NEW SOUTH WALES AUDITOR-GENERAL'S REPORT
PERFORMANCE AUDIT

Roads and Traffic Authority:
Delivering Services Online

THE AUDIT OFFICE
OF NEW SOUTH WALES

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Members of the Legislative Assembly
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In accordance with section 38E of the *Public Finance and Audit Act 1983*, I present a report titled **Roads and Traffic Authority: Delivering Services Online.**

R J Sendt
Auditor-General

Sydney
June 2003

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Foreword

Public sector agencies are required to use the Internet and related technologies to deliver appropriate services electronically. This is a key plank of the e-government reform strategy in New South Wales.

Effective use of these technologies promises improved and more efficient and accessible services to customers.

This report on *Delivering Services Online* is the latest in our series of performance audits on e-government. It explores the business-to-customer aspect of e-government applications in the Roads and Traffic Authority.

We selected the RTA as a case study to highlight important aspects of online service delivery in a large agency with high transaction numbers and a track record of achievements in e-government.

Our audit looked at the RTA's key approaches and achievements in providing secure and reliable online services and promoting public confidence in these services.

The RTA's approaches and achievements offer valuable insights that may be of benefit and interest to other government agencies.

R J Sendt
Auditor-General

June 2003

Executive Summary

Executive Summary

E-business is the use of web-based and related communication technologies to deliver services to customers. Effective use of these technologies promises improved and more efficient and accessible services. E-business also presents significant challenges, particularly legal obligations relating to security, privacy and integrity of information.

NSW Government agencies were expected to provide appropriate services electronically via the Internet by 31 December 2001. This formed part of the e-government vision for the NSW Government.

The Audit Office has selected e-government as a theme for a series of performance audits. This audit is the latest in the series. It explores the business-to-customer aspect of e-government applications.

Our other performance audit reports related to e-government are available on our website, at www.audit.nsw.gov.au.

We selected the Roads and Traffic Authority (RTA) as a case study to highlight important aspects of online service delivery. We consider that the RTA's e-business approach and achievements may be of benefit and interest to other government agencies. The RTA:

- website was ranked as the second most widely visited State government site by Australians in March 2001

- was one of the first NSW Government agencies to introduce online services

- has won a government Gold award in the 'Best Practice in e-Government' category for its online registration renewal service

- plays an important role in key sector-wide e-government initiatives.

This audit provides a strategic assessment of how well the RTA is managing the benefits and risks associated with a major element of its e-business. In particular, the audit assessed the RTA's:

- overall management and achievements of its e-business program

- protection of information assets, and the security and reliability of its online services to promote public confidence

- management of stakeholder and staff issues.

The RTA's online services involve a number of components. We focused on the biggest one, registration services, which includes vehicle registrations, personalised vehicle number plate sales and the provision of information.

Currently, customers can conduct a number of registration related transactions and seek a variety of information online.

The RTA has also developed a number of systems to enable business partners to send information electronically in order to facilitate the online registration process.

The online service delivery channel is one of several channels available to customers.

Audit Opinion

A staged, systematic and careful approach and extensive business re-engineering effort underpinned the RTA's steady progress in providing customers with a range of reliable and secure online registration services. The RTA's consistent and disciplined pursuit of new and challenging e-business opportunities is commendable.

The RTA has strengthened many controls considered critical for a secure online business to maintain customer confidence in using these services. A small number of important gaps, however, remain. For example, an enterprise-wide information security policy framework does not underpin the operation of the security controls. This needs to be addressed as a priority.

The RTA needs to enhance its capacity to monitor the overall costs, benefits and outcomes of the e-business program against set key performance indicators. It also needs to promote online services more proactively to encourage greater take-up and not delay benefits.

The RTA has directed significant efforts at effectively managing customer expectations, key stakeholders and critical business risks to implement its e-business initiatives and achieve operational efficiencies. More effective consultation with key government stakeholders, specifically NSW Police, is needed to resolve outstanding issues relating to data quality and system availability as a priority. In particular, in the interest of efficient and effective 'joined-up government', the impact of online services needs to be assessed jointly with key government stakeholders to ensure their capacity to deliver core services is not undermined or diminished and cost shifting does not occur.

Findings

The RTA is in its third year of implementing a five-year online migration strategy. A number of online services are offered and many others are either in development or investigation stages.

All online services have shown a steady growth, but their take-up rates have varied. Take-up rates for some services have exceeded expectations, while others have fallen short of meeting original, and even revised, estimates.

The RTA approaches the promotion of its new online services softly. While there is some sense in this, especially in the early stages of implementing services, soft promotion will likely delay the achievement of benefits from some online services.

The RTA's well-defined strategic framework and governance arrangements provide a sound foundation from which to drive performance and ensure accountability for the delivery of online services.

We consider that the RTA has a sound and systematic approach to ensuring value for money can be achieved. However, existing assessment tools lack rigour and may not provide reliable performance information for decision-making.

The RTA has researched customer needs, monitors customer experiences and acts on feedback to improve online service delivery. Some of the monitoring tools and approaches used, however, may not be suited for an online environment and may not provide for effective analysis of issues and trends.

The RTA has an adequate security posture in its online business environment. Some policy gaps were identified. The RTA would have a level of security regarded as 'appropriate practice' (in relation to security standards) if current gaps were addressed.

The RTA uses several security management practices that are considered good practice, especially its security governance arrangements, enterprise-wide risk awareness and use of internal and external expertise.

The RTA's privacy management framework is in line with legal requirements. Data sharing practices and privacy complaints management are generally consistent with privacy requirements. However, the RTA has reported to the NSW Privacy Commission complaints reviewed, not all complaints received. Further, agreements with a small number of agencies that currently access RTA information have not been finalised.

The RTA has significantly re-engineered systems and processes to deliver secure and reliable business-to-business and business-to-customer online services. Improved data quality and system availability are needed to share information better with key government stakeholders, but the RTA alone cannot resolve this.

The RTA's change management framework and current flexible staffing/work arrangements strengthen its position to manage short to medium term impacts of online services on staff, but this position may not be sustained in the long term.

The RTA's sustained efforts and ongoing dialogue with key business partners have achieved significant success and helped progress its e-business agenda. Overall, the RTA appears to have managed well key stakeholder relationships and has effective mechanisms for ongoing communication and consultation with key strategic business partners.

Recommendations

To enable the RTA to improve its already strong position and be used by other agencies as an example of good practice, the following recommendations have been drafted.

1. Ensure improved performance monitoring and assessment of value for money. To this end, we suggest that the RTA develop for the online strategy:

   - an implementation plan, with priorities, targets and timeframes
   - a consolidated budget with adequate systems to track expenditure
   - a post-implementation review methodology to apply consistently across projects
   - key performance indicators covering efficiency and effectiveness issues
   - stronger approaches to cost-benefit analysis.

2. Adopt a more proactive promotion strategy for online services to create greater customer awareness, encourage greater take-up and achieve desired benefits while managing scale and demand.

3. Develop a consolidated framework for managing customer expectations. To this end, we suggest that the RTA develop:

   - an integrated approach and performance measures for managing complaints and suggestions from online customers
   - a more advanced survey tool to monitor regularly and consistently the experience and satisfaction of online customers and enable comparisons over time.

4. Strengthen further the management of information security by addressing the policy gaps identified in the security audit and other related issues. To this end, we suggest that the RTA:

   - incorporate all information security policies into an enterprise-wide framework to ensure a consistent approach to security across the RTA and to aid communication of policy provisions. This framework should also contain updated and referenced standards, guidelines and procedural documents linked to the policies
   - ensure that policy provisions mandate the regular review of security policy and technical compliance
   - develop a policy to ensure that contractual arrangements involving third party access to RTA information processing facilities and data formally address the establishment of appropriate security controls and their ongoing effectiveness
   - require all appropriate staff to sign confidentiality clauses as part of their employment contracts

- assign intellectual property rights to the RTA in third party contracts (external contractors) relating to security matters
- use different companies and products to conduct periodic, independent and non-vendor specific penetration testing of the website in order to ensure greater coverage of vulnerabilities/risks and capture the benefits from different vendor approaches
- undertake regular risk assessments of online systems to ensure new threats do not impose unacceptable levels of risk to the RTA
- consider providing dedicated resources and support staff to the information technology security manager and establish formal linkages to key organisational functions to strengthen this position.

