And the Bangalore area has been one of the big winners. Immigrants have poured in from other parts of India and from all around the world. Many of the newcomers, who now account for more than half of the city’s population, are highly qualified IT experts employed at the national and international computer and high-tech companies that have made Bangalore what it is today: a center of the country’s software industry and the Silicon Valley of India. Between 2001 and 2011, the population of the metropolitan area grew almost 50%. Home to some 8.5 million people, Bangalore is now India’s third-largest city after Mumbai and Delhi and one of the country’s key business and commercial centers. To find sustainable solutions to the challenges facing the booming conurbation, the local infrastructure will have to be substantially expanded.

G.V. Sanjay Reddy’s predecessors had to start virtually from scratch. At the turn of the millennium, political leaders in Karnataka realized that economic growth required a highly efficient infrastructure. However, the public funds available for its expansion were not sufficient. And the government needed a strong partner. Having already demonstrated in projects worldwide how innovative transportation solutions, efficient power supply and advanced healthcare facilities can create an environment in which economic growth benefits all of a region’s inhabitants, Siemens filled the bill.
Public-private partnerships – The formula for India’s success

Bengaluru International Airport is a prime example of how Siemens provides financing as well as technological solutions for future-oriented infrastructure developments. The project was launched in the early 1990s, when a public-private partnership was first proposed. G.V. Sanjay Reddy is convinced that cooperative efforts of this kind – partnerships in which governments and private companies work hand-in-hand to implement projects that benefit entire communities – are “the formula for India’s success.” Why? There are two reasons, Reddy explains. The first is financing: “The Indian government doesn’t have the ability to fund the huge infrastructure deficit that we have in India,” he says. “Over the next five years, the government expects that India will need around $1 trillion worth of infrastructure investment. And the public sector does not have the capability to invest that amount.” Therefore, the Indian government is relying increasingly on private investment. And the second reason why public-private partnerships are so important is that they offer major advantages for private companies: “The private sector has the ability,” says Reddy, “to benchmark to the global best practices and find the best solution.” In the case of Bengaluru International Airport, for example, that solution was Siemens.

Siemens paved the way for the public project’s private financing and also subsequently invested in BIAL, with Siemens Project Ventures (SPV), a business unit of Financial Services (SFS), acquiring a 40% stake in the new airport company. Other investors included Larson & Toubro Ltd., India’s largest engineering and construction company, and Unique Zurich Airport, a Swiss airport operator, each of whom acquired a 17% stake. To ensure that the state would also have a say in the running of this strategically vital infrastructure project, the remaining 26% was split between the government of Karnataka and India’s federal government. “And this still applies today,” says G.V. Sanjay Reddy, “because under Indian law, its 26% stake gives the government a minority veto.”

BIAL has primary entrepreneurial responsibility for the entire airport. To enable the company to recoup its investment, the Indian government has granted it long-term rights to collect airline and passenger fees.

Bengaluru International Airport

Public-private partnership
About 12 million passengers in fiscal 2010/2011

India’s most advanced major airport

Innovative infrastructure solutions

Sharply increasing passenger numbers
July 2004
Contract signed by the Indian government and the airport operator

July 2005
Construction begun

May 2008
Official opening

ABOVE – Countless planes take off from Bengaluru International Airport every day, linking South India with cities throughout the world.
New runway ready for takeoff in record time
After years of preparation, work on Bengaluru International Airport proceeded very quickly. Construction began 35 kilometers north of the city center in July 2005. Only 33 months later, in May 2008, the first commercial flight took off from the new runway.

Project implementation was smooth and rapid because Asia’s most advanced airport had selected a complete, customized technology solution from Siemens. For the project, Siemens fully leveraged its unique strengths as an integrated technology company. As in other major projects, we demonstrated locally the entire scope of our international expertise. For example, all sub-solutions were internally coordinated in advance. In line with the Siemens One approach, a key account management team advised the project company every step of the way.

