National Department of Transport

Master Plan for an Intelligent Integrated Transport Information Hub Trading Entity
Background

1. The need for a master plan that outlines the ICT Approach and Framework

2. Intelligent transport system in context

3. The role of information technology (IT) today – a global perspective

4. Chief information officer’s priorities and mandate

5. Where are we now
6. The strategy canvas and methodology

6.1 Review the business strategy

6.2 Identify business objectives

6.3 Create business strategy map

6.4 Identify information and technology gaps

6.5 Map technology strategy

6.6 Create implementation plan
<table>
<thead>
<tr>
<th>Department</th>
<th>IT Hub Trading Entity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vision</strong></td>
<td><strong><code>“Transport is the heartbeat of South Africa’s economical and social development”</code></strong></td>
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<tr>
<td></td>
<td><strong>To provide innovative world class information through transport systems that is proactive, effective and enabling in service delivery</strong></td>
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<tr>
<td><strong>Mission</strong></td>
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<tr>
<td><strong>Lead the development of efficient integrated transport systems by creating a framework of sustainable policies and regulators, and implementable models to support government strategies for economic, social and international development</strong></td>
<td><strong>Allowing for the implementation of integrated transport information systems through the application of a solid information management framework</strong></td>
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Strategy alignment within Transport

• Our ICT Vision is that by 2015, we will provide our citizenry with a better customer experience by integrating our Information and Communications Technologies in the form of an *eTransport* solution.

• Integrated services - At the heart of this principle is the idea that the Department should be focusing on improving whole areas rather than just individual services. This means a greater emphasis on working together across all agency services and organisational boundaries.

• Increasing the ability for staff to perform their duties in different locations (e.g. in the office, at a hot-desk, at home, in the field).
Assessment : A fully operational intelligent transport hub trading entity

The significant benefit of such an intelligent, integrated information hub, when fully operational, is:

• Detecting dangers and timely notify related service providers.

• Analysing and predicting traffic data across multiple networks in real time in order to optimize traffic.

• Providing real-time information on best routes within changing modes of transport.

• Monitoring of carbon emissions, energy consumptions, and various pollutants.

• Integrate transport data to provide up-to-date information.

• Perform data analysis and modelling to continuously improve transport planning.
1. Delivering commercial transport value:

1.1 Understanding the need for enhanced management maintenance and safety systems.

1.2 The need to support infrastructure projects of national interest.
1.3 Roles of the IT Hub Principles:
IT hub systems and infrastructure platform

1. Data Centre
2. Service Level Agreement
3. Integration Suite/Enterprise Systems Bus
4. Knowledge Management and Portal Technologies
5. Business Intelligence
6. Geographic Information Systems
7. Business Continuity
Performance management, monitoring and evaluation

How successful are organizations at Strategy Design & Execution?

Only about 38% of the potential brain power of the organization is turned into value!!

1) Organizations only use 60% of the brain power of its employees to define plans & strategies. Source: Dr. Theo Comprenolle, Corporate Brain Disorder
2) Organizations only realize 63% of the value potential of its strategies. Source: Marson Associates

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Performance management, monitoring and evaluation

How do we get leadership commitment and develop competent leaders

1. Leadership Principles & Commitment
2. Leadership Branding
3. Leadership Development & Pipeline
4. Leadership Performance
5. Leadership Recognition

Developing great leaders for today & tomorrow
Performance management, monitoring and evaluation

How do we get the execution premium?

1. Focus & Prioritization
2. Clear Accountabilities & Resource Allocation
3. Initiative Tracking
4. Result Monitoring & Evaluation

Level of Potential realized

Execution premium

Execution competence

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Project management and change management

- **Principles of Project Management**
- The Programme Owner for flagship IT projects within the transport family will always be the Department of Transport, through its trading entity, the IT Hub or Transport Information Centre.
- The programme manager will be own capability or in-sourced capacity from within transport, never out-sourced.
- The Integrated Project Team must include Users as the functional owners and authority, DOT ICT management as the primary user system integrator and owners of the ICT management process and standards for the DOT, other role players as relevant to the project such as solution or service providers as appropriate.
- Structured and formalised configuration management of the Project as relevant to all its obligations.
- Focus and sustained progress management and reporting according to plan to ensure appropriate communication and status awareness.
- Appropriate external management arrangements and mechanisms to participate with external role players and stakeholders such as other instruments of government and / or solutions / service providers.
Project management and change management

