Introduction
EngineWorks Pty. Ltd. is an engineering company that focuses on maintenance of rail and road services. This report will examine the background and company structure of EngineWorks, in particular the organizational structure and strategic plan.

EngineWorks was established in the 1960s as an engineering specialist in high-tension electricity transmission grids, principally in New South Wales. The company was sold to the multinational corporation Global Infrastructures in 1985 although continued in Australia as EngineWorks.

In the mid 1990s the company expanded its scope to include maintenance and service contracts in rail, road, and refinery plants. Work in electricity supply was still undertaken, though on a smaller scale. The company also began to develop offshore contracts in Indonesia and Singapore.

In 2005 EngineWorks operates as one of three manufacturing, construction and service groups controlled by Global Infrastructures as shown below.

Figure 1: EngineWorks' position within Global Infrastructures

By the mid 1990s the NSW government tendered the maintenance of NSW’s regional and metropolitan railway network to private enterprise. This maintenance falls into two basic categories:

- track maintenance
- signal maintenance and software development

Track maintenance involves scheduled maintenance programs, as well as ‘needs based’ maintenance where a problem is detected before scheduled maintenance is due. Activities range from replacing individual bolts on railway ties to lifting entire sections of track and replacing the ballast and sleepers (see below).
Signal maintenance requires trained signalmen and electricians to maintain the signaling hardware of the railway systems. Communications engineers maintain and upgrade the software elements of the system.

Figure 2: Track maintenance in operation. From: EngineWorks Annual Report 2003

The Organisational Structure
In April 2003, the total workforce of EngineWorks was 220. Management, trained engineers and administration staff accounted for 49 of these positions, which were located largely in Sydney. The remaining 171 personnel were supervisors, technicians and maintenance staff who work out of regional bases around the state (see Appendix 1).

This organisational structure is typical for a company of this size. All of the senior management positions have a management span of 8 to 12 subordinates. At a supervisory level, most of the positions supervise 20 to 30 other staff, with variations due to regional requirements. For example the maintenance supervisor in Dubbo is responsible for 9 personnel, while the maintenance supervisor in Armidale supervises 33 personnel. However Armidale is the only region to have an assistant supervisor position.

The Strategic Plan
The company has been through several restructuring processes. The most recent planning documents dated from 1999. There was no official mission statement beyond the general goal to "grow the business". The strategic plan of 1999 examined every aspect of the business, and also analysed the competitive advantages of other engineering firms bidding for the same projects. Internally, the accounting and finance
departments of EngineWorks provided an accurate picture of the state of the business and the environment in which it was operating.

- **Staff**

  The manager was quoted in the Annual Report as stating that experience staff were "the greatest asset to the company."

- **Property**

  A rationalisation of real estate owned by the company was also proposed.

- **Diversification**

- **Quality Assurance**

  The organisation is **ISO9000** series accredited, with the greatest emphasis being on **safety**. Minimum quality standards are addressed in the relevant Australian Standards. Quality control inspectors from both EngineWorks and the client inspect completed jobs to verify that all work is within the defined tolerances. Measurements are recorded, and where appropriate photographic and physical evidence are retained as well.

  For details on relevant Australian and ISO Standards (see Appendix 2).

**Conclusion**

In summary, most activities performed by EngineWorks are done so within industry norms. Although the company lacks a formal mission statement, this appears to have had no obvious impact in the 12 years since the last major strategic planning sessions. EngineWorks has been able to adapt quickly to a changing business environment, as demonstrated with the procurement of projects interstate and offshore. Since 1998 EngineWorks has doubled its revenue to $426 million (Construction & Maintenance Capability Statement, 2002).
Appendix 1
(Details would go here)

Appendix 2
Standards (Australian & ISO) and area of relevance

Occupational Health & Safety
AS4801 - Safety Management System
ISO9001 - Quality Management Systems
ISO14001 - Environmental Management systems
AS4292 - Rail Safety

Quality Assurance and Rail Safety
ISO 9001 - Quality
AS 4801 – Safety
ISO 14001 – Environmental Management
AS 4292 – Rail Safety
AS 4360 – Risk Management