



GMA CASE STUDY

GAUTENG TRANSPORT INFRASTRUCTURE ACT (GTIA)

The impact of the GTIA applications management process on the Planning Phase and the Development and Operational Periods of the Gautrain Project.

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The aim of the case study is to capture the manner in which the Gauteng Transport Infrastructure Act (GTIA) applications process was managed during the planning phase and the Development and Operational Periods of the Gautrain Project. A number of challenges were experienced in managing the applications in compliance with the provisions of the GTIA, more especially during the planning phase and Development Period. These are also the periods within which most of the applications were received. Solutions to these challenges were gradually introduced, which later brought about a significant improvement in the management of the applications process. The case study gives a backdrop in the context of the business environment at the time. It then details the challenges and the solutions introduced as a result of the learnings, and concludes with an overview of the lessons learnt. The lessons learnt from the GTIA applications management should assist, not only the Gautrain Management Agency (GMA), but also other stakeholders in the public transport sector in ensuring an efficient and cost-effective management of applications in accordance with the GTIA.

HIGHLIGHTS

THE CHALLENGE

The Gautrain Project, as a large infrastructure development and ground transport project, necessitated acquisition of a substantial amount of land. Given that it was a green fields project, there were also a lot of unknowns or uncharted territory in terms of land use, environmental impacts and the like. Consequently, an unprecedented number of GTIA applications were received; there were imminent legal battles, as well as the discom-

fort brought about by the land acquisitions process, which resulted in the relocation of existing engineering services and an impact on land parcels. The GTIA process had to commence at the preliminary or initial stages of the planning phase of the Project. As such, there were understandably limited information resources about the proposed Gautrain rail route to inform the planning and the applications processes management.

All of these issues resulted in challenges pertaining to the management of the applications process. These challenges can be grouped into the following three categories:

- The divergent nature of the applications;
- Complexity of the applications management process; and
- Limited use of relevant technology to support the management of the applications process.



THE OUTCOME

The highly technical nature of the GTIA applications affecting the Gautrain Rapid Rail Link Project, as well as the other challenges articulated, necessitated a high level of varied expertise on the part of the Provincial Support Team (PST) members, tasked with processing the applications. Having established the need arising from the complexity of the applications processes, the PST put together a specialised team of experts to manage the process. The team comprised of town planners, transport engineers, geotechnical engineers, civil engineers, environmental specialists, land acquisitions specialists and legal experts. The team also needed to be familiar with strategic stakeholder management; hence a communications team was pulled into the team to assist with stakeholder engagement.

The team embarked on four strategies to deal with the challenges:

1

A specialised team for GTIA applications management

2

A system for processing GTIA applications

3

Extensive stakeholder engagement

4

Facilitating collaboration on management of the GTIA applications with the Concessionaire.



Approximately 250 applications for approval in terms of the GTIA and other applicable legislation were received by the PST, and subsequently the GMA, during the period 2004 to August 2012. The applications were received during the different stages of the land acquisitions process, i.e. route determination, preliminary design, land acquisition and proclamation. The applications therefore were of a divergent nature and required highly technical expertise in various fields.

1. HOW IT ALL STARTED

Transport infrastructure development in South Africa is governed by various pieces of legislation, which may be different for each province in some instances. The applicable legislation in Gauteng, in particular at the time, was the Transvaal Roads Ordinance, 1957 (Ordinance No. 22 of 1957) and the Advertising on Roads and Ribbon Development Act, Act No. 21 of 1940.

