DOCUMENT CONTROL
FOR THE GAUTRAIN RAPID RAIL PROJECT

Record keeping and document management
during the planning and development periods
of the Gautrain Rapid Rail Project

GAUTRAIN
FOR PEOPLE ON THE MOVE

GAUTRAIN MANAGEMENT AGENCY

INDEX

This case study traces the record keeping and document management processes from the beginning of the Gautrain project planning period in 2000, through to the end of the development period in 2011. We discuss the challenges that the Provincial Support Team (PST) experienced in setting up and managing the systems, the valuable lessons that were learnt, and recommendations for implementing a document management system in other similar large-scale transport infrastructure projects.

HIGHLIGHTS

THE CHALLENGE

The Gautrain Rapid Rail project had different requirements during its various stages, plus the nature of the Public Private Partnership (PPP) and the vast number of stakeholders involved in the process all made managing records and documents very complicated. This was further compounded by tight timelines and an initial lack of a formalised and integrated document management system, as well as other issues, which we'll discuss below.

THE OUTCOME

The record keeping and document management systems implemented in the Gautrain project were by and large successful. Despite the initial lack of a formal, electronic system during the pre-development phase of the project, the skills and commitment of team members contributed to making the manual system successful. Managing the manual system, however, was time consuming and had other major drawbacks. Once the formal electronic system was implemented at the beginning of the development period, document control became a much more time and process efficient procedure.

> *A large PPP infrastructure project such as the rapid rail Gautrain project can't be successful unless every decision is recorded and communicated to the right people at the right time, using a proper record keeping and document management system. These systems can be thought of as the fuel that keeps the project vehicle moving in the right direction."*
>
> **- COO Mr William Dachs**

1. HOW IT ALL STARTED

The first major document involved in the conception of the rapid rail Gautrain project was the Inception Report issued in June 2000. This was created shortly after the announcement of Gautrain as a Blue IQ or Spatial Development Initiative (SDI) Project in February 2000. The Inception Report was preceded by pre-feasibility study documentation in 1999 and was followed by comprehensive feasibility study reports, culminating in a Request for Proposals (RFP) in 2001. This RFP request was issued after the formal approval of the Gautrain project by the Gauteng Provincial Government (GPG) in 2001.

These documents were issued during the planning period of the project. The need for an RFP came about because of a decision to establish a PPP as the most suitable way of executing the Gautrain project.

The GPG as the public partner issued the RFP to procure a suitable private partner, and the bidding phase marked the transition from the planning to the development period.

2. FACING THE CHALLENGE

2.1 Getting context

Record keeping and document management, while related to each other, serve distinct purposes. Records provide evidence of an organisation's activities and policies and because of this, they're often subject to strict compliance requirements such as retention, access and destruction.

Documents, on the other hand, can contain information or data that can be changed and accessed by many people in an organisation. Whereas all records are documents, not all documents generated through the lifetime of an organisation are permanent records that have to be kept. Some documents, such as emails used to reach a decision or implement a process, don't form part of an organisation's records.

The reason for keeping records is to make sure that complete, relevant and accurate information is accessible to support financial and performance reporting. Document management aims to create a seamless communication network of channels among all the stakeholders in a large project.

2.2 The stakeholders

The vast scope and complexity of the Gautrain project meant that communication had to take place among a large number of stakeholders.

The stakeholders directly involved in the record keeping and document management processes were:

- The Gauteng Provincial Government (GPG) as the owner of the Project and the public partner in the PPP Project.

- The then Gauteng Department of Public Transport, Roads and Works (GDPTRW, also referred to as Gautrans) as the Gautrain proponent.

- The consortium of consultants appointed by the GPG, consisting of Khuthele Projects, Arcus-Gibb and Lebone Engineering, which later on became part of the Provincial Support Team (PST), as well as Ledwaba Mazwai and Equinox.

- The Provincial Support Team (PST) appointed by the GPG to assist with the management of the development of the Project.

- The Concessionaire, Bombela Consortium and its subsidiaries (from mid-2005), as the preferred bidder and then as the private partner in the PPP.

The Gautrain Management Agency (GMA) was appointed as a statutory agency to take over the task of running the

project at the beginning of the operational period. The GMA was therefore not involved in record keeping and document management during the development period of the project.

2.3 Specific challenges

The various challenges experienced in setting up and maintaining a record keeping and document management system for the Gautrain project included:

- The complexity of the Gautrain project

- Intensive consultation and document management requirements

- Tight timelines

- An initial lack of a formalised and integrated record keeping and document management system

- Implementing a formal document control process, including deciding on the best technology to use

These are discussed in detail in the next section.

3. GRAPPLING WITH THE ISSUES

3.1 Complexity of the Gautrain project

Just why was this project so complex? We list some of the main events and accompanying documentation below to explain this.