5. Enhance compliance with all privacy requirements. To this end, we suggest that the RTA:
    - report all complaints received to the NSW Privacy Commission irrespective of whether they are later withdrawn, rejected or referred to another agency.
    - finalise the agreement with NSW Police to formalise access to information

6. Expedite initiatives aimed at improving data quality and systems availability to enhance data sharing with key business partners and government stakeholders. To this end, we suggest that the RTA:
    - formalise data management responsibilities and protocols between NSW Police and the RTA through a memorandum of understanding which could clarify data transfer and reconciliation arrangements between the two agencies
    - address system failures and outages, especially for NSW Police
    - strengthen its monitoring of system performance.

7. Further develop the strategy to enable ongoing assessment and monitoring of the overall impact of e-business on staff. This will ensure greater clarity, assist consultation with staff and their representatives, and enable redirection of resources to more effective use.

8. Consider improved consultation with and involvement of key stakeholders from the concept development stage of any e-business initiative.

Response from the Roads and Traffic Authority

I refer to your letter dated 14 May 2003 with respect to Performance Audit Roads and Traffic Authority (RTA) – Delivering Services Online.

Thank you for presenting the draft report on 9 May 2003. It was pleasing to note that the RTA has generally performed well with respect to the development of online services.

The final report is accepted as submitted without any need for further amendment. The RTA aims to address the recommendations of the report to further develop online services and achieve industry best practice.

I look forward to continuing to work with the Audit Office to ensure effective services for the people of NSW.

(signed)
Paul Forward
Chief Executive

Dated: 30 May 2003.

1. Introduction

1.1 E-business

E-business is the use of web-based and related communication technologies to deliver services to customers. Effective use of these technologies offers the potential to improve:

- customer access to information and services
- service quality
- productivity
- efficiency.

1.2 E-government theme

The Audit Office has selected e-government as a theme for a series of performance audits. This audit of the Roads and Traffic Authority (RTA) is the latest in the series. It explores the business-to-customer aspect of e-government applications.

Our other performance audit reports related to e-government are available on our website, at www.audit.nsw.gov.au.

1.3 Why the RTA?

We selected the RTA to highlight important aspects of online service delivery in a large organisation with high transaction numbers and a track record of success in e-business. The RTA's approach and achievements offer valuable insights that may be of benefit and interest to other government agencies.

RTA was one of the first NSW Government agencies to introduce online services. It has had considerable success since its e-business journey started in 1998.

RTA has won a government Gold award in the 'Best Practice in e-Government' category for its online registration renewal services and a Bronze award in the 'Service Delivery' category for driving customer focus.

The RTA also plays an important role in key sector-wide e-government initiatives. For example, it:

- was involved in the development of the Government's *connect.nsw* implementation framework
- is represented on the NSW e-government steering committee
- assists with the Government business licensing project
- plays a leading role in the Government Access Program.

1.4   Government policy

In 1997, the New South Wales Government released its *Information Management and Technology Blueprint - A Well-Connected Future,* and *connect.nsw - An Internet Strategy for NSW.* These documents outlined the Government's vision and strategic direction for New South Wales in the information age. They also highlighted the importance of delivering customer focused services and the need to include the Internet in service delivery strategies.

NSW Government agencies were expected to provide appropriate services electronically via the Internet by 31 December 2001. Government agencies were also required to report on the progress of their electronic service delivery programs implementation to the Office of Information Technology. Currently, monitoring is focused on results achieved from implementing electronic service delivery.

1.5   The audit objective

In this audit, issues of efficiency, effectiveness and economy were approached using a strategic assessment of how well the RTA manages the benefits and risks associated with delivering services online. In particular, the audit assessed RTA's:

- overall management and achievements of its e-business program
- protection of information assets, and the security and reliability of online services to promote public confidence
- management of stakeholder and staff issues.

We focused on registration services which include personalised vehicle number plate sales and provision of information.

Detailed audit criteria and methodology are outlined in Appendix 1.

1.6   Cost of the audit

The cost of the audit was $279,876, including consultancy fees and printing costs.

1.7   Audit team

The audit team comprised Bettina Ocias, Henriette Zeitoun and Stephen Horne.

We contracted 90East Asia Pacific Pty Ltd to make an expert assessment of the RTA's information security management arrangements related to online services.

1.8   Acknowledgements

The Audit Office gratefully acknowledges the cooperation and assistance provided by the Roads and Traffic Authority.

We also thank those representatives from government and private sector organisations who assisted with this audit for their time and insights.

2. Vehicle Registration Services

The RTA's responsibilities are to:

- maintain and develop road infrastructure and manage traffic flow
- test and license vehicle drivers
- register and inspect vehicles
- provide information.

The RTA services over four million customers across the State and undertakes almost 19 million transactions per annum. Customers range from school leavers to the aged and incorporate a diverse range of country and city people, ethnic background and special needs groups.

While the RTA's e-business strategy targets all areas of responsibility, this audit focused on online registration services.

Vehicle registration services include:

- registration and updating registration details
- number plate transactions.

2.1 Vehicle registration requirements

The Road Transport (Vehicle Registration) Act 1997 requires vehicle owners to register their vehicles on an annual basis.

NSW Police is responsible for enforcing compliance of all vehicle registrations in NSW.

2.2 Registering a vehicle and updating registration details

These services involve:

- issuing and renewing vehicle registrations
- transferring registration ownership following the sale of vehicles.

2.2.1 Registration process

To register a vehicle, an owner is required to:

- obtain a 'pink slip', for cars older than three years, or a 'blue slip'[1] from an Authorised Inspection Station (AIS) certifying vehicle road-worthiness
- obtain a 'green slip' from an insurer certifying 'compulsory third party' (CTP) insurance coverage.

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[1] Once a registration is cancelled, it cannot be renewed but must be re-established. This requires a blue slip inspection report from an Authorised Unregistered Vehicle Inspection Station (AUVIS) certifying vehicle road-worthiness and identification.

Vehicles may be registered:

- in one of 130 motor registries
- in one of 39 agencies, including by post
- in one of four Government Access Centres
- over the phone
- via the Internet.

Customers can register their vehicles after they have obtained the necessary certification of vehicle insurance and road-worthiness.

Registering a vehicle can cost owners from $500 to over $700, depending on the weight and intended use of the vehicle. This cost is inclusive of fees and charges for registration, CTP insurance, safety inspection and weight tax.
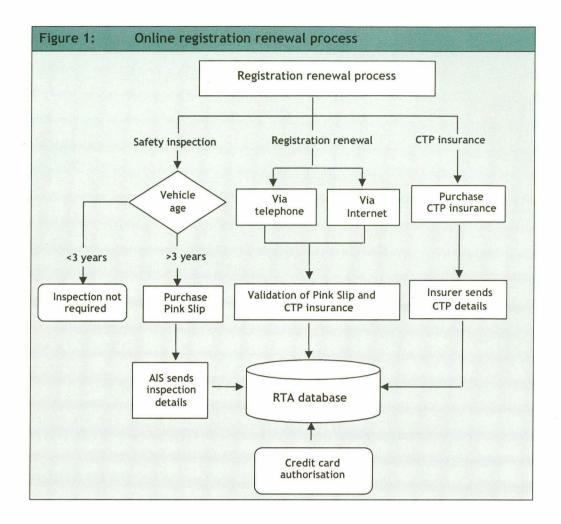
Exemptions and concessions from registration charges apply to over 700,000 vehicle owners in NSW.

The RTA maintains and updates all vehicle registration records on its Driver and Vehicle System (DRIVES) database.
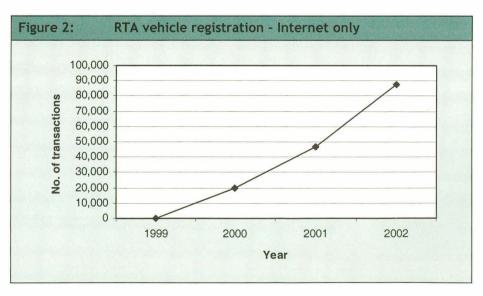
The RTA has developed a number of online systems enabling business partners to send information electronically in order to facilitate the online registration process. These include:

- dealer online, which enables motor dealers to register vehicles via the Internet
- e-greenslip, which enables CTP insurers to send green slip information electronically to the RTA
- e-Safety check, which enables AISs to send vehicle inspection information electronically to the RTA
- Internet access to DRIVES 24, which allows 24-hour remote mobile access to the DRIVES enquiry system.