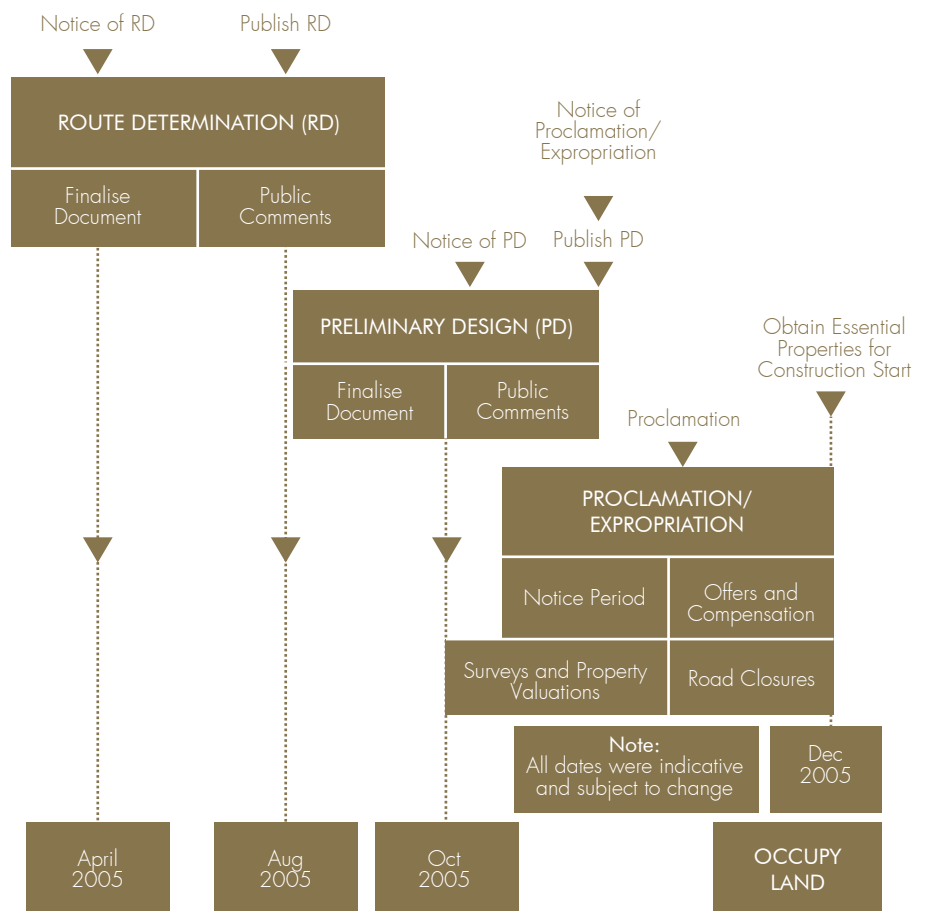
It became apparent that the existing legislation would not be fully enabling in terms of the Gautrain Project as it did not cater for land acquisition and proclamation and, more importantly, the development of a provincial railway. Consequently, the Gauteng Transport Infrastructure Act, 2001 (Act No. 8 of 2001), referred to as the GTIA, was promulgated, partly repealing the Advert Ribbon Act and the 1957 Ordinance in as far as it relates to Gauteng Province. The GTIA can therefore be said to be a consolidation of the previous laws relating to roads and other types of transport infrastructure in Gauteng. The GTIA was subsequently amended in 2003. These amendments mainly related to definitions, land use rights and route determination, among other aspects.

The GTIA provides for due processes to be followed in the planning, design, development, construction, financing, management, control, maintenance, protection and rehabilitation of provincial roads, railway lines and other transport infrastructure in Gauteng. In terms of the Gautrain Rapid Rail Link Project, the GTIA sets out the steps that need to be taken by the Gauteng Provincial Government (GPG/the Province), more specifically the Gauteng MEC for Roads and Transport, to determine and finalise the route of the Gautrain, complete the preliminary design, proclaim the rail reserve, and

expropriate land. From 2001 onwards, all land use changes or land use developments affecting the Gautrain Rapid Rail Link Project were subject to approval by the Gauteng MEC for Dept. of Roads and Transport in terms of the GTIA. The Department received these applications and referred them to the Provincial Support Team (PST) for detailed analysis and recommendation during the planning phase and the Development Period (from 2004 to 2011). The Gautrain Management Agency (GMA) took over the function during the Operational Period (from 2012 onwards). In this respect, the PST and the GMA acted as agents for the Gauteng Department of Roads and Transport.



The diagram below provides a visual summary of the GTIA process:



