

Gautrain enhances economic growth in the province

With the official opening of the Gautrain's north-south line at the beginning of August, visitors to the University of Pretoria can now make use of this state-of-the-art rapid rail route that runs right past the Hatfield Campus.

The opening of this phase of the Gautrain for commercial service on 2 August 2011 followed a rigorous evaluation of all the contractual and technical requirements for this phase. The complete route runs from Park Station in Johannesburg, past Rosebank, Sandton, Marlboro, Midrand, Centurion and the Pretoria CBD, terminating in Hatfield. The entire 60-km trip takes less than 45 minutes, travelling at maximum speeds of 160 kilometres per hour. Gautrain bus services are fully functional along the entire route.

Although the link between the OR Tambo International Airport and Sandton has been operational for some time now, the final, southward leg of the route, from Rosebank Station to Park Station in the Johannesburg CBD, will be opened at a later date. This is to accommodate additional engineering works in that section of the route and is a precautionary measure to ensure that the highest passenger safety standards are adhered to while engineering works are in progress.

According to Mr Jack van der Merwe, CEO of the Gautrain Management Agency, the biggest advantage of this long-awaited high-speed train is its predictable travelling time. This modern train offers international standards of public transport with high levels of safety, reliability and comfort.

Relieving traffic congestion

Passengers can expect a train every 12 minutes during peak periods (from 05:30 to 08:30 and from 16:00 to 19:00) and every 20 minutes in off-peak periods (from 08:30 to 16:00 and from 19:00 to 20:30) during the week, and every 30 minutes over weekends and public holidays. There are 125 buses to transport passengers within a radius of five to six kilometres of the various stations (with the exception of weekends and public holidays). Subject to road traffic conditions, the

bus timetable is integrated with the train timetable.

The Gautrain offers a cost-effective, efficient, environmentally friendly and safe solution to some of the worst transport problems in the most densely developed area in the province, which is also the country's economic hub. It also brings Pretoria and Johannesburg in line with many major cities in the world where it is common practice to link cities by rail to international airports. The Gautrain will therefore form the backbone of many other modes of public transport in Johannesburg, Midrand and Pretoria.

Mobility is the key to future economic growth in Gauteng, and the need for an alternative mode of public transport to help alleviate congestion on the roads between Johannesburg and Pretoria has been evident for some time. Traffic congestion on the N1 freeway is currently estimated to cost more than R300 million a year, including production time lost during travelling time, higher transport costs and above-average accident rates.

Traffic congestion impacts negatively on quality of life. The N1 carries some of the highest traffic volumes in South Africa. More than 157 000 vehicles travel on it daily and it has a traffic growth rate of 7% per annum. It is estimated that approximately one-fifth of Pretoria-Johannesburg commuters will make the switch from travelling by road to travelling by rail. The Gautrain could transport more than 100 000 passengers a day.

The determined fares are based on the principle of affordability and are highly competitive compared to other modes of public transport. They are sufficiently price-attractive to create a substantial shift from private car use to public transport. The safety and security of passengers are of the utmost importance, and safety and security features have been extended to include





→ *The Gautrain set on the test track at Bombardier's Testing Facility, Derby, in the United Kingdom.*

other facilities, such as station precincts and vehicle parking areas.

Enhancing economic growth

The Gautrain project is primarily aimed at enhancing and supporting economic growth in Gauteng and generating employment. It is part of a longer-term vision, which will include a commitment to creating and sustaining a new culture of public transport usage in South Africa.

The project was initiated as one of eleven Blue IQ projects of the Gauteng Provincial Government (GPG). Blue IQ is a multi-billion rand initiative of the GPG to develop economic infrastructure for specific major projects in smart industries, high value-added manufacturing and tourism. It works in partnership with business and government departments as a catalyst to promote strategic private sector investment in key growth sectors of the Gauteng economy.

The Gautrain project is the largest public-private partnership (PPP) to be launched in South Africa. It links private enterprise and government in a project that will become the central hub of a future integrated transport project for South Africa's commercial heart. With a value of about R25.2 billion, the project was structured to ensure that the government and the concessionaire, Bombela Concession Company, operated within a strict set of financial and time parameters.

One of the main elements in the agreement was the sharing of commercial risk. This meant that Bombela took "transfer" from the government of the responsibility for delivering the Gautrain project at a fixed base price within a certain period.