Principles of Change Management

• The management of change within the transport family must be scoped around:
  – The ability to ensure continuous alignment between business and ICT where ICT becomes an enabler for business within transport.
  – The ability to leverage the optimum potential utility of ICT towards continuous improvement of the way in which the transport business operates.
  – The necessity for greater integration and connectivity which increases the demand for using standardised best practice as appropriate to the business environment whilst at the same time increasing the use of open standards and SITA standards as appropriate.
  – The increasing requirement for sustainability and longer-term use of technology to facilitate and optimise process and functionality with a decrease in complexity for users.
  – Managing the cost and risk related to ICT solutions within an acceptable governance framework that recognises demands and obligations for performance and compliance.
Sustainable IT

• What will the IT HUB be doing?

• Look to link in with other central Government initiatives/targets aimed at reducing carbon footprint of IT.

• Consider options across the architecture to reduce Co2 emissions, i.e. at the data centre, through to desk top environment and printing.

• Ensure through our service providers and contracts that we source lower Co2 options for implementation.

• Continued virtualisation of servers at the data centre will improve sustainability by lowering the number of servers but each virtualised server consumes a greater Co2 than traditional server technology.

• Implementation of systems to reduce use and storage of paper information is underway and will drive the Department to a less waste position.

• Procure solutions that meet the principle of improving the Department’s carbon footprint.
Sustainable IT

<table>
<thead>
<tr>
<th>IT department</th>
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<tbody>
<tr>
<td><strong>Strategy</strong></td>
<td><strong>Governance &amp; Organization</strong></td>
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<tr>
<td>Vision, Targets, Desired Outcomes, Driving Forces, Motivation, Strategic Plan, Participation in Trading Schemes, Use of Renewable Energy, Offsets</td>
<td>Accountabilities, Decision Rights, Policies, Procedures, Incentives and Rewards, Budget</td>
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<tr>
<th>Short Term</th>
<th>Medium Term</th>
<th>Long Term</th>
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<tbody>
<tr>
<td>Power management features</td>
<td>Reconfigure data centre equipment</td>
<td>Location of data centre(s)</td>
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<tr>
<td>Print management</td>
<td>Virtualization of servers</td>
<td>Design of facilities</td>
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<tr>
<td>Print use policies</td>
<td>Virtualization of storage</td>
<td>Specification of data centre equipment</td>
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<tr>
<td>Disposal of consumables</td>
<td>Thin client devices</td>
<td>Reduce layers in network</td>
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<tr>
<td>Ownership of energy costs</td>
<td>Selection of servers</td>
<td>Softswitch and softphone (IP)</td>
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<tr>
<td>Employee Awareness</td>
<td>Storage optimisation</td>
<td>Renewable energy sources</td>
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<td>Baseline measures</td>
<td>Consolidation</td>
<td>Capacity-on-demand</td>
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<td>Flex Time/Telecommute</td>
<td>Rationalization</td>
<td>Multi-core processors</td>
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<th>Processes and Policies</th>
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<tr>
<td>Procurement Project Management</td>
<td>Facilities Management Business Continuity</td>
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<tr>
<th>Resources</th>
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<tbody>
<tr>
<td>Printers Office Systems</td>
<td>Data Centre Software</td>
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*Source: KPMG International, 2008*
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<tr>
<td>Due diligence across all entities</td>
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<td>Controlled change management process across all entities</td>
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<td>Strategy approved</td>
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<td>Governance Structure approved</td>
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<td>Business Architecture Defined</td>
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<td>Critical processes identified for automation 70%</td>
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<td>Automation Implementation 5%</td>
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<td>Artefact repository created</td>
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Conclusion

• Thank you