Five years after Argentina was shaken by a severe financial crisis, Buenos Aires, the city of the tango, is booming again. Among the forces behind this rebirth are infra-structure technologies from Siemens. At the same time, economic growth is creating major challenges in the power generation and transportation sectors. Siemens will celebrate 100 years of operations in Argentina in 2008 with a gala event at the newly restored and reopened Teatro Colón opera house, which will celebrate its 100th birthday in 2008. Even before its subsidiary was founded in 1908, Siemens installed Argentina’s first telegraph system in Buenos Aires in 1857. Further large projects included construction of the city’s C and D subway lines in 1934 and 1936. With Siemens’ help, the Obelisco — the city’s trademark monument — was built in 1936. In 1938, the largest-scale American office building, the 410-meter-wide Avenida 9 de Julio, today, over 3,500 people work for the six Siemens Groups operating in Argentina. At the moment, Line A (built in 1913 as Latin America’s first subway) and Line B are being lengthened to include two and four more stations, respectively, in order to link booming districts. Kutner is most proud of the new Line H, however, which is the first with air conditioning. Line H is also known as Paseo del Tango because every station features artwork and is dedicated to a famous tango dancer.

Traffic is bumper-to-bumper on the Iliá free- way in Buenos Aires. The capital’s metropol- itan area is now home to 13.5 million people, as the region’s residents are known, and greater Buenos Aires also houses nearly half of the country’s industrial plants. As a result, the city is the undisputed center of Argentinian’s commercial, industrial, and cultural life. For Matthias Kleinhempel, the five million private vehicles, taxis, and diesel buses that make their way through “the Paris of Latin America” every day are evidence of an eco- nomic upturn. But there’s a downside: “Nearly half of all privately insured individuals. “We’ve also developed a concept for integrat- ing the state-run insurance program into our system,” says Simcic. The country’s Ministry of Health has not yet, however, made a decision on the matter. The municipality of Buenos Aires is already a step ahead: “Everytime more information and communication technologies is not a luxury,” says Diego Pablo Gorgal, a representative of Buenos Aires City. “On the contrary, such in- vestment helps us optimize limited resources and become more efficient.” His favorite exam- ple is the digitization of all entries into the central civil registry office, which since 1866 has recorded over 3.5 million entr- ees per day were recorded. Siemens was com- misioned back in 2000 to monitor major thor- oughfares. Today, flots of cars equipped with radar and high-resolution cameras capture images of motorists who violate speed and parking regulations. Siemens handles every- thing from recording the violation and assess- ing the severity to producing and distributing tickets.

Maximum Capacity. Around the world, urban planning experts agree that the top priority for megacities should be intelligent solutions for dealing with huge volumes of traffic (see Pictures of the Future, Spring 2007, p.14). That’s why Buenos Aires is now focusing on expanding its mass transit system, especially the Subte, as the city’s subway is known. The subway system is already overcrowded. “Every day 1.2 million people ride 50 kilome- ters of track on our five subway lines — and that’s our maximum capacity,” says Subte chair- man Edgardo Kutner. The city’s goal, he says, is to transport around 2.2 million passengers on nine lines covering 80 kilometers by 2012 to 2013.

The Music is Back

The educational level of the Argentinians is above average and we have very well-trained engineers,” Kleinhempel says, adding that this is why Buenos Aires is now such a popular location for software factories operated by major global IT companies such as SAP, IBM, ED5, Accenture, Motorola, Sun, and Tata (India). The companies’ logos can be seen on the streets of modern Flores and five- star hotels that have opened in the swanky new harbor district known as Puerto Madero, as well as along the Rio de la Plata. The con- struction boom in these areas reflects the country’s average nine percent economic growth over the last few years. Kleinhempel says that the construction sector was the first to recover from the crisis. “Half of the construction infrastructure in Argentina was built by us and more than 35 million medical prescriptions are processed each year using Siemens technology.” “Things looked different ten years ago,” says Gabriel Simcic, a director at Siemens IT Solu- tions and Services, referring to the situation when IMED was launched at the end of the 1990s. With IMED — the most extensive com- munication and IT solution in the Argentine healthcare system — patients can use the In- ternet to have prescriptions authorized by their health insurance company and processed by a pharmacy. Siemens has provided smartphones to individuals with health insurance throughout the country. The implementation of this project required the harmonization of dozens of differ- ent software solutions in use at the country’s pharmacies to ensure that all of them could ac- cess the central authorization system operated by Siemens. But now that the system has been implemented, even small pharmacies can now place their orders via a call center set up for this purpose. The same solution also accommo- dates large pharmacies in Buenos Aires that op- erate according to the American “drugstore principle” and need to process hundreds of pre- scripts per hour in real time. IMED also of- fers a solution that is smoothly coordinated with hospital systems. “A total of 7,200 phar- macies are connected to the IMED network, along with 3,000 doctors and hospitals, 20 pri- vate health insurance companies, and six mil- lion insured individuals,” says Simcic. “We’re also incorporating a payment feature for med- ications and treatment into our system.” “Every health insurance company has its own billing procedure, which IMED is able to classify and process,” adds Jorge Arriaga, who, as manag- ing director of Famaalink, coordinates contracts between insurance companies and the phar- maceutical industry. One company, PMR, which insures 2.5 million retirees, is the country’s largest health insurer.