Figure 1 illustrates the online registration renewal process for light vehicles.

Figure 1:   Online registration renewal process

Registration renewal process

Safety inspection   Registration renewal   CTP insurance

Vehicle age

Via telephone   Via Internet

Purchase CTP insurance

<3 years   >3 years

Inspection not required

Purchase Pink Slip

Validation of Pink Slip and CTP insurance

Insurer sends CTP details

AIS sends inspection details

RTA database

Credit card authorisation

The take-up rate of online registration services (Internet only) for all vehicles has increased from 28 transactions in 1999 for cars less than three years old to 87,798 transactions in 2002, when online registration for cars older than three years also became available. Figure 2 shows this trend.

Figure 2:   RTA vehicle registration – Internet only

Line graph titled "RTA vehicle registration – Internet only" showing No. of transactions (y-axis, 0 to 100,000) by Year (x-axis, 1999 to 2002). Values rise from near 0 in 1999 to approximately 20,000 in 2000, 46,000 in 2001, and 87,000 in 2002.
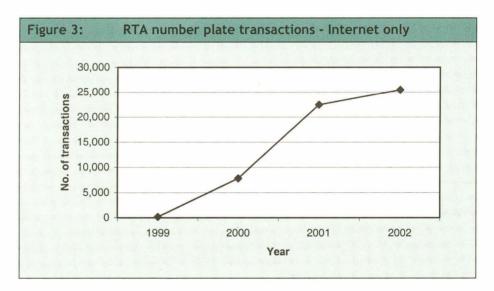
2.3 Number plate transactions

This service includes:

- ordering special or personalised number plates
- replacing, exchanging or returning existing plates
- collecting plates at motor registry
- maintaining plates
- recording lost or stolen plates.

The RTA offers extensive online services in this area. Customers can design, search and purchase personalised number plates. The take-up rate of online personalised number plate sales (Internet only) has increased from 165 transactions in 1999 to 25,458 transactions in 2002. The RTA sold around 27,000 plates (via the Internet) in 2001-02, which generated revenue of $4,058,223.

Figure 3 shows the trend in the take-up of online sale of number plates.

Figure 3:	RTA number plate transactions - Internet only

3. Governance and Performance

Part A - Strategic framework for online services

The RTA's well-defined strategic framework and governance arrangements for online services provide a sound foundation from which to drive performance effectively and ensure accountability for the implementation of its e-business.

The RTA approaches the promotion of its new online services softly. While there is some sense in this, especially in the early stages of implementing services, soft promotion of online services will likely delay the achievement of benefits from some online services.

3.1 Strategic framework for online services

3.1.1 The strategy

In 2000, the RTA engaged PricewaterhouseCoopers (PwC) to develop a five-year online migration strategy. This strategy serves as the framework for development and expansion of online services. The PwC forecast was that up to 40% of all transactions could be made available online and that there could be a 10% take-up rate in this timeframe (ie 4% of transactions could be undertaken using the Internet or telephone interactive voice response system). This includes all registration transactions.

The RTA is now in its third year of implementing this strategy. A number of online services are currently offered and many others are in development or investigation stages.

Currently, customers can conduct a number of registration related transactions and seek a variety of information online (see Appendix 2). Customers can, for example:

- renew their vehicle registrations
- order personalised vehicle number plates.

3.1.2 Growth of online services

All of RTA's online services have shown a steady growth, but their take-up rates have varied. The take-up rates for some services have exceeded expectations while others have fallen short of meeting original, and even revised, estimates.

For example, the RTA:

- set an initial target rate for online registration renewal of 10% by 2002. This estimate was revised to 5%, but the actual rate was less than 2%
- estimated that 10% of Authorised Inspection Stations (AISs) would adopt the e-Safety check by the end of 2002. The actual rate was 3% (173 out of 5,779)

- exceeded expectations in the online sale of number plates, which reached 45,101 (34% of transactions) in 2001-02 against a target of 13,358 (10%).

The downward revision of some targets can be explained in part by the need to take into account new information and/or change priorities.

A more important factor was perhaps the soft release/passive promotional strategy that the RTA deliberately adopted for introducing its online services. While this approach was appropriate for the early stages to manage demand for online services and system capacity, continued use of this strategy may have delayed the achievement of optimum levels of take-up.

Examples of soft promotion of online services

To promote the e-Safety check the RTA:

- commissioned a firm to assist in developing an integrated communication and change management strategy
- designed special signage for AISs participating in the e-Safety check program
- distributed more than 50,000 brochures to AISs regarding e-Safety and 750,000 brochures to customers with registration renewal advice promoting Online Registration and e-Safety checks
- prepared a press release about the availability of the e-Safety check service
- published articles about e-Safety checks in automotive industry magazines.

The RTA was aware of the need to step up its awareness campaign and is now taking steps to actively promote its online services.

3.1.3 Selecting services for online delivery

The strategy for online services outlined services to be targeted for online delivery and grouped them by level of complexity and significance. The strategy did not propose specific priorities within each grouping.

The overall rationale was, however, to target first relatively simple, high volume transactions that can be easily performed in a web environment and do not require proof of identity or legislative changes. More complex services were to be tackled last.

However, the RTA did not translate this migration strategy into a comprehensive implementation plan to enable measurement and monitoring of results against set budget, targets, timeframes and key performance indicators. Instead, the RTA:

- selected specific aspects/initiatives without setting targets for each initiative within the overall priority
- provided a rationale for selecting some initiatives but not others (although services selected were those identified in early consultation with community groups as part of the development of the Government's *connect.nsw* implementation strategy).

3.2 Governance arrangements

3.2.1 Strategic oversight

The RTA's e-Business Steering Committee oversees the e-business program. It sets the strategic directions and priorities, approves expenditure and monitors progress.

Other committees are also involved in RTA's e-business decisions in different capacities. These include:

- IM&T Steering Committee
- Audit Committee
- Business Investment Review Committee
- Motor Registry Steering Committee.

3.2.2 Allocation of responsibilities and accountability

The Road Safety and Road User Management (RSRUM) Directorate is responsible for the overall delivery and management of RTA's e-business program. This includes planning, coordination, funding and monitoring. RSRUM reports to the e-Business Committee on a quarterly basis. It also meets regularly with the IM&T and the Motor Registry Steering Committees.

The provision of RTA's internal services is based on a funder-provider model. In this model, RSRUM, as the funder, has service level agreements (SLAs) with various internal provider units to ensure the delivery of agreed services. The model is aimed at providing:

- more efficient use of resources
- value for money for the provision of services
- a service that is competitive with both internal and industry standards.

SLAs formalise the arrangements between RSRUM and various provider units. They:

- outline services to be performed and amounts to be charged for these services
- facilitate monitoring of agreed outputs
- provide a basis for performance measurement and benchmarking
- identify opportunities to improve service delivery.

Examples of performance targets related to e-business
The SLA between RSRUM and IM&IT defines targets for the following performance areas: - system availability   - DRIVES recovery time   - DRIVES transaction response time   - level of server faults for desktop service   - IT Support Centre telephone response time   - telephone and data service restoration times.

3.2.3 Project management

The RTA has well-defined project management procedures for key e-business projects. Personnel with different expertise (eg information technology, privacy, internal audit, human resources, operations, etc.) are involved in various stages of a project.

Progress is monitored and reported to the e-Business Steering Committee on a regular basis.

Part B - Driving performance and achieving value for money

The RTA has a sound and systematic approach to ensure value for money can be achieved. However, existing tools lack rigour and may not provide reliable performance information for decision-making.

3.3 Determining costs and benefits

The RTA routinely undertakes cost-benefit analyses for key projects as a prerequisite for project approval. Review of some of these analyses, however, showed:

- a general lack of robustness, with insufficient and sometimes inconsistent details provided to justify decisions and/or assumptions
- cost estimates did not account for factors such as overheads and depreciation
- poor tracking of project documentation
- limited monitoring of total costs and benefits once a project progresses.

