PART D

SCOPE OF SERVICES

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D1. INTRODUCTION

The Virtual Plan Room (VPR) Project will be delivered in three phases:

Phase 1 - VPR Strategy Development
Phase 2 - Initial Implementation and Review
Phase 3 - Production System Implementation

This tender is for Phase 1 only and will:

- Establish the business requirements
- Deliver the solution architecture
- Deliver an implementation plan
- Project Manage Phase 1
- Project Manage Phases 2 and 3 (*As a deliverable of Phase 1 a breakdown of costs and pricing rationale will provide the basis for the Project management of Phases 2 and 3 metrics on which the successful contractor will operate and charge accordingly)*

NOTE
Professional services to be provided for Phases 2 and 3 of the VPR Project (other than Project Management services requested under this tender) will be subject to a separate tender process. Due to a potential conflict of interest, the contractor will be precluded from the tender process for later stages of the VPR Project.

D2. BACKGROUND

On 1st January 2004, RailCorp was formally established as a new state-owned corporation that has as its main focus the provision of a safe, clean, secure and reliable metropolitan passenger rail service. The merger brings together two substantial organisations, each with their own business processes, technologies and information management practices, in addition to a range of internally and externally facing websites.

In relation to engineering drawing management, RailCorp today finds itself with:

- A growing volume of electronic drawings
- Increasing use of external parties for engineering design, construction and maintenance work
- No single view of assets, across its ERP system (Ellipse), geospatial systems, document management systems and drawing repositories
- A high cost of storing, handling and preserving paper plans
- A risk of loss or permanent damage to paper drawings

VPR is intended to deliver a solution for electronic approval/authorisation capability for receiving, reviewing, accepting and lodging electronic drawings into a central repository.

Addressing these problems requires an approach that effectively tackles issues specific to engineering drawing management, while working towards a strategic, whole-of-enterprise outcome under the overarching Enterprise Content Management Program. It will also support business improvement efforts through the strategic adoption of web technology.

Implementation of the ECM strategy will utilise a number of approaches that encompass major projects (as part of an ECM program), periodic releases and small-scale business-as-usual implementations.

RailCorp has recently evaluated and selected the Documentum ECM solution from EMC. This will provide key capabilities that are common and fundamental across all ECM projects.

The Virtual Plan Room (VPR) is one of the major projects included in the ECM Program that will establish a secure electronic repository of plans, and support plan room business processes.

D3. OBJECTIVES

The objectives of the VPR Project are to:

- Establish a best practice environment for managing the engineering document lifecycle of drawings and related documentation, including the application of Engineering Authority sign off;
- Ensure the availability of different types of asset information, such as maintenance and defects, their location, related engineering records, standards and drawings at the same time, to facilitate asset planning and management;
- Ensure well managed business interactions with external AEC companies;
- Minimise reliance on paper documents and drawings and to enable the distribution of electronic drawing images for internal users using the Intranet and to create a framework for the future e-distribution of documents to external users over the public Internet;
- Streamline and secure access to asset information;
- Enable electronic review and approval/authorisation of drawings during design and construction; and
- Enable a smooth transition from the existing paper based system to an electronic system

D4. SCOPE OF WORK

The Works will address the end-to-end requirements of RailCorp's long-term drawing management requirements. The scope of the VPR project is to establish a virtual repository of engineering documents, implement tool sets to enable electronic lodgement of engineering documents and to manage the document lifecycle of the engineering document.

Phase 1 of the VPR Project is concerned with the following:

- Defining strategic business and information requirements for drawing management across RailCorp including processes, organisation, location and data for drawing management services
- Describing a future-state solution architecture and services for RailCorp drawing management, including underlying applications and technology infrastructure
- Developing a recommended implementation plan for the Virtual Plan Room, identifying key initiatives to deliver the Virtual Plan Room services as well as early opportunities for benefits realisation
- Achieving buy-in and commitment of RailCorp stakeholders to the above.

- Establishment of business requirements, solution architecture and an implementation plan for the Virtual Plan Room to guide subsequent phases of the VPR Project.