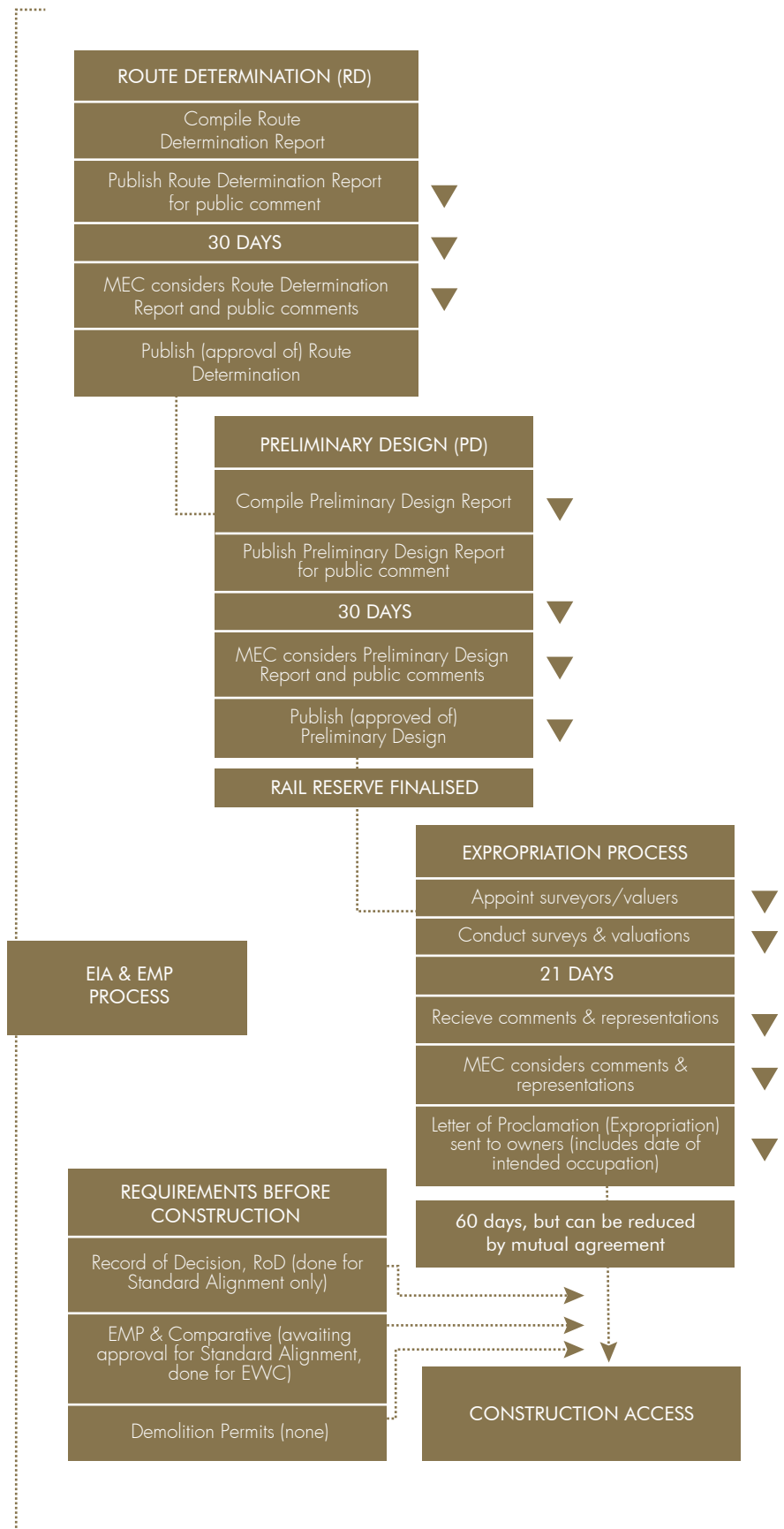
2. FACING THE CHALLENGE

The four main processes that had to be complied with in terms of the GTIA, prior to and, at some instances during, construction of the Gautrain Project, as referred to above, were as follows:

- Regulatory measures in respect of routes, i.e. route determination;
- Regulatory measures in respect of accepted preliminary designs;
- Expropriation of land or rights in land; and
- Proclamation of the rail reserve.

The route determination phase was concerned with the establishment of the proposed railway line corridor. The MEC for Roads in Transport granted official approval of the route on the 1st of August 2005. Publications regarding the approval appeared in the Provincial Gazette and local newspapers on the 5th of August 2005. Once the route determination phase was completed, the preliminary design phase could commence. This phase was concerned with the technical design of the vertical and horizontal alignment of the railway line. The boundaries of the rail reserve had to be determined in terms of spatial location and in relation to cadastral boundaries. The preliminary design processes had an impact on land parcels owned by private individuals, commercial owners and government. Over a 1 000 properties had to be expropriated and/or proclaimed to make way for the Gautrain.

The diagram below illustrates the extent of the land acquisitions process:



In terms of the GTIA, anyone who wishes to engage in any development or alteration of any development within or in the vicinity of the rail reserve must first seek permission in writing from the Gauteng MEC for Roads and Transport. The GTIA allows the MEC, through his agents, to assess and, where applicable impose conditions on the application for the protection of the rail reserve and other transport infrastructure.