A group of consultants were appointed in 2000 to assist

the GPG with the execution of the Gautrain project.

A project office for the Gautrain was officially opened and operational on 1 March 2003, and this is where all the appointed consultants worked.

THE APPOINTED CONSULTANTS WERE:

Khuthele Projects (project leadership and management)

Arcus-Gibb (engineering consultants)

Lebone Engineering (engineering consultants)

Ledwaba Mazwai (legal consultants)

Equinox (marketing and communication)

The group had extensive experience with public transport and rail projects and transportation planning in general, and together they formed what became known as the Provincial Support Team (PST).

Khuthele Projects was responsible for record keeping and document management during the planning period. The activities of all the consultants generated a huge amount of documentation during this planning phase.
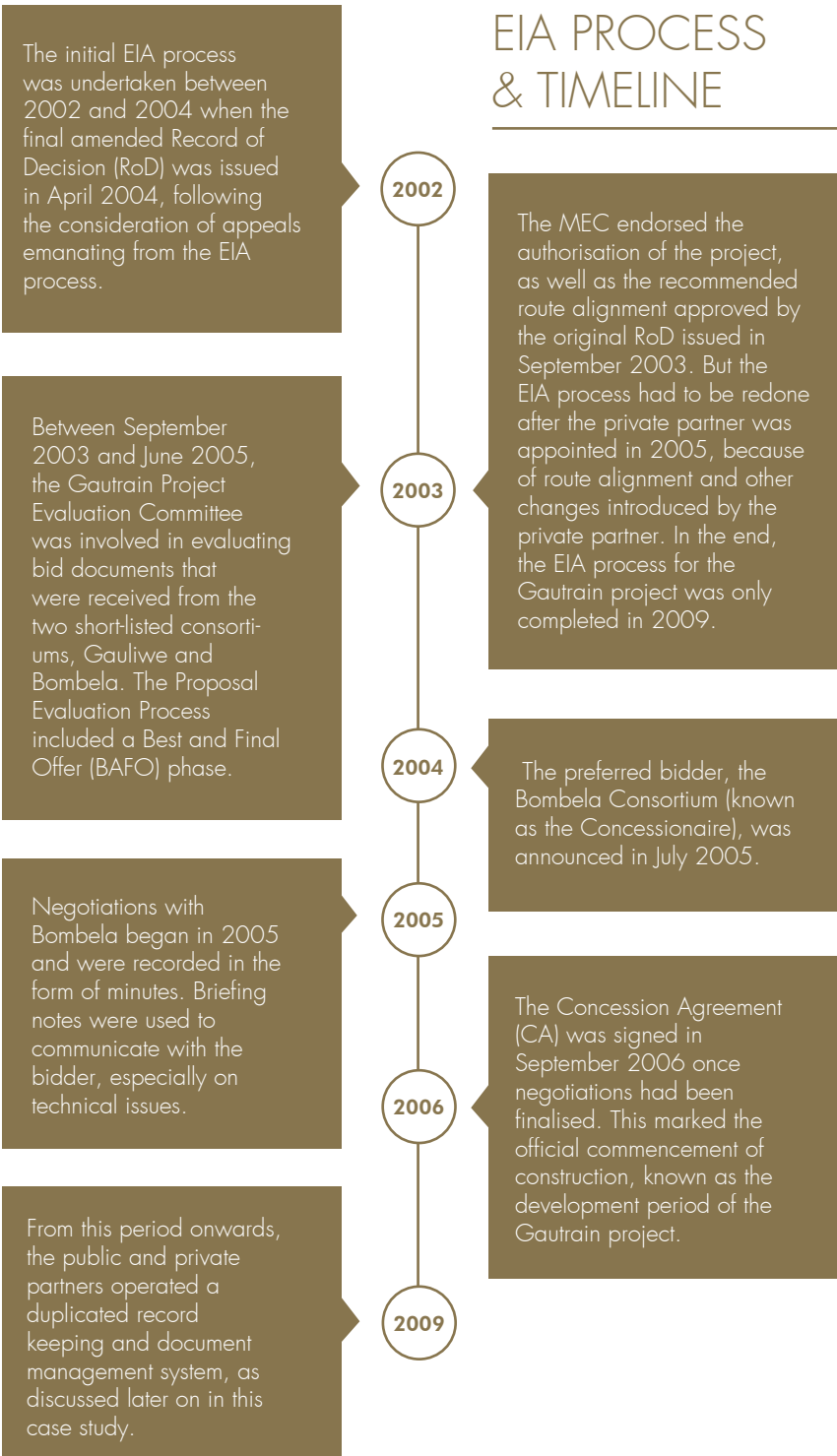
The planning period consisted of the following four main phases, with the accompanying documentation:

① The Project Inception
② The Feasibility Assessment, including the needs assessment and system planning
③ The Project Specification and the Request for Proposals
④ Preliminary Design Reviews

As well as this key documentation, regular progress reports on the project had to be submitted by the PST to the MEC for Transport and Public Works.