> ### Example of a cost-benefit analysis
>
> The cost-benefit analysis included in a Discussion Paper for Online Registration Renewal assumed that 25% of registration transactions could be done online (via Internet/telephone). The cost of transactions conducted online is assumed to be $1 (based on industry electronic service delivery cost), compared to $4.37 for a motor registry transaction. The analysis does not contain any detailed calculations. In addition, initial systems set-up costs are not accounted for.
>
> The Feasibility Study Report for the Online Registration Renewal indicates that online registration will cost $1 per transaction (based on industry standards), compared to $3.62 for a motor registry transaction. The initial cost for setting up the system is estimated to be $330,000 for hardware, software, and 177 weeks of staff resources. Again, there are no detailed calculations of staff costs or transactions at motor registries.

3.4   Reviewing results

The RTA has undertaken post-implementation reviews for some e-business projects. This, however, has not been consistent for all projects. We observed that:

- some planned post-implementation reviews have not been undertaken
- an agreed post-implementation review/evaluation methodology for use across all projects has not been developed.

Inconsistent post-implementation reviews make follow-up and analysis of whether value for money has been achieved at a project level and across the e-business program difficult to determine.

The RTA advised that a post-implementation review process has recently been established as part of project management training.

> ### Planned post-implementation reviews
>
> The RTA intended to conduct post-implementation reviews of:
> - the Online Registration Renewal process in February 2002
> - the e-Safety check in March 2002.
>
> These reviews did not take place.
>
> The 2002-03 RSRUM Business Plan indicates that the Road Users Strategic Project Unit was to develop mechanisms for post-implementation review of strategic projects. This had not occurred by the time of the audit.
>
> The RTA, however, reported to the Office of Information Technology (OIT) a post-implementation review for the e-Safety check project which was partly funded by OIT.

3.5 Tracking e-business expenditure

The RTA is progressively achieving integration of its e-business with core programs. Expenditures on e-business are managed, as part of these programs, on a project-by-project basis. There is no consolidated e-business budget.

Tracking costs and benefits under current arrangements is difficult, as a significant amount of interpretation and manipulation is required.

In addition, lack of systems to ensure this information is readily available makes value for money calculations unreliable and may impact on the quality of decision-making.

3.6 Monitoring performance

The RTA monitors and reports regularly to the e-Business Steering Committee on the take-up of online services on a project-by-project basis.

The RTA should now establish key performance indicators for its e-business program. It should also explicitly report or monitor the impact of its online services on other service delivery channels.

The RTA advised that the impact of its online services on other service delivery channels has so far been too insignificant to warrant any explicit reporting.

3.7 Benchmarking performance

The RTA routinely benchmarks the performance of motor registries across the State by sector and undertakes research into other better practices. The RTA has also benchmarked the performance of its Newcastle Call Centre and help desk against industry practices.

The RTA has not, however, conducted specific benchmarking of its online services, nor has it developed a systematic benchmarking tool.

Part C - Managing customer expectations

The RTA has researched customer needs, monitors customer experience, and acts on feedback to improve online service delivery. Some of the monitoring tools and approaches used, however, may not be suited for an online environment and may not provide for the effective analysis of issues and trends.

The current approach for managing complaints/suggestions from online customers requires consolidation and establishment of performance measures.

3.8   Determining customer needs and satisfaction

The RTA has undertaken a number of different surveys to identify customer needs and used a variety of other publicly available market research studies.

Examples of customer research
• Consultation with community groups as part of the Government's *connect.nsw* strategy identified key services that customers wanted to access online.
• The PwC strategy identified additional services for online delivery and grouped them by significance and complexity.
• In 2000, the RTA conducted a survey to determine customers' preferred method for accessing registration services. The survey also identified customers' experience with the website and preferred time for conducting online transactions.
• In 2001, the RTA conducted a survey of online customers. It sought information on preferred times to use online services, their Internet experiences, a rating of service, and user-friendliness of the website.
• In 2002, the RTA conducted its annual survey of motor registry customers. The survey asked whether customers would use the Internet for registration transactions.

The RTA expected to repeat its 2001 customer survey in 2003 to enable comparison over time.   This survey had not yet been undertaken.

The current approach to surveying Internet users would be better if it enabled comparison of results over time.

The RTA undertakes extensive and regular customer surveys to monitor customer satisfaction with its motor registry and call centre services. These surveys show steady improvement on a number of measures, including waiting time, transaction number and service quality.

These monitoring mechanisms were designed specifically for motor registries and may not be appropriate for measuring the satisfaction of online customers, especially Internet users.

There is some evidence, however, that the RTA monitors the satisfaction of online customers in a limited way and on an irregular basis.

Monitoring satisfaction of online customers
The RTA provides an option for customers who conduct registration transactions on the Internet to provide feedback upon completion of the transaction. Quarterly feedback results show a high level of customer satisfaction. For example: • in the second quarter of 2002, 98% of customers rated services as good or very good • in the third quarter of 2002, 95% of customers rated services as good or very good.

This information is, however, not consolidated in a clear framework with established performance measures. Such a framework would enable better analysis, tracking and reporting of customer complaints and suggestions.

3.9 Managing customer feedback

Online customers can give feedback, make suggestions and/or lodge complaints via multiple channels, including the Internet, through the Webmaster, at motor registries, on the telephone or by mail.

We could not determine whether or not the RTA had revised its policies and procedures for handling customer complaints/suggestions from online customers.

Further, we could not determine how the RTA analyses complaints/suggestions received through different service channels to gain an overall understanding of the nature and types of customer issues.

The RTA advised that it is developing tools to better track complaints/suggestions received from its online customers.

3.10 Fees/pricing strategy

The 'user pays' principle is fundamental to all of RTA's transaction costing activities. This principle aims to ensure that the:

• cost recovery for goods and services is set on an equitable basis for each customer

• occurrence of cross-subsidies between services is minimised.

The RTA online migration strategy aimed to expand customers' available choices, rather than to use pricing or other incentives to force migration. This deliberate strategy was adopted as it:

• was unlikely that relevant customer groups would oppose it

• maintains pricing equity among all users and across the range of services offered, irrespective of which service delivery channel is used.

In the long term, however, online services may have a different cost structure and be more economical than services offered through other channels. If pricing does not reflect this difference, then potentially cross-subsidisation across different channels will occur.

Recommendations

1. Ensure improved performance monitoring and assessment of value for money. To this end, we suggest that the RTA develop for its online strategy:
   - an implementation plan, with priorities, targets and timeframes
   - a consolidated budget with adequate systems to track expenditure
   - a post-implementation review methodology to apply consistently across projects
   - key performance indicators covering efficiency and effectiveness issues
   - stronger approaches to cost-benefit analysis.

2. Adopt a more proactive promotion strategy for online services to create greater customer awareness, encourage greater take-up and achieve desired benefits while managing scale and demand.

3. Develop a consolidated framework for managing customer expectations. To this end, we suggest that the RTA develop:
   - an integrated approach and performance measures for managing complaints/suggestions from online customers
   - a more advanced survey tool to monitor regularly and consistently the experience and satisfaction of online customers and enable comparisons over time.

4.   Managing Information Security

The information technology security consulting firm commissioned by the Audit Office assessed the RTA as having an adequate security posture in its online business environment. Some policy gaps were identified. The RTA would have a level of security regarded as 'appropriate practice' if current gaps were addressed.

The RTA has several practices relating to security management considered good practice.

4.1 Meeting security standards

Providing a secure and trustworthy environment for e-business is essential to gaining customer confidence, complying with legal and government requirements, and achieving maximum benefits from e-business.

The RTA is the custodian of a great deal of personally and/or commercially sensitive information. The confidentiality, integrity and availability of that information are crucial. The RTA must protect its information from unauthorised or accidental modification, loss or release.[2]

Government agencies are required to take appropriate security measures to protect their information assets.[3] This includes having their information technology (IT) systems certified to national standards for information security management, ISO 17799.

Agencies are expected to seek certification when they consider that their information security management meets standards. So far, there has been no specified timeframe within which to achieve this, but the Government's Office of Information Technology (OIT) expects certification will become mandatory within the next two years.[4]

Quality Assurance Services (QAS) is the only accredited firm contracted by the Government to assist its agencies to certify their IT systems.[5]

The primary reason for seeking compliance with standards is to mitigate agencies future security risks.

The RTA advised that it expects to achieve certification of its IT systems soon.

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[2] Office of Information Technology, Information Security Guidelines for NSW Government Agencies, September 2001; Privacy and Personal Information Protection Act 1998, Section 12(c); and Office of Information Technology, Information Security Guideline Part 1, p.9.