All the metropolitan municipalities were impacted by the Project as the location of the Gautrain stations were earmarked in all three Gauteng Metropolitan municipalities.

The City of Johannesburg particularly had a huge interest in the Gautrain Project and as a result went on to develop Urban Development Frameworks for some of the stations. The co-ordination committees were focused on the design and integration of the stations. The functions related to the GTIA were transferred from the PST to the GMA from January 2012 when the GMA appointed a senior manager for the role.

The prescribed GTIA application processes can be described as complex, both in terms of the supporting documentation required for every application and the technical requirements to fulfil the approval conditions. The complexity was compounded by the need to make changes in the route alignment and preliminary design, following the appointment of the partnership (PPP), in 2005.

As discussed in the Environmental Impact Assessment case study, the route alignment was amended more than 13 times between 2004 and 2006.

Various challenges were experienced in complying with the prescribed application processes under the GTIA. They are discussed under the following headings in the next section:

- The divergent nature of the applications;
- Complexity of the applications management process; and
- Limited use of relevant technology to support the management of the applications process.

3. GRAPPLING WITH THE ISSUES

The divergent nature of the applications

Approximately 250 applications for approval of various kinds in terms of the GTIA and other applicable legislation were received by the PST and subsequently the GMA during the period 2004 to August 2012. The applications were received during the different stages of the land acquisitions process, i.e. route determination, preliminary design, land acquisition and proclamation. The applications therefore were of a divergent nature and required highly technical expertise in various fields.



The table below gives an indication of the nature of the GTIA applications:

GTIA APPLICATION TYPE	DESCRIPTION/DETAIL
Advertising signs and hoarding	Section 44 GTIA application for advertising or displaying of billboards and other sign posts on provincial railway lines.
Blasting, drilling, implosion	Section 46 GTIA application for installation of third party engineering services, demolition of structures, and/or dismantling of rock material on or over, or below the surface of a provincial railway line or land in a building restriction area. This includes applications made in the vicinity of the Gautrain system.
Consent use	Applications made to a local authority in terms of the provisions of the Town-planning and Townships Ordinance (1986) and the Spatial Planning and Land Use Management Act (2013) (SPLUMA), read in conjunction with the applicable land use management/-town planning schemes for additional land use rights, which do not change the existing zoning or primary right in the land.
Development	An application traced from the local authority Site Development Plan (SDP) and Building Plan submission processes prior to actual construction on site. Land use rights are usually already in place for this type of application and if the development is on or over, or below the rail reserve, a Section 46 GTIA application will be applicable.
Encroachments	An application for structures to encroach within the rail reserve. These applications normally include installation of anchors (temporary/permanent) and development of overhanging structures within the rail reserve.
Leasing of immovable property	Application to lease out or dispose of land or lease out or dispose of rights held in land by the Province that was acquired for or in connection with transport infrastructure and was not immediately required.
Relaxation of expropriation conditions	Application for relaxation of expropriation conditions issued by the Province to a land owner or title holder. The relaxation normally includes permission for: <ul style="list-style-type: none"> • Sinking boreholes; • Constructing basements below the servitude area; • Piling of foundations for any buildings or structures to be erected on the surface; • The construction, laying or installation of any pipelines, electrical lines, cables or any structure of whatsoever nature at depths exceeding three meters below the surface of the servitude area; • The use of explosives for any excavation of whatsoever nature below the surface of the servitude area; and • Any excavation of any nature deeper than three meters below the surface of the servitude area.
Rezoning	Land use change application made to a local authority in terms of Section 56 of the Town-planning and Townships Ordinance (1986) / the provisions of Spatial Planning and Land Use Management Act (2013).
Rezoning and removal of restrictions	Simultaneous land use change and removal of restrictive title condition(s) application made to a local authority in terms of Section 56 of the Town-planning and Townships Ordinance (1986) / the provisions of Spatial Planning and Land Use Management Act (2013) and the Gauteng Removal of Restrictions Act, 1996.
Subdivision and consolidation	Application made to a relevant authority in terms of: <ul style="list-style-type: none"> • Town-planning and Townships Ordinance, 1986; • Division of Land Ordinance, 1986; • Subdivision of Agricultural Land Act, 1970; and • Spatial Planning and Land Use Management Act, 2013.
Township establishment	Application for establishment of a township made to a local authority in terms of the provisions of the Town-planning and Townships Ordinance (1986) / the Spatial Planning and Land Use Management Act (2013).
Wayleave for services across the rail reserve: Electrical cabling, Fibre optic cabling, Water pipelines, Sewer pipelines, Construction works, Roads, Storm water culverts, canals and pipelines	Applications directly submitted for approval to the MEC for Roads and Transport / the PST / the GMA in terms of Section 46 of the GTIA for engineering services within the Gautrain rail reserve.