It made Bombela accountable for the "turnkey contractor" appointed to construct the Gautrain system, as well as the contractor appointed to operate and maintain the Gautrain service.

The two parties had to make complex projections and calculations on the construction programme, spending, the sourcing of material, equipment, labour and skills – some of it sourced internationally due to the unavailability of certain skills in the country – over the life of the contract. All these issues had to be agreed on between the province and the Bombela Concession Company before laying a metre of track. Private-sector funding for the project was provided through equity in the form of shareholders' funds. The equity made available by shareholders in the Bombela Concession Company covered approximately 20% of the funding necessary for the project. Of the 80% balance, 71% was provided by bank syndication and 9% through a floating rate mezzanine funding facility.

Environmental impact

There can be little dispute over the fact that rail transport is more environmentally friendly than road

transport. It requires a relatively small amount of land and the pollution emanating from it in terms of emissions is insignificant when compared to most other means of transport.

International experience shows that cities that have effective, efficient public transport systems have significant improvements in air quality. Levels of nitrous oxide, carbon monoxide, diesel particles, carbon dioxide and airborne lead have negative impacts on society, particularly on developing children. The Gautrain will have a significant, positive impact on air quality by reducing the use of fossil fuels.

“The environmental impact of fossil fuels is going to result in a number of changes in the transportation industry,” says Mr Van der Merwe, “and over the next 20 to 30 years, the country is going to be obliged to move the transportation of many goods and other products off the roads and onto its railway network.” The technology developed for the Gautrain will therefore not just be utilised to address the problems experienced by commuters in densely populated areas, but also for transporting freight across the country. Routes that will benefit tremendously from this linkage are those leading from the country’s harbours, such as Durban, to the economic hub of the country, Gauteng.

The future of rail transportation

In terms of commuter transportation, the Gautrain is the first of several that are being planned for South Africa. One of the problems that has been inherited from the previous political dispensation is the large numbers of workers that live in rural areas, such as KwaNdebele in Mpumalanga, who have to commute daily by bus to their places of work in Pretoria and Johannesburg. Investigations are already underway to utilise the existing ring route of 250 km that incorporates

Koedoespoort in Pretoria in order to change the lives of hundreds of people who currently spend three hours twice a day just to get to their places of employment.

According to Mr Van der Merwe, there is also great interest in the exportability of the technology developed for the Gautrain to the rest of Africa. As a public-private partnership, the Gautrain has been commended internationally, and much interest has been shown in the lessons learnt from this contractual form and its application to other projects throughout the world. In 2008, it received a Partnerships Bulletin Award in the United Kingdom for the best private finance initiative (public-private partnership) deal in the world.

The Gautrain also received the annual Glenrand MIB Excellence Award of the South African Association of Consulting Engineers (SAACE) in 2007 in the category Visionary Client. In 2008, the project received an international Bentley Empowered Award for Excellence in Project Management in Baltimore, USA, specifically for innovation in rail and transit.

Its most recent achievements are the presentation of two awards by the International Association of Business Communicators (IABC) in March 2011. The African Gold Quill awards were received for the Gautrain’s social media, as well as for its media relations. These awards recognise individuals and organisations for leadership, strategic management, creativity, resourcefulness and successful solutions in the communication sector.

Mr Van der Merwe says that the success of the project can, to a large extent, be attributed to the multidisciplinary approach that was followed. It is important to adopt a broader perspective. In this regard, it is important not only to focus on the engineering works that are involved in

the project, but also the environmental impact, the economic modelling, factors related to socioeconomic development, the financial and legal-technical matters, as well as marketing and stakeholder engagement.

This project has certainly made the world sit up and take note of South Africa’s innovative project management expertise and its vision to provide solutions that will improve the lives of its people and enhance economic growth. 🌱



Mr Jack van der Merwe is an alumnus of the University of Pretoria. He obtained his BSc(Engineering) and BSc(Hons)(Engineering) degrees in Civil Engineering from the University of Pretoria. He is also a graduate of the Harvard Business School’s Senior Executive Development programme. As CEO of the Gautrain Management Agency, he has overseen the building and operation of the Gautrain Rapid Rail Link since its inception in 2000. In 2003, he was elected vice-president for Africa of the International Association of Public Transport (UITP). This organisation is a worldwide association for urban and regional passenger transport operators, authorities and suppliers. Under his leadership, the Gautrain project has developed into the largest public-private partnership in the history of South Africa. It has won numerous international awards.