We tackled the challenge head-on, delivering electrical systems on a turnkey basis, supplying energy for the airport buildings, installing customized IT solutions and providing suitable mobility solutions – all in record time. The service package covered everything from planning and delivery to installation and commissioning. And, as G.V. Sanjay Reddy recalls, our involvement didn’t end when the airport opened: “Siemens was very active in implementing the project from the beginning. The Company is solutions-oriented and views its tasks from a 360-degree perspective. That makes Siemens a strong, reliable and trustworthy partner.”

Our Company-wide Siemens One approach enables us to offer complete, customized solutions – systematically and across business areas – for hotels, hospitals and airports, for instance. The idea behind Siemens One is simple: at an integrated technology company, the whole is greater than the sum of its parts.

G.V. Sanjay Reddy, Managing Director of Bangalore International Airport Limited

“In Siemens, we’ve found a strong, reliable and trustworthy partner. The company’s technology leadership – coupled with its strong focus on sustainability – has made its input into the project invaluable.”
Increasing passenger numbers make expansion necessary

In 2008, when the first flights took off from the new Bengaluru International Airport, Bangalore had about seven million inhabitants. Today, it has a population of nearly 8.5 million. And as the city has grown, so has its airport. In BIAL’s fiscal year 2010/2011, around twelve million travelers passed through the terminal – an increase of almost 12% over the year before. The original plans at the end of the 1990s were based on a figure of only 3.7 million passengers a year. An expansion is necessary, and we’re involved in this project too. The single-source infrastructure solutions for which we’re responsible include the provision of security and electrical systems – from design to commissioning.

As planned, we’re scaling back our own financial commitment in view of the airport’s successful business development. In fiscal 2012, we announced the sale of a 14% stake in BIAL to G.V. Sanjay Reddy’s GVK Power & Infrastructure Limited. However, we continue to hold a substantial 26% stake in the airport operator.

G.V. Sanjay Reddy is looking to the future. Throughout the continued expansion of Bengaluru International Airport, he intends to keep the focus on sustainability. “We as a company – and Siemens as well – have put a lot of emphasis on sustainability,” he notes. “For us, receiving the prestigious Golden Peacock Environment Award in 2012 is both a distinction and an incentive. It honors our joint activities in the past and sets a new benchmark for the future. We want to continue our efforts to maintain an environmental balance and minimize adverse environmental impacts. And it’s here that Siemens is making a very valuable contribution.”

www.siemens.com/ar/proximity

www.siemens.com/ar/proximity-movie

ABOVE – Thanks to innovative Siemens technologies, passengers can check in very quickly at Bengaluru International Airport.
Our intelligent infrastructure solutions are proving their value worldwide. The construction of Bengaluru International Airport is just one of many projects that have enabled us to impressively demonstrate our capabilities as an integrated technology company. In particular, our cross-Sector Key Account Management Program – as is usual in large-scale projects of this type – provides support for managers on site, from the initial planning phase to servicing and maintenance. Tapping the full extent of our knowhow, our Key Account Managers combine solutions from a wide range of Siemens Sectors and Divisions to create integrated, end-to-end solutions tailored to specific requirements – thus saving customers valuable time and ensuring outstanding customer support around the globe. We’ve bundled our extensive infrastructure portfolio in our Infrastructure Sector, which supplies integrated products, solutions and services from a single source – from mobility and logistics solutions to intelligent power distribution systems to highly efficient building technologies. Financial Services (SFS) is an international provider of financing solutions. With its financial and industry knowhow, SFS helps make infrastructure projects like Bengaluru International Airport a reality.

Not only do we have the necessary technologies in our portfolio; we also have decades of experience acquired in bringing hundreds of major projects worldwide to successful completion.

At the heart of our solutions for Bengaluru International Airport are our IT solutions, which network all the applications of the airport’s IT landscape and link independent IT solutions from different suppliers to create a structured, flexible whole. All participants profit from a simplified data exchange with optimized, accelerated processes.

Bengaluru International’s surveillance and alarm management systems are equipped with a Siemens danger management system, which bundles all the information provided by security and fire protection subsystems in a central control room. These subsystems include an access control system with 105 readers, an audio and voice evacuation system with 650 loudspeakers, a fire detection system with 1,800 smoke, heat and flame detectors, an intrusion protection system with 100 detectors and a video surveillance system with 60 cameras.