[3] Premier's Department, Circular 2001-46, Security of Electronic Information, September 2001.

[4] Office of Information Technology, IT Security Bulletin No. 2, September 2002; and Information Security Guidelines for NSW Government Agencies, September 2001.

[5] Office of Information Technology, IT Security Bulletin No. 2, September 2002.

In this chapter we:

- outline the results of an audit of RTA information security management
- highlight key aspects of information security management considered good practice.

Part A - Assessment of RTA information security management

The Audit Office commissioned 90East Pty Ltd to assess the adequacy and appropriateness of RTA's current information security risk management framework according to recognised standards, including AS/NZS ISO/IEC 17799:2001 and AS/NZS 4360:1999.

90East performed a high level Security Management Audit (SMA) with particular emphasis on online services. The aim of the SMA was to:

- examine the overall security framework established to protect RTA's information assets from external threats
- determine the state of RTA's security controls relative to security best practice, as defined by nationally recognised standards for security management.

90East reported that:

- operationally, the RTA maintains generally appropriate levels of security
- given its current risk profile, the RTA maintains a generally adequate security posture, with some identified gaps in its online business environment
- overall, the RTA would have a level of security regarded as 'appropriate practice' if current policy gaps were to be addressed.

The RTA's risk profile was assessed as 'medium'. 90East determined that security controls with effectiveness ratings of 'fair/sound' were warranted to meet this risk profile.

A summary of gaps rated as most significant in key security controls follows.

4.2 Security management structure

RTA has many policies that relate to IT security. However, these have been developed to address specific needs, rather than to take an enterprise-wide view of information security based on business needs and risk management.

The lack of an existing enterprise-wide information security policy framework to underpin operation of security controls, which is a problem itself, could also undermine the effectiveness of other RTA security controls.

There is no assurance that security controls without underlying policies will continue over time. Up-to-date policies are the driver for effective security controls. Such controls are then able to survive organisational and personnel changes.

The RTA has developed a draft enterprise security policy which provides an excellent foundation to address this gap. The policy, however, needs to be prefaced with a suitable risk assessment.

4.3   Organisational security

There was no evidence of a policy to ensure security requirements are included in third party IT service or outsourcing contracts. Furthermore, there is no entity that has responsibility for reviewing such contracts to ensure the adequacy of any information security controls implicit in the contracted services.

In practice, however, the RTA has some of these measures in place.

4.4   Personnel security

No evidence was found that staff are required to enter into any non-disclosure or confidentiality agreement as part of their employment contracts. This may expose the RTA to bad publicity or possible legal action.

The RTA has, however, a draft code of conduct which, when implemented, will provide the necessary protection.

4.5   Communication and operations management

No evidence was found of a current policy requirement to destroy or effectively remove information from media when it is disposed of, with a detailed log to maintain an audit trail.

The 'Secure Disposal of Computer Storage Media' policy addresses this issue, but was still in draft form at the time of the audit.

The RTA has advised that this policy has now been approved and distributed.

4.6   Other findings

The security audit also highlighted the following issues:

- Suitable intrusion detection tools to monitor unauthorised logs and interceptions are considered best practice in modern Internet facing infrastructures.   The RTA acknowledges this and has mitigated the risk of future intrusions through the deployment of a number of network based intrusion detection systems in its infrastructure.

- With the prevalence of keystroke/screen capture software, there is a medium-level risk that computers may be compromised. This would allow the capture of log-in information, which could be used by unauthorised people to gain access to, and fraudulently use, RTA systems.

- No evidence was found of any protection of RTA intellectual property (IP) rights with external contractors. Assignment of IP rights to the RTA in third party contracts should be required, particularly with regard to security matters.

PART B - Good practices

The Audit Office noted several good practices in the RTA's management of information security risks which may be of interest to other government agencies. A summary of some of these practices follows.

4.7   Strong governance arrangements

Information security is a governance issue and Chief Executive Officers (CEOs) are legally responsible for its effective management. It should be driven from the top and shared by the management team.

The RTA has a strong framework for managing information security with cross-functional representation from relevant parts of the RTA. This includes:

- a management forum called the 'IT Steering Committee' which reviews security and works on security initiatives
- an IT Security Committee chaired by the IT security manager is being considered
- a large IT unit within the internal audit branch with a dedicated IT security auditor who has significant input and involvement in all key e-business initiatives.

4.8 Access to relevant expertise

The RTA has access to relevant specialist information security expertise from internal and external sources. For example, the RTA:

- has a full-time specialist security manager who also acts as the internal advisor on security matters and reports directly to the CEO. There is no budget or support staff allocated to this position

- has, through its outsourcing arrangement, a security specialist involved in the management of the data centre and dedicated to the RTA account

- is expected to enter into a three-year contract with a firm that will provide managed security services as well as IT security advice as required

- involves internal audit staff in the specification of security in new applications early in design specification stages.

4.9 Enterprise-wide risk awareness

The RTA is progressively rolling out its enterprise-wide risk identification training. In the RSRUM Directorate, almost one in three staff has received training in this area.

The RTA project management approach reflects a strong focus on identifying and managing e-business risks, including security, technical and privacy risks.

The RTA advised that 90% of e-business applications/IT projects have a risk assessment included in the project plan, especially for large and/or significant projects. For example, the e-Safety check and online registration renewal projects both had a risk assessment undertaken.

Further, the RTA's internal audit section has developed a risk assessment checklist which is used widely within the RTA. It also has an active audit program specifically targeting online initiatives. A number of online services have been audited, and a penetration test of the website has also been conducted by independent agencies.

Recommendations

4. Strengthen further the management of information security by addressing the policy gaps identified in the security audit and other related issues. To this end, we suggest that the RTA:

   - incorporate all information security policies into an enterprise-wide framework to ensure a consistent approach to security across the RTA and to aid communication of policy provisions. This framework should also contain updated and referenced standards, guidelines and procedural documents linked to the policies

   - ensure that policy provisions mandate the regular review of security policy and technical compliance

   - develop a policy to ensure that contractual arrangements involving third party access to RTA information processing facilities and data formally address the establishment of appropriate security controls and their ongoing effectiveness

   - require all appropriate staff to sign confidentiality clauses as part of their employment contracts

   - assign intellectual property rights to the RTA in third party contracts (external contractors) relating to security matters

   - use different companies and products to conduct periodic, independent and non-vendor specific penetration testing of the website in order to ensure greater coverage of vulnerabilities/risks and capture the benefits from different vendor approaches

   - undertake regular risk assessments of online systems to ensure new threats do not impose unacceptable levels of risk to the RTA

   - consider providing dedicated resources and support staff to the information technology security manager and establish formal linkages to key organisational functions to strengthen this position.

5. Legal and Regulatory Compliance

The RTA's privacy management framework is in line with legal requirements. Data sharing practices and privacy complaints management are generally consistent with privacy requirements. However, the RTA did not report to the NSW Privacy Commission all complaints it received; it reported only the complaints it reviewed. Further, agreements with a small number of agencies that currently access RTA information have not been finalised.

Online services provide a number of benefits. They also present significant challenges, particularly legal obligations relating to security, privacy and integrity of information.

The security management audit outlined in Part A of chapter 4 examined the security posture of the RTA and the extent of its compliance with nationally recognised standards.

The security audit also covered compliance of information systems with statutory, regulatory and contractual requirements. The RTA's performance was found to be 'sound' in this area.

This chapter deals with important aspects of privacy that were outside the scope of the security audit. In particular, we examined the following aspects of privacy:

- the management framework
- data/information sharing with external parties
- complaints handling.

The *Privacy and Personal Information Protection Act 1998* regulates all public sector agencies in safeguarding the privacy of individuals through the protection of personal information collected and held by them.

5.1   Management framework

We found that the RTA:

- has a privacy management plan consistent with legislative requirements
- website presentation complies with privacy requirements
- has reviewed key policies and practices to ensure compliance with relevant laws and has an ongoing program of review
- promotes awareness of privacy issues through staff training
- has a dedicated privacy officer to advise on and manage privacy matters.

5.2 Data/information sharing with external parties

Almost 100 government and non-government agencies access information from the RTA's DRIVES system.

In addition, the Australian Bureau of Statistics, Australian Taxation Office and Australian Electoral Office have access to RTA's information.