Knowledge Cuts Costs. Argentine health in- surance companies can use their access to data on their medications distributed by pharmacies, treatments, and lab tests to compare the infor- mation and thus control their costs. A net- worked system also allows insured individuals to get medications more rapidly. IMED cur- rently serves six million Argentinians — or around half of all privately insured individuals. “We’ve also developed a concept for integrat- ing the state-run insurance program into our system,” says Simcic. The country’s Ministry of Health has not yet, however, made a decision on the matter. The majority of Buenos Aires is already a step ahead: “Everytime more in information and communication technologies is not a luxury,” says Diego Pablo Gorgal, a representative of Buenos Aires City. “On the contrary, such in- vestment helps us optimize limited resources and become more efficient.” His favorite exam- ple is the digitization of all entries into the central civil registry office, which since 1866 has recorded over 3.5 million entries large pharmacies in Buenos Aires that operate according to the American “drugstore principle” and need to process hundreds of prescriptions per hour in real time. IMED also offers a solution that is smoothly coordinated with hospital systems. “A total of 7,200 pharmacies are connected to the IMED network, along with 3,000 doctors and hospitals, 20 private health insurance companies, and six million insured individuals,” says Simcic. “We’re also incorporating a payment feature for medications and treatment into our system.” “Every health insurance company has its own billing procedure, which IMED is able to classify and process,” adds Jorge Arriaga, who, as managing director of Famaalink, coordinates contracts between insurance companies and the pharmaceutical industry. One company, PMR, which insures 2.5 million retirees, is the country’s largest health insurer.

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Siemens is involved in all of these subway projects, for which it is providing its entire range of technical expertise. Experts are modernizing the electrical equipment for the nearly 100-year-old Line A at night during the three hours when the trains do not operate. The new Paseo del Tango (Line H) is also being equipped with state-of-the-art signaling technology and intelligent systems, such as Automatic Train Operation (ATO),” says Eugenio Real, Argentina’s Transportation System director. ATO automatically reduces the speed of trains traveling too closely in sequence.

“We’re off to a good start, but we still need to make public transportation more attractive,” says Andrés Barthagaray, an architect who is also executive director of the Buenos Aires 2010 strategic planning council, where he serves as an advisor to the city government. Barthagaray believes that intelligent IT solutions are the key to improvement. “We need real-time information for passengers so they’ll know when the next bus is coming,” he says. His concern extends beyond the porteños to include the many tourists who are returning to Buenos Aires, the world capital for tango enthusiasm, now that the city is booming again. In 2004 six million people visited the city.

**Major Projects.** Klenheimel also sees huge potential for growth in the area of transport projects, especially now that the Argentine government has launched a broad nationwide plan (Plan Integral Tránsito y Transporte) that addresses all transport modes. “We received major orders in 2004,” says Klenheimel, reflecting the generally robust state of the national economy. In 2006 Siemens was awarded a US$1 billion contract to build two new gas and steam turbine power plants. One third of Argentina’s electricity output of 24,000 megawatts is generated in power plants equipped by Siemens.

The two plants will be handed over in 2008. Siemens is supplying two gas turbines, a steam turbine, and control technology for both facilities. It’s also providing a heat-recovery steam generator. Experts estimate that Argentina’s total electrical output will reach 38,000 megawatts by 2015. Klenheimel is confident that “growth in the energy market will be followed by investment in transport and medical systems, with the latter being significantly financed by hospitals.”

