

ASPIRE

Case Study:

Arup Infrastructure Gautrain Rapid Rail Link Gauteng, South Africa

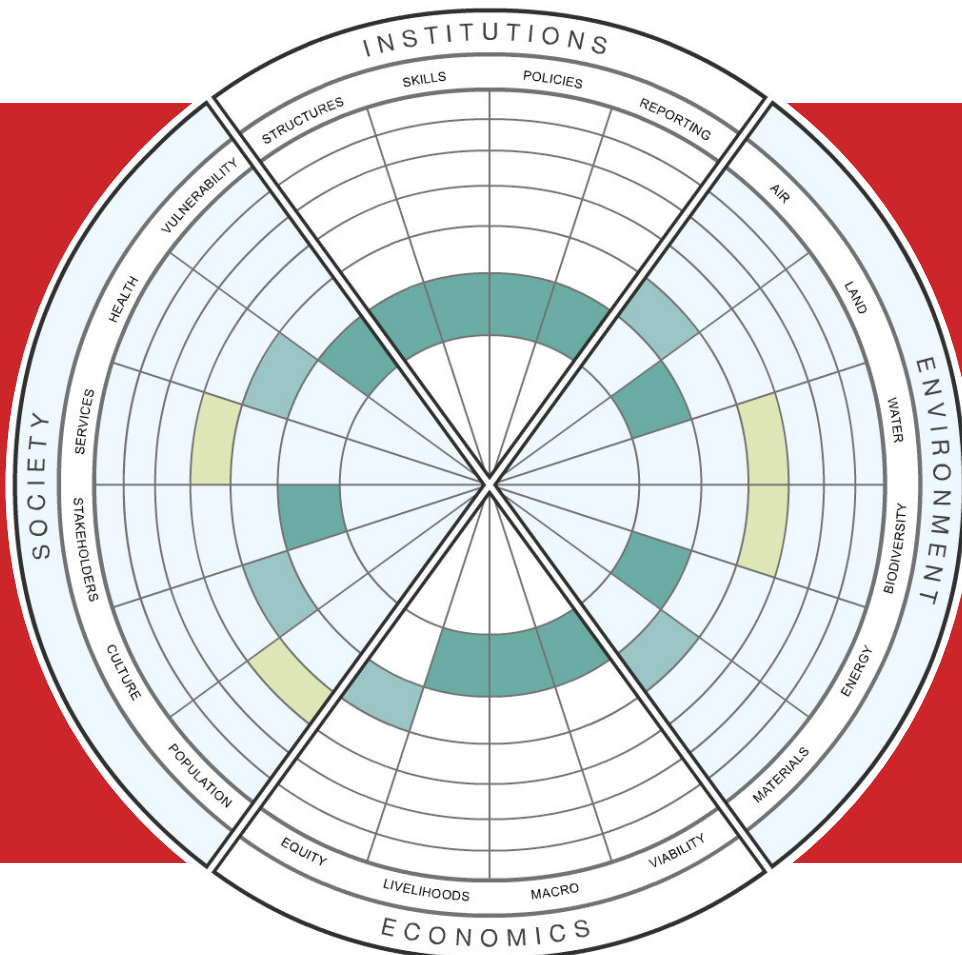


Source: Arup South Africa

Rapid rail link

Project Description

The proposed Gautrain Rapid Rail Link entails the construction of a modern, state-of-the-art rail network consisting of two spines: a north-south spine linking the two major cities of Pretoria and Johannesburg (a commuter service), and an east-west spine linking Sandton and the East Rand at Rhodesfield in Kempton Park (a commuter service), together with a dedicated service linking Sandton and JIA airport. A network length of approximately 80 km is planned, with provision for future extensions. Gauteng is the economic hub of South Africa, generating more than 36% of the country's Gross Domestic Product (GDP), whilst covering less than 2% of the country's total surface area. Gauteng therefore plays a vital role in the national economy and it is important to prevent this being undermined by traffic congestion. Furthermore, land development in Gauteng has historically been distorted and, in many cases, has not been supported by an adequate public transportation system.



ASPIRE Keystone

The ASPIRE assessment has been carried out by members of the Arup Johannesburg team, who are the technical reviewers for the development of the Gautrain link.

The assessment was carried out at the Implementation stage of the project life cycle, during the further stakeholder consultation phase of work and has been valuable in highlighting the importance of stakeholder involvement in the successful evolution of the scheme as well as the robust financial viability.

ASPIRE Assessment

Institutions

The Gautrain Rapid Rail Link scores notably highly within the Institutions quadrant of the ASPIRE assessment. This is owing to the involvement of a private sector consortium which is well resourced and under strong contractual obligation to include capacity of local companies. National and Provincial Government approvals are in place; a multi-stakeholder review called the 'Gautrain Integration Report' checked that all aspects of the project would be aligned with other transport institutions and as well as with national, provincial and local development and transport policies. Further to this, the Provincial government has a well resourced project office to manage the project and staff within the project office have the skills, financial resources and organisational capacity to meet responsibilities. The scheme has a record of good public relations and has been opened to inspection by members of the public during key stages of the development process.

Environment

Strengths of the Environment quadrant include Energy and Land elements, where the project is encouraging a new development philosophy in South Africa of higher density mixed use, high quality developments at stations and transport nodes. This is a welcome development in the context of an otherwise very low density, unsustainable development culture. Biodiversity and water score relatively poorly, owing to the major impact on water/riverine systems through disposal of water during construction. Tunnelling has had an impact on groundwater and aquifers which are part of the resource of public water authorities. Little advance planning for impacts of such water extraction took place. Furthermore, trees on route have sometimes been felled without adequate consideration of alternatives or replacement.

Economics

A significant amount of training and empowering of local labour and businesses will be undertaken to deliver the project. Interestingly, the Equity strand still scores comparatively lower than the other Economics themes, as there has been some debate about access to public transport for low income

communities in South Africa, as the main beneficiaries in the near term will likely be current transport users in middle and high income groups. Ensuring open access and fare levies to benefit all socioeconomic groups would have resulted in a higher evaluation, but through an integration report, the project has outlined the positive indirect impacts on employment opportunities and the fact that other transport systems are likely to become more efficient and accessible in the long term as a result of the operation of Gautrain. Taking these limitations into account, the project still performs strongly in the Economics quadrant due to its focus on equal opportunities, transparent contracting practices which promote ethical competition, high labour standards, long term operational viability and strategic alignment with regional and national infrastructure policies.

Society

Within the Society quadrant, the Services and Population themes appear to be weaker than others because the indicators within these themes had neither a positive nor negative impact to the project and were therefore given an average/neutral score. For instance the focus of the project is improving transportation for current users, and access to other key services such as primary education provision, telecommunications and fuel sources is not the primary focus so the assessment assumes a neutral stance on the project impact on community cohesion along the transport corridor. However, in-depth analysis of income levels and land use was conducted to assess the project's value over the next 20 years, which plans for possible changes in population, and there are strong accountability and grievance mechanisms in place to ensure that all construction, social and environmental commitments are delivered, leading to higher scores in the Stakeholder theme.