Several key government stakeholders rely on this information to deliver some core services. For example, NSW Police requires information to enforce compliance with licensing and registration requirements and the State Debt Recovery Office (SDRO) needs information to collect debts owed to the Crown.

The *NSW Privacy Commissioner's Direction on Information Transfers Between Public Sector Agencies* (June 2002) allows for transfer of information from one agency to another for the purpose of:

- responding to correspondence from Ministers or members of Parliament
- referring inquiries between agencies
- auditing
- law enforcement
- performance of agreements which operated in the 12-month period prior to 1 July 2000.

The RTA is expected to enter into an agreement, through a Memorandum of Understanding (MOU), with each agency it shares information with.

Memorandum of Understanding details
A MOU should require agencies to: • define the information to be accessed, the reason it is needed, how it will be used and who will use it • have enforceable internal policies to ensure adherence to the agreement • have security and privacy arrangements to protect the accessed information • maintain complete and accurate records of their access to the RTA, to conduct an annual audit of access to information, and report results to the RTA. A MOU should also specify liabilities and the duration of the agreement.

Our review of a sample of MOUs and consultation with staff, stakeholders and the NSW Privacy Commission showed that the RTA:

- has a MOU with most agencies that access information, and generally maintains its MOUs up-to-date. Four MOUs were pending finalisation at the time of the audit, including NSW Police, the largest user of RTA data

- is proactive in enforcing the requirement on agencies to conduct an annual audit of access to information. The majority of agencies had complied. Eight agencies that did not comply had their access to information suspended

- undertakes compliance audits of agencies that access information to ensure information is used in accordance with MOU conditions.

5.3 Handling privacy related complaints

The RTA is required under the *Privacy and Personal Information Protection Act 1998* (PPIP) to report to the NSW Privacy Commission all:

- privacy related complaints received, irrespective of whether the complaint is later withdrawn by the complainant or rejected following review

- progress and outcomes of reviews of privacy complaints.

During the 2002 calendar year the RTA received 15 complaints relating to online services. Some of these complaints were reviewed and others were either withdrawn or referred to other agencies. However, the RTA reported to the NSW Privacy Commission and in the annual report only those complaints that were reviewed.

Recommendation

5. Enhance compliance with all privacy requirements. To this end, we suggest that the RTA:

   - report all complaints received to the NSW Privacy Commission irrespective of whether they are later withdrawn, rejected or referred to another agency

   - finalise the agreement with NSW Police to formalise access to information.

6. Providing Reliable Online Services

The RTA has significantly re-engineered systems and processes to deliver secure and reliable business-to-business and business-to-customer online services. Improved data quality and systems availability are needed to better share information with key business partners and government stakeholders, but the RTA alone cannot resolve this.

Customers expect access to online services to be reliable, secure and available on a 24-hour, seven-day basis.

The reliability and quality of online systems, processes and information are, therefore, crucial to meeting this expectation and maintaining public confidence. They are also important to maintaining effective relationships with key business partners and government stakeholders.

We examined several aspects of the e-business framework, particularly:

- technology, processes and standards used
- the management of system capacity and interoperability[6]
- access to information by external parties
- business re-engineering
- the website presentation and information.

6.1   Reliability of IT systems and processes

6.1.1 Technology, processes and standards for e-business

Key IT systems, applications and procedures were assessed against important components of an IT standards framework. Notably, the RTA has:

- a sound system development and maintenance methodology, and change management processes for IT and e-business systems
- sound communication and operations management controls over operational procedures and information processing systems
- a process for ongoing monitoring and improvement for IT and e-business, which promotes a quality culture
- access to specialised technical expertise through outsourcing and contracting arrangements.

The RTA has outsourced significant parts of its IT functions. This includes the management of its data centres, desktop services, and managed security services. The RTA also uses contractors and consultants for specialist tasks.

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6 Interoperability refers to the extent to which diverse software applications are able to interact and share data internally and with key stakeholders.

Outsourcing arrangements provide many advantages to the RTA in the short to medium term, but also present significant risks in the longer term. The following table briefly describes some of the advantages and disadvantages to outsourcing.

Outsourcing[7]
Advantages of outsourcing may include: • flexibility to overcome management constraints (eg, industrial conditions, organisational culture, etc.) • access to specialised technical expertise and innovative technologies that may not be sustainable internally • benefiting from the economies of scale of a specialist provider who may also be providing services to other organisations. **Risks of outsourcing may include:** • loss of technical expertise within the organisation with no guarantee that the specialist expertise will be available in the medium to long term • loss of ability to effectively manage contractors • payment of a high premium to buy back those skills should the RTA decide to reverse the outsourcing decision • loss of ability to effectively evaluate competing tenders.

Balancing short-term benefits with a potentially significant erosion of hands-on skills and knowledge in the long term will remain a challenge for the RTA.

The RTA has the funds to obtain up-to-date expertise, which many budget dependent public sector agencies lack.

We could not determine RTA's total expenditures on outsourcing, contractors and consultants for the last financial year, or the proportion of expenditures attributable to e-business.

6.1.2 System capacity and interoperability

The RTA has successfully managed the way its diverse internal software applications are able to interact and share data. It has also enabled a large number of business partners and government stakeholders to share data through appropriate interfaces. System availability issues are discussed in chapter 8.

We found that online systems and processes were adequately handling demand which is still relatively small despite a steady growth.

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7 Standards Australian, HB 240:2000, 'Guidelines for managing risk in outsourcing, utilising the AS/NZS 4360 process', p.4.

Online systems capacity to deal with full demand loads has not been tested. The security management audit outlined in chapter 4, however, showed that the RTA has managed capacity as a key risk area and has systems and processes in place to ensure target demand can be met effectively.

6.1.3 Access to information by external parties

Two broad categories of external parties were considered:
- key business partners
- key government stakeholders.

Business partners

The RTA relies on its key business partners to offer customers a suite of online services. Partners include third party insurers, the Motor Accident Authority, Authorised Inspection Stations, Institute of Automotive Mechanical Engineers, Motor Traders' Association, and Service Station Association. They each play a unique role.

Key business partners indicated an overall satisfaction with current business-to-business systems and processes and the RTA's leadership role. Third party insurers noted their satisfaction, especially with the RTA's:
- approach to introducing online business - insurers can conduct their business with the RTA either online or using manual systems
- progress towards achieving real-time transactions - the RTA has reduced transaction processing time from 27 minutes to 20 seconds
- care in ensuring the introduction of online services do not disadvantage any partner or confer a competitive advantage to others who are better placed to adopt online services
- quality of support from the help desk.

Key government stakeholders

Government stakeholders access data, but do not directly affect the RTA's ability to offer online services. NSW Police and the State Debt Recovery Office (SDRO) are examples of such agencies.

A large number of agencies access information from the RTA through an interface called DRIVE 24. [8] This interface provides a direct link to data secured in the RTA's DRIVES system. DRIVES 24 is expected to be available 24-hours, seven days a week, minus a four-hour weekly allowance for system maintenance.

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[8] Provides read only access.

To highlight some of the issues facing government stakeholders, we focused our examination on the experience of the NSW Police. NSW Police is:

- the largest user of RTA data - approximately 11 million hits[9] a year are made on the DRIVES 24 interface, with NSW Police accounting for at least 90% of these hits (or 10 million hits a year)

- responsible for enforcing compliance of all vehicle registrations in NSW.

Police access to information
Operational Police (ie those on patrol) in metropolitan areas can interrogate their own Computerised Operational Policing System (COPS) or DRIVES 24 through mobile data terminals (MDT) or radios. In rural areas, MDTs are not available to Police because of bandwidth constraints, but Police stations do have radio access to information. Police access RTA data to either confirm or check COPS information, or to obtain information not available on COPS. The COPS system provides a limited range of information linked to criminal records information.

Consultation with a number of NSW Police staff indicated that:

- interrogation of DRIVES 24 is too slow due to 'black spots', choked radio airwaves and other technology limitations, some of which are from the Police end

- DRIVES is often unavailable outside normal business hours and there is no reliable alternate back-up system; however, this situation has improved recently.

The RTA is aware of these outages and is considering a number of options to rectify them. They include:

- an alternative to the current DRIVES 24 architecture to manage DRIVES database access

- new technologies to allow implementation of updates without major access outages.

According to the RTA, DRIVES outages are monitored as part of the outsourcing arrangement, but not the DRIVES 24 interface. In addition, it would have been cost prohibitive for the RTA to compile this information so the Audit Office could verify trends, causes, frequency and duration of outages.