**Trouble-Free Travel**

Steven has arrived at the suburban commuter station, and his travel assistant directs him to the nearest empty parking spot. It got any information from a parking management system developed by Siemens, which is already installed in many parking garages — for example in Munich, Toulouse, Oslo, and Singapore. An automated, driverless subway brings him to Nuremberg’s central rail station. Before boarding the high-speed ICE train to Frankfurt, Steven strolls through the station. Suddenly his electronic appointment planner reminds him to buy a birthday present for his wife, so he stops at a boutique. He likes the shop so much that he recommends it to friends by marking the establishment with “digital graffiti,” a virtual note that “sticks” to the shop, remaining invisible to other passersby. But if one of Steven’s friends passes the store, his or her travel assistant will convey the original message left behind.

Regardless of how we travel in the future, everyone will find that traveling is much more comfortable and convenient. In the comfort of his or her home or office, anyone with a digital assistant — either in a mobile device or a personal computer — will be able to plan and book trips using all forms of transport. What’s more, a single electronic ticket will cover the entire trip. “Whenever possible, a trip should not require moving from building to building or from one level of terminal or station to another,” says Moninger. “Ideally one ticket should suffice and the connections should be on time using GPS. Many of these technologies are already in use today. Others, like the digital travel assistant and digital graffiti and electronical bidding of lading have yet to be realized; but a standardized travel ticket might well be available soon.

**Universal Ticket.** Steven has arrived at the suburban commuter station, and his travel assistant directs him to the nearest empty parking spot. It got any information from a parking management system developed by Siemens, which is already installed in many parking garages — for example in Munich, Toulouse, Oslo, and Singapore. An automated, driverless subway brings him to Nuremberg’s central rail station. Before boarding the high-speed ICE train to Frankfurt, Steven strolls through the station. Suddenly his electronic appointment planner reminds him to buy a birthday present for his wife, so he stops at a boutique. He likes the shop so much that he recommends it to friends by marking the establishment with “digital graffiti,” a virtual note that “sticks” to the shop, remaining invisible to other passersby. But if one of Steven’s friends passes the store, his or her travel assistant will convey the original message left behind.

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**You Forgot Your Suitcase!** Today’s information systems already do a lot, but problems will always arise if, for example, a train is delayed and essential information isn’t delivered digitally — in other words, when and where it’s needed,” explains Moninger. In terms of technology, navigation devices could be made smarter. But the problem is more a question of legal issues because someone must bear responsibility for the accuracy of the information. “The biggest problem with the major communications systems on the market today, which are characterized by a multitude of displays, formats and standards,” he says. “Someone places his suitcase to one side in the boutique. He is so engrossed with composing his digital graffiti note that he forgets his bag and walks away. Immediately, a smart camera equipped with Railprotect image analysis software from Siemens (already available) automatically detects the unattended luggage and even assigns it to its owner. The software continually compares the distances between people and pieces of luggage. If the maximum permitted distance is exceeded for a certain duration, which can be set as desired, the bag is considered unattended.

The system then sounds an alarm at a security control center and automatically arranges for the luggage to be removed if necessary. Automatic detection by means of software has become so sophisticated, that it can be used even in heavily frequented areas. The software is an element in Railcom Manager, a seamless network of information and monitoring systems with intelligent image recognition and a very high detection rate that has been installed in Hanover, Germany, and other locations. With its alarm management, incident management, and rail control, the system enables security personnel to react to crisis situations with maximum speed.

Currently, Steven is a member of a travel service, where he has left his personal ID. So the neglected piece of luggage is clearly linked to his name. His travel assistant receives a message and it, in turn, reminds Steven to retrieve his bag. Now, although he’s really got to hurry to

**Transportation**

A pioneering traffic concept that encompasses all forms of transport — from cars and trains to planes and ships — is designed to make travel as easy and convenient as possible.

problems in areas that are easily accessible, but also located and identified any freight not only to be easily transported across borders, but also located and identified any freight not only to be easily transported across borders, but also located and identified any freight not only to be easily transported across borders, but also located and identified any freight not only to be easily transported across borders, but also located and identified any freight not only to be easily transported across borders, but also located and identified any freight not only to be easily transported across borders, but also located and identified any freight not only to be easily transported across borders, but also located and identified any freight not only to be easily transported across borders, but also located and identified any freight not only to be easily transported across borders, but also located and identified any freight not only to be easily transported across borders, but also 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