The deliverables within this scope of services will need to deliver the following:

a) Business Changes:

- The definition of new processes and standards for engineering drawing management in line with industry best practice, including the review and approval/authorisation of drawings during design and construction. Note: This must allow the application of Engineering Authority sign off and delegation.
- Planning for the development of staff competencies to follow proposed new processes and standards
- Definition of support services required for both suppliers and users of drawings
- Determining the agreements that need to be established with 3rd parties concerning information exchange
- Definition of governance mechanisms to oversee business operations and 3rd party relationships.

b) ICT Implications:

- A complete solution architecture will be defined to guide the subsequent detailed design in phases 2 and 3.
- In regard to content management, it is imperative that the solution is implemented based on RailCorp's chosen ECM solution, Documentum from EMC. This may require the extension of core Documentum capabilities through acquisition of a partner product.
- Business process management requirements may require integration with enterprise BPM tools (product to be selected).
- Search capabilities are to be provided by the FAST ESP enterprise search product.
- Integration may be required with existing asset management systems such as RailCorp's Enterprise Resource Planning System (Ellipse) and Geospatial Information System (Small World), Signal Job and Document Control (SJDC).
- Establishment of secure web access channels for internal and external use will involve enterprise portal technology (product TBD) and additional security measures.
- Integration with desktop systems such as CAD (MicroStation and AutoCAD) and Microsoft Office may be required.
- Communications infrastructure should be sufficient to support content distribution and access requirements.
- Data migration requirements from existing systems will need to be specified.
- The implementation roadmap of VPR must define the logical implementation steps to arrive at a full business solution over time, while meeting business priorities and capturing early benefits.

D5. DELIVERABLES

The following diagram and table sets out the deliverables required for the VPR Solution Strategy Development. The diagram illustrates the proposed deliverables and likely relationship to each other as well as key project reference documents.

The order of the deliverables in Table 1 are not fixed and the respondent may have their own project approach and is required to indicate the schedule for analysis and provision of deliverables, as set out in Part B. A project approach and relevant stages will be defined in detail as part of the project initiation and the development of a Project Management Plan in consultation with RailCorp.