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[9] This refers to the number of times users attempt to access RTA data through the interface.

The RTA did, however, advise that:
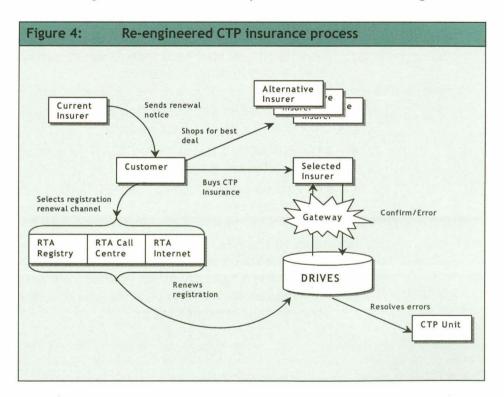
- NSW Police is given unfettered access to DRIVES during special events (ie the system is available all the time)
- NSW Police, unlike other agencies, is given access to RTA information free of charge
- some outages are due to issues with NSW Police systems, not the RTA
- NSW Police demands for RTA data have grown exponentially in recent years.

6.1.4 Business re-engineering

The RTA has significantly re-engineered systems and processes to implement its e-business initiatives and meet new business imperatives of an online environment.

Re-engineering has covered a large number of business-to-business as well as business-to-customer systems and processes and involved input from staff, customers and key business partners and government stakeholders.

The re-engineered CTP insurance process is illustrated in figure 4.

Figure 4:   Re-engineered CTP insurance process

6.2 Quality and reliability of information

The quality and reliability of information is crucial to customers, business partners and government stakeholders. We examined two key categories of information:

- information available to customers via the website, telephone interactive voice response system and call centre
- information provided by customers and later shared with external parties.

6.2.1 Information available to customers via the website

The RTA's website was ranked as the second most widely visited State government site by Australians in March 2001.

At the time of the audit, the RTA had commissioned a private firm to redesign the website in response to feedback from user groups. The changes aimed to:

- improve the visual identity of the site (image)
- provide enhanced access to information ('backroom connections')
- give a choice of links to transact online
- offer real-time information on roads and traffic related matters.

The Road Safety and Road User Management (RSRUM) Directorate has overall responsibility for the development, implementation and monitoring of online services. Fulfilling this responsibility requires having effective website presence and expert input.

RSRUM draws on internal and external expertise. This includes assistance from internal units such as the:
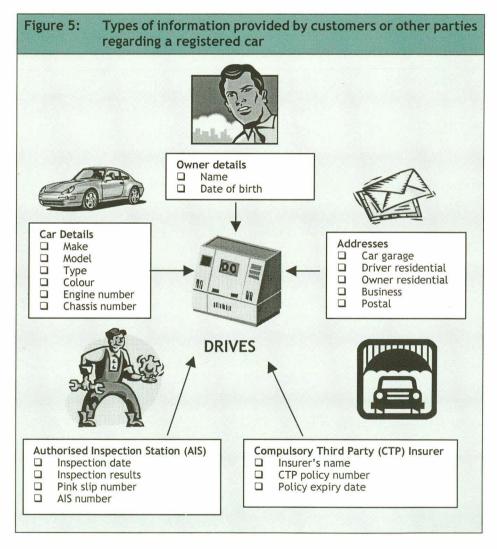
- Corporate Communication unit with managing e-business promotions and the website
- IT unit with the development, implementation and maintenance of technical aspects of the website
- Business Research unit with forecasting and tracking e-business trends, and usage patterns.

This approach, with clear processes and well-defined responsibilities, provides a sound basis for managing the website and ensuring improved information quality and reliability.

6.2.2 Quality and reliability of information shared with external parties

A large number of business partners and government stakeholders need access to reliable information from the RTA to deliver key functions. It is therefore important that this information is available when needed, accurate, up-to-date, complete and consistent.

The quality of information held by the RTA largely depends on the currency, accuracy and completeness of information provided by customers, and business partners and government stakeholders. The following figure illustrates the flow of information to RTA's DRIVES system.

Figure 5: Types of information provided by customers or other parties regarding a registered car

Key business partners, such as third party insurers, were generally satisfied with the quality and reliability of RTA data and the assistance from the help desk in resolving issues and queries.

Key government stakeholders, such as NSW Police and SDRO, raised several issues of concern. In particular:

- NSW Police commented that data was often unreliable, not up-to-date and not consistent
- SDRO advised that approximately 80 out of 3,000 record matching transactions per day could not be matched with RTA data
- both NSW Police and SDRO indicated that RTA does not record dates of amendment to data. The RTA advised that an action table listing all transactions and when they were updated exists, but NSW Police and SDRO may not be aware of it.

In separate discussions with agencies, the Audit Office was provided with different views on the error rate in transferred data, reasons for errors, and technology limitations.

The scope of the audit did not include any reconciliation of records/data or analysis of the data transferred between the RTA and other agencies. The impact of this issue on regulating traffic and enforcing the law is explored in our current 'Unauthorised Driving' performance audit.

The RTA is working proactively with NSW Police and SDRO to resolve these issues. For instance:

- work is underway to develop a global memorandum of understanding between the RTA and NSW Police to better define data management and governance issues
- the RTA has introduced an online change of address service, to ensure address details are more current
- options to establish Australia Post Delivery Point Identifier are being explored.

Clearly, data quality and reliability need to be improved as a priority to mitigate the risks of:

- creating a barrier to law enforcement and undermining police efficiency and safety
- shifting cost (real or perceived) to other government agencies
- the community having to bear severe safety and civil implications from damage caused by accidents involving uninsured drivers.

However, sector-wide interoperability issues, lack of standards for the exchange of information and privacy restrictions make real-time access to information more difficult.

Recommendation

6. Expedite initiatives aimed at improving data quality and systems availability to enhance data sharing with key business partners and government stakeholders. To this end, we suggest that the RTA:

    *   formalise data management responsibilities and protocols between NSW Police and the RTA through a memorandum of understanding which could clarify data transfer and reconciliation arrangements between the two agencies

    *   address system failures and outages, especially for NSW Police

    *   strengthen its monitoring of system performance.

7. Managing the Impact of Online Services on Staffing

RTA's change management framework and current flexible staffing/work arrangements strengthen its position to manage the short to medium term impacts of online services on staffing, but this position may not be sustained in the long term.

Online services promise significant benefits in terms of improved and more efficient and accessible services. Efficiencies from online services are likely to derive from re-engineering systems and processes, which may result in job losses, skill shortages or deficiencies and possibly low morale.

It is important to have a strategic framework to manage these issues, as they present a challenge for any organisation. In particular, there is a need to ensure:

- staff have the required competencies to effectively support the introduction of online services through training, guidance and incentives
- excess or redundant staff are employed in a productive capacity
- staff and their representatives are aware of, and appreciate decisions made.

7.1   Change management framework

The RTA has been implementing a change management program for a number of years. This program involved the restructure of motor registries and the call centre with the input and participation of staff and staff representatives. The restructure led to:

- efficiency and productivity gains from improved staff rostering and work practices
- more flexible employment arrangements, with 60% of hours undertaken by full-time staff and 40% by part-time staff.

The strategic change management framework enables the RTA to manage potential systemic impacts of e-business on staffing and initiate necessary communication and changes to policies and practices.

The e-business strategy developed for the RTA refers to the importance of managing the long-term impact on staffing. However, we found limited evidence of an explicit assessment of the long-term strategic impact of e-business on staffing levels.

The RTA advised that no significant impact on staffing is expected for the next ten years. Neither the recent RTA Business Plan for 2003 nor the service level agreement between RSRUM and Operations make mention of any e-business impact on staff.

There is, however, evidence that the RTA considers separately the impact of *each* new e-business initiative on staffing on a project-by-project basis.

7.2   Managing staffing levels

The RTA has a number of strategies to ensure compliance with the Government requirements that there be no forced redundancies and staff be employed in a productive capacity or re-deployed into productive jobs. For example, the RTA may:

- cease any new recruitment and allow natural attrition to take its course
- transfer staff from registries where there has been a significant reduction in workload to registries with higher customer demand
- reduce the number of work hours per staff
- deliver new services or expand existing ones.

Flexible staffing/work arrangements strengthen these strategies and make compliance with the government policy of 'no forced redundancies' much easier to manage.