The GPG, in collaboration with the PST, decided to complete certain facets of the project during the planning period, before the private partner was appointed. Important among these were the environmental impact assessments (EIA). When tracing the EIA process (set out in a separate case study), it becomes immediately apparent that this was one of the most prolific processes in terms of document generation.

EIA PROCESS & TIMELINE

The initial EIA process was undertaken between 2002 and 2004 when the final amended Record of Decision (RoD) was issued in April 2004, following the consideration of appeals emanating from the EIA process.

2002

The MEC endorsed the authorisation of the project, as well as the recommended route alignment approved by the original RoD issued in September 2003. But the EIA process had to be redone after the private partner was appointed in 2005, because of route alignment and other changes introduced by the private partner. In the end, the EIA process for the Gautrain project was only completed in 2009.

Between September 2003 and June 2005, the Gautrain Project Evaluation Committee was involved in evaluating bid documents that were received from the two short-listed consortiums, Gauliwe and Bombela. The Proposal Evaluation Process included a Best and Final Offer (BAFO) phase.

2003

2004

The preferred bidder, the Bombela Consortium (known as the Concessionaire), was announced in July 2005.

Negotiations with Bombela began in 2005 and were recorded in the form of minutes. Briefing notes were used to communicate with the bidder, especially on technical issues.

2005

2006

The Concession Agreement (CA) was signed in September 2006 once negotiations had been finalised. This marked the official commencement of construction, known as the development period of the Gautrain project.

From this period onwards, the public and private partners operated a duplicated record keeping and document management system, as discussed later on in this case study.

2009

3.2 Intensive consultation and document management requirements

A high degree of consultation was required for the Gautrain project, especially during the planning period. This is because the project needed many interactions with local and provincial stakeholders and role players, as well as members of the public.

Where matters such as EIA and land acquisitions directly affected the public, there was direct consultation between the PST and the broader Gauteng community.

The EIA consultation process alone amounted to one of the biggest public participation processes undertaken in South Africa. It included numerous focus group meetings, public forums and consultations with private and public owners. The land acquisitions process also required extensive consultation, since over 1000 properties had to be expropriated and/or proclaimed to make way for the Gautrain.

The Gautrain project generated significant media and public interest. Some members of the public supported it, but many were initially opposed to it for various political, environmental and individual reasons, especially where land belonging to members of the public had to be acquired. For this reason, it was crucial to manage communication in a way that allowed for clear, unbiased and technically

correct messages using a fully transparent process. A database was set up by the PST for stakeholder communication, as well as a number of press releases and focused press conferences.

When it came to internal technical matters, the PST invited technical representatives from the main role players to participate directly in the Project Review Committee. They established strategic milestones and invited role players to provide their input. Targeted consultative conferences were also established to obtain input from technical experts.

The PST arranged consultation meetingswith the metropolitan councils, local authorities and other role players and most of these meetings took place on a task group level, rather than at the Project Review Committee level.

3.3. Tight timelines

The target date for commissioning the Gautrain rapid rail service by 2005 meant that there was an extremely tight implementation programme.

This, together with the complexity of the project required intensive interaction among the team members and consultation with various stakeholders.

Also as a result of the tight timelines, implementation of the groundwork during the planning period had to be fast tracked. A phased approach couldn't be used for this, since many of the phases overlapped and tasks had to be carried out simultaneously in order to achieve targets.

This posed a challenge for the record keeping and document management process, which had to be structured in a way that dovetailed with the project programme to ensure that time constraints were met.

3.4 Initial lack of formalised and integrated record keeping and document management system

The document management system was not formalised at the beginning of the project. Rather, the following processes were in place:

- The respective offices of the PST team members communicated via the secretaries of the support teams.

- There was no thorough, centralised organisation of the document control process, as each team member kept their own documents.

- The Project Administrator at the time, Johan Venter, was the only person who received all documentation and correspondence between 2003 and 2005, while a proper documentation system was being developed.

- A register of documents received was kept at reception. Except for email correspondence, all records and documents were kept in physical, hard copy format.

- Johan was assisted by Nina Otto who worked for Khuthele as an engineer. Nina was responsible for organising the weekly PST meetings where other employees took minutes, which were then emailed to Johan.

- Even though there was no centralised document control system, care was taken to scan and keep documents: at least 98% of the documents during the planning period of the project were kept.

During the bidding process, the handling of document and communication between the two then bidders and the GPS was extremely sensitive. Because of this, proper measures were taken to manage all documentation before the implementation of a formal document control system.