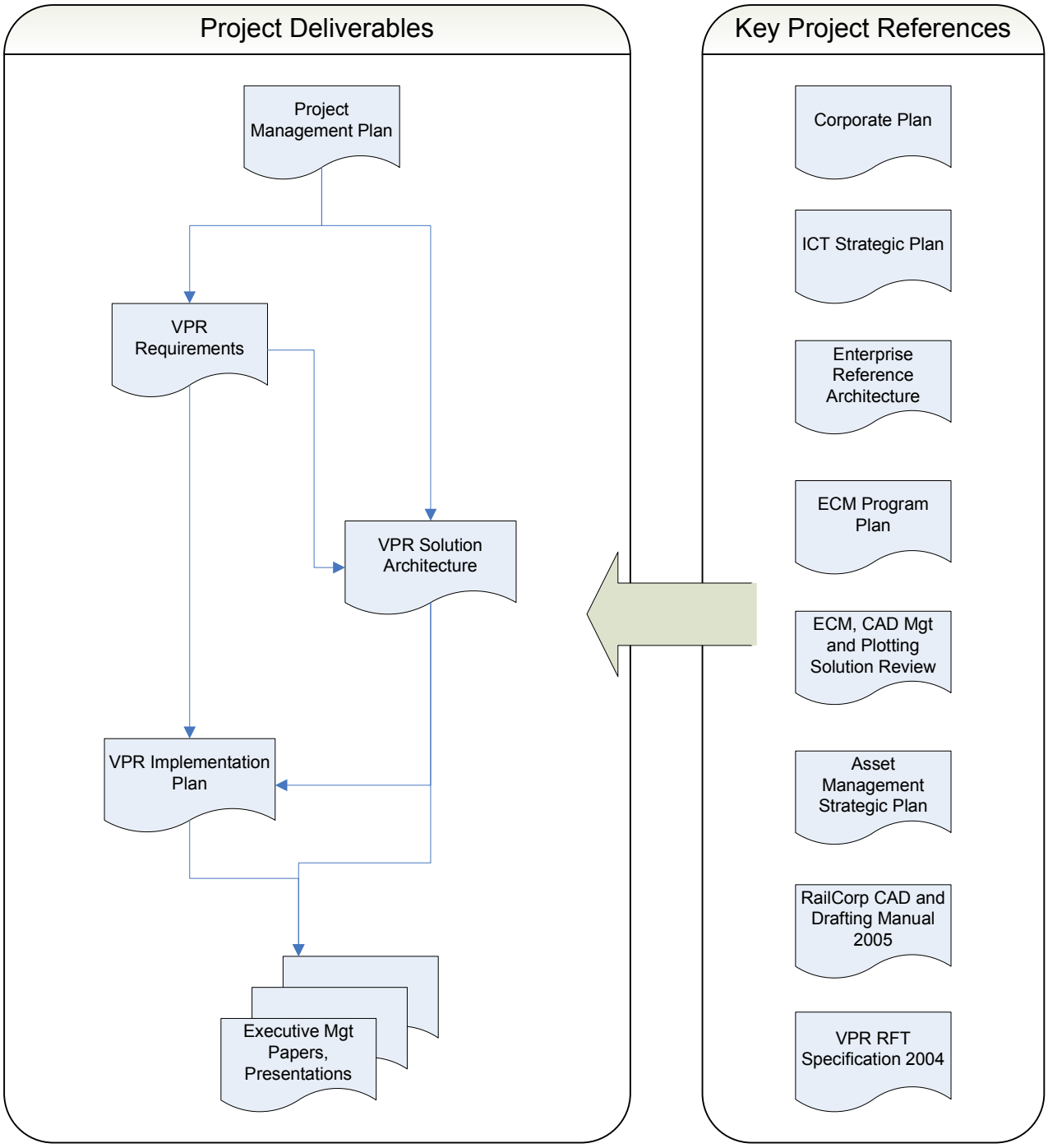

Figure 1. Project Deliverables Map

Ref	Deliverable & scope
A	**Project Management Plan** A Project Management Plan shall be prepared and submitted for approval at the commencement of the project. The plan shall include consideration of the following elements: 1. Project control, governance and reporting mechanisms 2. Stakeholder management and Industrial Relations plan 3. Change management plan 4. Project phase and activity descriptions, including timing, dependencies and resources

Ref	Deliverable & scope
B	**Virtual Plan Room Requirements** This deliverable will describe the business needs and requirements for RailCorp's drawing management and the Virtual Plan Room. As a minimum, it will include: 1. Definition and Scope for Change, including: • As-Is Process • Areas of Change (Process, Information, Location) • Benefit and Impact 2. Business Need, including: • Priorities • Business Strategies • Capabilities and Constraints 3. Business Requirements, including: • Standards • Workflows • Business Rules 4. Architecture Requirements, including: • Information Assets • Integration Requirements • Security Requirements 5. Solution Requirements, including: • Functionality • Scalability and Sizing • Usability • Performance • Reliability All requirements specified will demonstrate strategic alignment and traceability by mapping to corporate and relevant business unit Key Result Areas (KRA's) The tenderer should seek requirements from a number of stakeholder types, including: • RailCorp Engineers and other personnel responsible for Engineering Authority, Engineering Design, Delivery management, and for drafting or using drawings • Plan Room Management personnel • External organisations (e.g. TIG, TIDC) that are either sources or end users of RailCorp drawings • Project management personnel • Strategic Asset Management personnel and field maintenance personnel • Field commissioning people, in particular, Regional Signalling Engineers • ICT The requirements will provide a gap analysis, identifying key areas such as business processes and practices to be addressed under a change management program.

Ref	Deliverable & scope
C	**Virtual Plan Room Solution Architecture** This deliverable will describe the services, systems and technologies for RailCorp in order to deploy best practice drawing management capabilities. The deliverable shall include the following elements that support clarification of future drawing management services: 1. Conceptual architectures: Business, Application, Information and Technology models for proposed drawing management services. The conceptual business architecture is a high-level business vision and capabilities. High-level process maps or similar diagrams may support the definition of this conceptual business architecture. 2. Descriptions of recommended technologies, including rationale for their adoption and associated functional and non-functional requirements. 3. Estimated business benefits and performance outcomes, such as improvements in: • Information and security aspects (e.g. data integrity and access); • Skills availability and training requirements; • Administration and support; • Regulatory compliance; and • Customer service outcomes. Although they are estimates only, benefits should be quantified wherever possible. 4. The future applications topology to support drawing management services should be clearly stated, including existing applications for retention or integration. A technology gap analysis will identify any technology solutions requiring evaluation, selection, acquisition and implementation in Phase 2 of the project.

Ref	Deliverable & scope
D	**Virtual Plan Room Implementation Plan** An implementation plan that defines the series of business and technology change initiatives required to deliver the Virtual Plan Room services confirmed from Deliverable C. The plan shall include treatment of the following elements for each change initiative: • Scope statement • Project success criteria • Project dependencies • Initial risks and issues identified • High-level business case including estimated costs and benefits • High-level work breakdown structure, including functional responsibilities • Specific change management requirements. Specific consideration should be given to delivering the proposed program in a series of staged releases including the identification of quick wins that will enable benefits to be realised progressively and allow business and technology change risks to be effectively managed over time. This approach is also necessary to allow existing, tactical change programs (identified in ECM Program Plan) to be progressively aligned to deliver against the solution architecture described in Deliverable C.
E	**Executive Management Papers and Presentations** Prepare and deliver supporting papers for the ECM Program and VPR Project Control Group. It is anticipated that a minimum of two formal Project Control Group meetings will be conducted, involving presentations with accompanying documentation.

