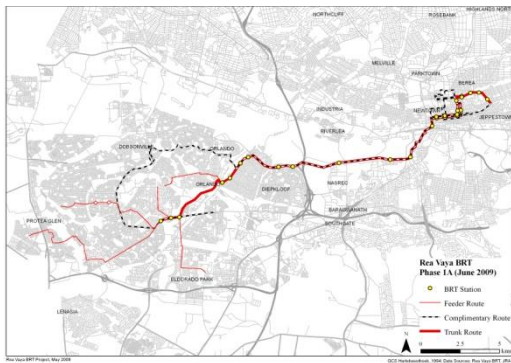


# GTZ's Contribution to the Johannesburg Rea Vaya Bus Rapid Transit (BRT) Project

Johannesburg started planning a Bus Rapid Transit (BRT) system in November 2006. The FIFA 2010 World Cup meant that a significant amount of national funding had become available for transport projects in the host cities, as long as these projects also left a public transport legacy for the cities' residents long after the month-long tournament was over.



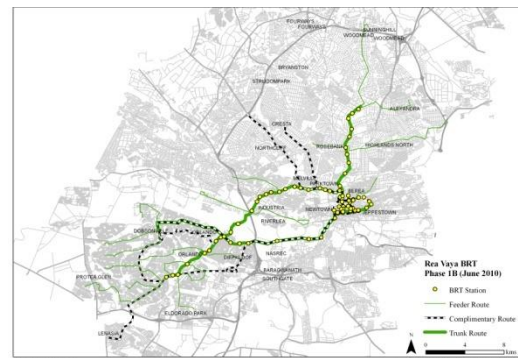
Phase 1A

The BRT project, called “Rea Vaya” (which means “we are going”) aims to develop approximately 122 km of exclusive busways as Phase 1 of a high quality BRT mass transit system by 2013. Phase 1A, with 25.5 km of exclusive busways and 20 stations, will be completed by June 2009 and shall be operational before the Soccer Confederation Cup in June 2009. Phase 1B (intended to bring the total busways to 63km and the number of stations to 78) will be completed in time for the FIFA World Cup in June 2010. The BRT routes are designed to connect the major concentrations of visitors and spectators with the two major soccer stadia, at Ellis Park and

Nasrec. The major BRT routes will link Soweto with central Johannesburg (CBD) via Nasrec, Soweto with Sandton via Parktown and Rosebank, and Sandton to the CBD and the stadia.

The legacy of the first phase will be a high-quality public transport system that meaningfully integrates Soweto and Alexandra, areas of historical disadvantage, into the rest of the City, and also provides a credible public transport alternative, for the first time, to residents of areas of high motor vehicle usage.

The active assistance of GTZ International Services began just over a year ago. Since April 2008, when the local GTZ project manager was appointed, a consulting team of some 20 individual experts has been assembled and brought on board via contracts with GTZ. Those engaged to date come from Colombia (4), Brazil (4), the United States (2), Germany (2), Australia (1), Thailand (2) and South Africa (6).



Phase 1B

They have had a significant impact on shaping the project and its achievements. First of all, they have produced the “operational design” for Phase 1A and 1B. This has meant proposing the routes to be operated, the number, size and location of the stations, and also estimating the number and size of buses required to service them (and even drawing up the bus schedules for the services). As a result of this work, the City ordered 143 buses from Scania/Marcopolo in December 2008 – 41 articulated and 102 standard-sized buses, with doors on both sides to allow for kerbside and median-station boarding. The size and location of the 20, red-spiked “porcupine” BRT stations mushrooming noticeably in the middle of roads in central Johannesburg and along a major corridor to Soweto has a lot to do with the planning advice of the GTZ experts.



People using BRT

The position, size and layout of the City-owned BRT bus depots – temporary and permanent - has also resulted from the GTZ team work in scoping and sizing the depot facilities required in each phase. Bus staging areas and termini have likewise been scoped and sized for the engineers designing and building them.

Secondly, the GTZ team has had a major impact in being able to provide much-needed financial answers to City officials and politicians and national Treasury. A comprehensive financial model was developed by the Brazilian experts which has been

used to provide the City with confident estimates of what BRT operating costs can be covered by fare revenue, and what BRT costs need to be covered by government. Documentation to support the raising of funding for the buses from financial institutions has relied completely on the outputs from the model. The financial model has enabled the City also to determine what fares it must charge. The fare proposals, prepared by the GTZ team, are presently published for public comments by the residents of Johannesburg. The GTZ team has also advised the City as to what fee per kilometre it should pay to the bus operating company that will be contracted for 12 years to provide the first services. It has prepared the “escalation” formula for adjusting the fee as costs rise over time. These elements of constructing the “business model” for the BRT have been supported by the work of local GTZ contractors who prepared the concepts, contract packages and ground rules for the participation of the existing bus and minibus-taxi operators in the BRT system as its future operators. They also carried out detailed planning of which existing routes need to be subsumed by BRT and estimated the impact on various taxi associations and bus operators of each phase. They have also prepared documents outlining the City’s first “offer” to the first bus operating company. (This will be presented when this company is formed.)



One of the buses

Thirdly, the GTZ team has provided advice and input about the various BRT contracts. The BRT is made up of tangibles such as buses, stations and busways, but is underpinned by equally critical intangibles like the business model referred to above, contracts with service providers and institutional arrangements. Consultants from Colombia who previously designed and worked in the world-famous Bogota BRT system have been key here, with designing and helping write the Automatic Fare Collection system tender and contract, and the bus operator contract. In addition they have designed the station management contract and the system bank account contract. They have worked closely with local lawyers who have drafted the contracts. Similarly, these GTZ experts have advised on the best government institutional arrangements for BRT systems, and their input has extended from preparing the high-level concepts initially, to editing more recently some 40 detailed job descriptions for the new positions in the BRT entity.

Fourthly, a South African expert engaged by GTZ has “audited” the BRT stations and buses for their “accessibility” – a term referring to their ease of use universally, by all people including children, old people, people with poor hearing or vision, or people who have physical disabilities. Improvements to both the buses and the station design have been implemented

as a result of his advice. The safety and security plan for the BRT has also been developed by a South African security expert contracted by GTZ.

Fifthly, the GTZ team has provided advice on measuring and maximising the environmental benefits of the BRT. It has guided the work being done presently to prepare an environmental baseline for the BRT routes, after which GTZ will contract a CDM specialist, to assist the project to become registered for Clean Development Mechanism (CDM) credits.



A typical BRT station

On a more informal level, the regular visits of the GTZ team members has made available to the Johannesburg-based project team ready encouragement, advice and knowledge, generously given and shared, based on their experience in and of BRT systems elsewhere in the world. Advice on any planning, design, technical, environmental or implementation topic has been merely an email or skype-call away when they are not physically in Johannesburg. Presentations have also been given to the taxi industry structures to improve their understanding of how BRT systems function.

Going into the second year of the expert and training programme up to April 2010, GTZ will be implementing its more structured capacity building and training programme, alongside the ongoing expert programme.

By Colleen McCaul, Project Manager (GTZ), 04-2009