Complexity of the applications management process

The GTIA, development, land use change and wayleave applications were to be sent directly to the Department as prescribed by the GTIA and other relevant legislation, but the size of the Gautrain meant the capacity at the Gauteng Department of Roads and Transport was exceeded. By agreement, applications were sent to the Department for assistance. In addition to GTIA, development, land use change and wayleave applications, Site Development Plans (SDPs) were also sent to the PST team for comments. The complex nature of individual applications as well as the SDPs meant that more personnel and specialists were needed in order to increase the capacity required to deal with the applications.

A file was opened for each application, relevant/impacted stakeholders were consulted depending on the nature of the application, expert opinions were sought and site inspections were also conducted where required or applicable. The process to access information, particularly spatial files, was time consuming since these were kept in different locations. It was quite cumbersome to access the various databases as it would take about two weeks to get rail reserve data in relation to an application site. Team members were at some point overwhelmed by the number of applications, the more so since they also had other duties to perform. These factors had an impact on the time it took to handle the applications. In the case of challenging applications, extensive stakeholder engagement had to be conducted.

There was a stringent document management process for the Gautrain Project for both hard copy and electronic documentation. However, due to the lack of dedicated storage, hard copy documents were stored in different locations within the office, which made it difficult to track and access the documents. Relevant reply letters were issued to the Gauteng Department of Roads and Transport with a copy to the applicants and the affected municipality. The Department had to send official responses to the affected municipalities and applicants. In order to speed up the process, a decision was then taken to send the letters directly from

the GMA to the affected applicant, with a copy to the municipalities and the Department. Some of the land use change applications were abandoned by applicants as a result of incompleteness.

A GTIA application register was developed to capture the applications by allocating reference numbers for the various categories of applications. For example, all applications related to Township Applications (TA) had to be checked for completeness, locality plans, motivational memorandums and legislative requirements, such as title deeds and power of attorney. The applications register was also used for tracking processing follow-ups including applications that required comments from the Concessionaire.

Although the applications register was in an electronic format, having migrated from the word processor format to an excel spreadsheet, there were some limitations:

Applications were not captured in a database system and therefore it was cumbersome to track progress status electronically;

Application data was not spatially referenced although the core or fundamental aspect of the application was about the location of the proposed development in relation to the rail reserve; and

Manual reporting on the status of applications.

Limited use of relevant technology to support the application process and the initial lack of enabling technology needed for due performance in terms of to the GTIA process posed a challenge. ProjectWise, a document-control software tool was also not in use during the initial stages of the Project to manage the documentation. A Geographical Information System (GIS) was only introduced later on in the process. Due to the previous lack of enabling technology, it was difficult to quickly assess applications or get access to rail reserve information in order to assess application impacts in relation to the Gautrain system.

In general, the initial lack of technology led to time-consuming application processing methods and decision making in terms of applications. The required 60 days comment period on land use change applications as per the provisions of the Town-planning and Township Ordinance, Ordinance 15 of 1986, would at times be exceeded due to lack of technology and the time taken by the Department to forward applications to the PST.

The existence of GIS assists in the rapid evaluation as well as tracing of GTIA applications for extrapolations on development trends and patterns in the vicinity of the Gautrain system.



4. ROLE OF THE CONCESSIONAIRE

The role of the Concessionaire on GTIA applications is understood to be that of assisting the MEC in developing conditions of approval after assessment of GTIA applications. These conditions would then be issued by the MEC to the affected metropolitan municipality and applicant.

What is the GTIA dispute?

The dispute is

- whether it is the Concessionaire's responsibilities to carry out, on behalf of the MEC, the obligations of the MEC in his capacity as competent functionary under the GTIA Act in as far as GTIA applications are concerned.
- whether the Concessionaire is responsible to consider, assess and to provide comments to the Province on land development applications made in terms of the GTIA and/or other relevant legislation which could affect the Railway Line.