Table 1. Deliverables required for VPR Solution Strategy Development

D5.1 All deliverables must demonstrate alignment to RailCorp's Corporate Plan, Asset Management Group Business Plan, KPI framework, RailCorp Strategic Asset Management Plans, ICT Strategic Plan and policies and regulatory environment where relevant.

D5.2 All deliverables except the Project Management Plan will require the preparation of management presentations and communications packs that summarise analysis, recommendations and plans in slide format. However, the project deliverables for the VPR Solution Strategy must also be prepared as complete management and technical reports in a Microsoft Word document format.

Key Project References

The following documents will be provided as reference material to undertake the project work:

Ref	Key References
A	**Corporate Plan** The RailCorp Corporate Plan is a five year plan and identifies corporate vision, values, outcomes and key result areas, strategies and projects as well as key performance indicators.
B	**ICT Strategic Plan** The ICT Strategic Plan is a five year plan for the ICT function, identifying high-level business demand factors, an assessment of the current state of RailCorp's ICT, priority areas to be addressed, a recommended future state for ICT and a transition plan to move to the future state.
C	**Enterprise Reference Architecture** The Enterprise Reference Architecture is currently being developed for a number of related enterprise-wide technologies, including: • Enterprise Portal • Business Process Management • Enterprise Content Management • Enterprise Search • Enterprise Integration • Business Intelligence (now complete)
D	**ECM Program Plan** This documentation outlines the more detailed umbrella program plan for Enterprise Content Management implementation, under which this project is to be executed.
E	**ECM, CAD Management and Plotting Solution Review** The findings and recommendations from a recent consultancy engagement to review RailCorp's CAD Management and plotting solution options, including the internal response document from Engineering ("Response to ConsulCAD Review" document Version 0.3, Feb 2007)
F	**Asset Management Business Plan** Drawing Management responsibilities fall within the Engineering Division of the Asset Management Group, and the Asset Management Business Plan outlines the group's vision, relevant business strategies, key result areas and measures.

Ref	Key References
G	**RailCorp CAD and Drafting Manual** The CAD and Drafting Manual describes current procedures, policies and general standards applicable for CAD and drafting, as well as specific standards applicable for different disciplines within Engineering.
H	**Virtual Plan Room Specification 2004** This specification document for a Virtual Plan Room was developed prior to the current enterprise-wide ECM initiative was undertaken, and will be superseded by the deliverables produced in this engagement.

Table 2. Key References for the VPR Solution Strategy Development

D6. KEY STAKEHOLDERS

Whilst the project governance will be determined as part of the initial Project Management Planning activities, the Service Provider shall anticipate the need to work closely with the following stakeholders:

1. Asset Management Group (Project Sponsor, Project Owner) Including but not limited to:

    - Engineering Management, CAD and Plan Room representatives
      (Chief Engineers, CAD users, Plan Room managers, Design Delivery Managers, Design Engineers, Project Managers, Geospatial Information Managers, Signals Field Staff)

    - Strategic Asset Management
      (Asset management strategies, plans, asset quality and performance)

    - Field Maintenance, Field Design

2. ICT Group Including but not limited to:

    - Strategy and Architecture
    - ICT Portfolio Delivery
    - Project Management Office (PMO)
    - ERP Portfolio Delivery
    - ICT Operations Delivery

3. Other Reference Groups Including but not limited to:
    - TIG/TIDC
    - External suppliers
    - GSU
    - Internal Consulting
    - Safety & Environment
    - Records Management

D7. GLOSSARY

Acronym	*Meaning*
AEC	Architecture, Engineering and Construction
CAD	Computer-aided Design systems e.g. MicroStation, AutoCAD
ECM	Enterprise Content Management
EMC	EMC Corporation, supplier of Documentum ECM solutions
ERP	Enterprise Resource Planning system i.e. Mincom Ellipse
GIS	Geospatial Information System i.e. Small World
GSU	Geospatial Services Unit (Asset Management Group)
ICT	Information Communications and Technology Group
KPI	Key Performance Indicators
KRA	Key Result Area
TIDC	Transport Infrastructure Development Corporation
TIG	TIDC Interface Group
VPR	Virtual Plan Room