4. WHAT WAS DONE

The PST implemented a formal digital document control system for the Gautrain in 2005 as follows:

1

André Beukes, an engineering member of the PST, started a review of the process flow for technical documentation: he got input from every team member to determine how the document control process should proceed.

2

As a result, ProjectWise (a digital document control system) was adopted – both for correspondence and reviews.

3

Johan Venter and Bentley, the distributors of ProjectWise, worked together to customise this system.

4

All stakeholders were then trained including Bombela, the preferred bidder.

5

Since the ProjectWise environment was shared with Bombela, the PST set strict access protocols in place to prevent any unauthorised access. This took into account project reporting requirements set out in Schedule 30 of the Concession Agreement.

6

The PST developed a workflow process for technical documentation, which was later called Review Sheet. The chosen bidder Bombela & PST used Review Sheet to review all the technical documents.

7

Bentley offered training to PST members as well as relevant members of the Concessionaire. A Bentley representative was stationed in the PST offices to help both the PST and Bombela with technical issues and to provide support.

Thanks to the PST adopting the ProjectWise system, record keeping and document management were centralised at the beginning of the development period. The PST also appointed a document control manager and three document controllers at the beginning of this development period. Later on they appointed a chief document controller and six more document controllers.

How did the ProjectWise system work?

The PST adopted a dual system for record keeping: Bombela submitted documents in an allocated folder, The Province Document Controllers would then drag and drop the documents in the Province folder not accessed by Bombela. All this was done in accordance with Schedule 30 of the CA. In the change-over to ProjectWise, all hard copy documents had to be scanned into the ProjectWise system and care had to be taken to ensure that documents were legible and searchable.

Between 200-400 document reviews were done every month. There were three document control disciplines, in addition to the operations reviews: electrical engineering, civil engineering and management.

The PST introduced a document classification system:

- All original documents were filed separately and marked as originals, and weren't allowed to be taken from document control. If the original was required for signature, it was treated as a working document (invoices were an example of this). Copy 1 was regarded as a pending document and Copy 2 was used as an active/working document.

- They introduced a unique numerical referencing system.

- They introduced directive sheets to mark the action required for the document, denoting the urgency, as well as the parties it was intended for.

- They used colour coding for classifying reviews.

The PST experienced challenges with this system on three levels: people, processes and technology.

- The document management of correspondence posed a particular challenge because correspondence nearly always requires a short reply timeline. This meant constant checking on the part of people, including sending out weekly reminders on outstanding correspondence.

- An early warning system had to be built into the process with emails and phone calls to notify the relevant people when urgent documents needed to be reviewed or if there were any issues regarding their attention.

- The PST faced a technological challenge initially in sourcing compatible components to use in the ProjectWise system, such as scanners and software programmes.

- Every upgrade of ProjectWise also posed a challenge because of software compatibility and infrastructure suitability.

5. WHAT WAS LEARNT

What worked well?

The PST team was proactive in ensuring an efficient document control process was used during the initial stages of the project, before the formal document control system was implemented. The following aspects particularly helped in the success of the initial process:

- All information that would be required for disputes or legal processes was clearly flagged.

- An early identification process of critical documents was implemented.

- A database was set up for stakeholder communication, press releases and focused press conferences.

- Good working relations

between team members were maintained.

Despite the challenges we've mentioned, implementing the formal ProjectWise document control system contributed significantly to managing records and documentation successfully. Thanks to effective training and ongoing support and a ProjectWise representative stationed in the PST offices, the ProjectWise system proved to be effective – and is still being used today.

What didn't work well?

Although the PST managed the record keeping and document control processes successfully before ProjectWise was implemented, there is no doubt that the process would have benefitted had a formal, centralised system been implemented from the outset, or at least before the Concessionaire was appointed.

A silo mentality, despite the good working relations, resulted in processes being unnecessarily duplicated at times.

Managing the complexity of the record keeping and document control process, as well as the tight timelines, would have been easier if a formal, electronic system had been implemented.

The change over from the manual document control process to the electronic one was time and energy consuming. This was because all hard copy documents had to be scanned into the ProjectWise system so that they were both legible and searchable.

6. MOVING FORWARD

The lessons learnt from the record keeping and document control process followed in the Gautrain project should prove useful for any large

organisation, especially PPPs. They are:

- Implement a formal, electronic document control process at the inception of a project.
- Ensure that training and full support form part of this system: relevant new employees or team members should be trained in all aspects of using it.
- Provide education and create awareness among all employees of just how crucial record keeping and document control is, and the implications if the process isn't adhered to.
- Put an early warning system in place and obtain weekly reports on outstanding issues that were not attended to.
- Capture acknowledgements from the various parties that have received documentation (in the case of correspondence) for the sake of easy information retrieval.

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