What led to the GTIA dispute?

It is especially the uncertainty in roles and responsibilities between

the Province and the Concessionaire regarding evaluation of GTIA applications that led to the GTIA dispute.

What protocol measures were implemented to keep the process running?

The GMA receives applications in terms of the GTIA directly or via the Gauteng Department of Roads and Transport and Municipalities. These applications are, where GMA considers it necessary, copied to Bombela and their comment/consent is requested within a certain number of days.

On applications that are made in terms of section 46 of the GTIA, there was an informal arrangement between the GMA and the Concessionaire and if the GMA management considered it necessary to obtain the input or consent from Bombela, these applications would be commented upon by Bombela after being prompted by GMA officials through telephonic or email requests to this end. These prompts were normally responded to and proposed conditions to the granting of consents were conveyed via email to the GMA. The GMA

officials would then convert/transfer these conditions and requirements of Bombela into conditions of the MEC's consent to a particular application. Recently official written responses have been forwarded from the Concessionaire to the GMA on GTIA applications.

5. WHAT WE LEARNT

What worked well?

Over the years, solutions were implemented to most of the challenges as outlined above. The manner in which applications were initially processed was streamlined into a systematic and much more effective procedure. The systems developed initially in the form of a register and a rail reserve file aided the streamlining process to some extent, but were not sufficient. The PST prepared a general Practice Note for the benefit of those prospective developers who were not familiar with the processes and approvals required in terms of the GTIA.

Guidelines were also developed for risk evaluation and the Gautrain tunnel section. The guidelines assisted prospective developers by providing information as to the limitations on proposed structures within or in the vicinity of the tunnel area. These guidelines have been incorporated in the live "Guide for GTIA Applications" document developed by the GMA senior manager in 2015.

The Guide for GTIA Applications provides guidance on handling of GTIA applications and includes:

- GMA Wayleave Manual
- Application Recording Process
- Application Assessment Process
- Generic Approval Conditions
- Specific Approval Conditions

The stakeholder relationships established were quite vital for the applications process, especially in the case of the municipalities/metros and the urban development frameworks developed as a result. As a quality control measure, the GMA now conducts regular rail reserve site inspections in order to ascertain compliance with the conditions imposed on GTIA, development and wayleave applications.

The lack of expert capacity was overcome by appointing a panel of consultants to give limited use of relevant technology to support the application process and the initial lack of enabling technology needed for due performance in terms of the GTIA process posed a challenge. ProjectWise, a document-control software tool was also not in use during the initial stages of the Project to manage the documentation. A Geographical Information System (GIS) was only introduced later on in the process. Due to the previous lack of enabling technology, it was difficult to quickly assess applications or get access to rail reserve information in order to assess application impacts in relation to the Gautrain system. Enabling technology was introduced in the form of ProjectWise, a software document-control system.

An application register was developed and stored on ProjectWise and is still being followed for the management of GTIA applications. The applications were all grouped according to categories based



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An application register was developed and stored on ProjectWise and is still being followed for the management of GTIA applications. The applications were all grouped according to categories based

on the nature of the application. By introducing categories for the applications, referencing also changed to reflect the year, category, etc. Excel was used to auto calculate deadlines. Dashboard reports for GTIA applications were also developed and produced on a monthly and quarterly basis. GIS, a geographical information system, was introduced in 2014 to assist in the management of GTIA applications.

What did not work well?

Of all the challenges experienced in complying with the terms of the GTIA, the lack of collaboration with the Concessionaire has been the most intractable challenge. Collaboration with the Concessionaire improved over time and practical working relations have been established.

5. MOVING FORWARD

GTIA applications will be ongoing and might even increase in rapidly developing areas served by the Gautrain. In the process, the GMA stands to benefit from the lessons learnt in the implementation of applications thus far. The extent to which the GMA might need to allocate resources to this function in future will be determined by

the extension to the system and growth in building activities around the system. The GMA and the Concessionaire recently undertook a process of developing a procedure through which all parties involved in the processing of GTIA applications can interact in an amicable way going forward. The parties have signed an agreement in settling the GTIA dispute as

part of various other disputes on the Gautrain system. It is out of these settlements that the GTIA dispute has also been resolved through the "Annex B – GTIA Principles and Applications Procedure" document which has been recently (November 2016) signed by all parties involved as part of the main dispute settlement agreement.

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