The RTA advised that efficiency gains achieved from the introduction of online services are to date being:

- absorbed by the annual growth (1.5%) in transaction numbers
- absorbed by new transactions, such as Hazard Perception Tests and Driver Quality Tests
- directed to involvement in whole-of-government initiatives such as the Government Access Program
- directed to help the Parramatta Infringement Processing Bureau.

Government Access Centres
• Government Access Centres (GACs) provide 'one stop shops' in rural and regional communities for a range of NSW Government services. • GACs are located in towns with population greater than 1,000 people and at least 80km from a regional centre. The distance criterion is reduced to 50km for towns that demonstrate a significant level of isolation or disadvantage. • Currently, there are 37 GACs. The target is 45 GACs by June 2003. • The RTA manages expansion of the GACs program with support from the Attorney-General's Department. • GACs are generally distributed in motor registries and local courts, and provide service for up to eight departments and 17 types of transactions.

The RTA may find it difficult to rely on these strategies alone to fine-tune staffing levels, especially if efficiency savings derived from online services ultimately exceed growth in transaction numbers.

7.3   Managing staff competencies

The RTA provides training and guidance to staff to support the introduction of e-business initiatives.

The RTA identifies staff training requirements at the project development stage of each new e-business project and initiates the necessary training and guidance through service level agreements with relevant units of the RTA. Specific training has been provided to raise awareness about aspects of security and privacy and other related e-matters.

There is, however, no evidence that a review has been undertaken to identify competencies required to support online users.

The RTA also consults with staff representatives about a range of change management and staffing issues and communicates these changes to staff. However, there have been limited consultations specifically regarding the long-term impact of e-business on staffing levels/ratios and employment conditions.

Recommendation

7. The RTA should further develop the strategy to enable ongoing assessment and monitoring of overall impact of e-business on staff. This will ensure greater clarity, assist consultation with staff and their representatives, and enable redirection of resources to more effective use.

8. Managing Stakeholders

The RTA's sustained efforts and ongoing dialogue with key business partners have achieved significant successes and helped move forward the e-business agenda. Overall, the RTA appears to have managed key stakeholder relationships well and has effective mechanisms for ongoing communication and consultation with key strategic business partners.

However, in the interest of efficient and effective 'joined-up government', more work is needed with some government stakeholders to ensure that improved customer service does not shift costs to some stakeholders and/or diminish their capacity to carry out their functions.

Stakeholders are those people and organisations who may affect, be affected by, or perceive themselves to be affected by, a decision or activity.[10]

The RTA has adopted different approaches to managing key stakeholders. The approach used often depends on the priorities and business outcomes sought. The three key categories of RTA stakeholders are:

- customers
- business partners
- government stakeholders.

8.1 Customers

We examined the management framework adopted by the RTA to establish customer needs, monitor satisfaction, act on feedback, promote services and monitor take-up rates. These were considered important areas to manage well in order to meet customer expectations. Part C of chapter 3 addressed these issues in some detail.

8.2 Business partners

The RTA consults with a broad range of business partners to progress its e-business program and establish long-term strategic partnerships. This helps to:

- identify key impediments and devise appropriate strategies
- implement and coordinate e-business activities in a cooperative environment.

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[10] Standards Australia, Guidelines for managing risk in outsourcing utilising the AS/NZS 4360 process, p.96.

Key business partners cover a diverse group of organisations with different interests. They include:

- third party insurers - most of these are now online
- Authorised Inspection Stations (AIS) – 178 out of 5,779 stations are online
- motor dealers – 20 out of 500 are online as part of an ongoing pilot
- fleet managers - the RTA provides dedicated online services to these stakeholders with high transaction volume
- organisations such the Motor Accident Authority, Motor Traders Association, Institute of Automotive Engineers and Service Stations Association.

8.2.1 Insurers and industry regulator

RTA's most notable success has been with third party insurers. Six out of the seven major third party insurers are now able to send vehicle insurance policy details electronically to the RTA. These six insurers represent almost 98% of the third party insurance market share in NSW. Currently, transactions take approximately 20 seconds to be received by the RTA. More work is being done to close this gap from 20 seconds to an instantaneous response (real time).

The RTA is also working with insurers and the Motor Accident Authority on a memorandum of understanding to formalise relationships and better define responsibilities, accountabilities and legal liabilities. This task has proven difficult. After 22 months of negotiations, there is no resolution in sight.

8.2.2 Authorised Inspection Stations and peak industry bodies

The RTA is progressively rolling out its e-Safety check to AISs across metropolitan areas. This project started with 17 AISs in the pilot stage and has expanded to 178. AISs can send vehicle inspection details electronically or by phone to the RTA.

The AIS pilot and implementation stages involved consultations, extensive promotion, guidance and assistance from the RTA.

However, we found that perhaps the RTA needed to inform and consult peak industry groups more widely and much earlier in the concept development stage. This would have assisted to:

- secure greater participation by service stations - peak bodies can play a crucial role in providing information to members and promoting the project
- ensure all options were considered and impacts assessed adequately. For example, suggestions were made that the RTA should have extended the e-Safety check to all types of vehicles, including liquefied petroleum gas (LPG) cars. This would have allowed AISs to service a broader client base. Another suggestion was that the RTA could have provided a mock up training room to help AISs train staff, even if it was for a fee.

The RTA advised that it now has over 400 stations online and expects to have 1,000 online by December 2003.

8.2.3 Fleet managers and motor dealers

Although the RTA offers fleet managers and a select number of motor dealers dedicated online services, the take-up of these services has been relatively small. Online services to motor dealers are still in a pilot stage.

The dealer online system is available on a voluntary basis. However, the RTA may need to do more work to:

- address perceptions that the RTA is shifting costs - some dealers believe that they are now doing the work of the RTA
- review claims by dealers that transactions take much longer than with older systems
- explain why dedicated service counters are no longer offered to dealers.

We did not follow up on these issues as they were outside the scope of the audit.

The RTA advised that such issues are progressively being resolved and tangible assistance is being provided to large volume motor dealers. The RTA is also working on a business-to-business link to dealer inventory systems to reduce the need for them to enter so much data.

8.3   Government stakeholders

Government stakeholders include agencies that access information from the RTA to fulfil their core functions.

Section 6.1 of chapter 6 examined issues that impact on this group of stakeholders. Overall, large users of RTA data, such as NSW Police and the State Debt Recovery Office, require more reliable access to systems and information. To resolve this issue requires action from both NSW Police and the RTA.

A number of initiatives are under way to address some of the concerns, but indications are that although these issues have been discussed, tangible results are not forthcoming soon.

Recommendation

8. The RTA should consider improved consultation with and involvement of key stakeholders from the concept development stage of any e-business initiative.

Appendices

Appendix 1 About the audit

Audit objective The audit approached issues of efficiency, effectiveness and economy using a strategic assessment of how well the RTA is managing the benefits and risks associated with a major element of its e-business.

Audit criteria The audit reviewed whether the RTA:
- had appropriate governance and management arrangements to ensure a coordinated, well managed and accountable e-business program
- had systems in place to measure, monitor and report on the efficiency and effectiveness of its e-business program to ensure value for money, transparency and accountability for public expenditure
- managed risks and had in place effective controls and quality standards to achieve maximum benefits from its e-business
- had adequate and appropriate IT systems and processes to implement its e-business
- had sufficiently and appropriately skilled people to implement its e-business
- managed effectively the impact of its e-business on key stakeholders.

Audit scope The audit scope aimed to:
- explore the 'business-to-customer' aspect of e-government applications
- balance examination of RTA's successes and challenges in implementing its e-business program.

The audit focused on the provision of registration services, which includes personalised vehicle number plate sales and the provision of information.

The audit did not:
- examine the efficacy of the RTA's funder-provider model, but commented on the impact of this model on e-business
- consult directly with customers, but sought the views of key customer representatives, examined current approaches to customer consultation and reviewed customer surveys
- include any reconciliation of records/data or analysis of the data transferred between the RTA and other agencies. The impact of this issue on regulating traffic and enforcing the law is explored in our current 'Unauthorised Driving' performance audit.

Audit approach The audit approach included:
- interviews with relevant RTA staff, business partners and government stakeholders
- examination of relevant documents
- research into other practices.

The Audit Office contracted 90East (Asia Pacific) Pty Ltd to assess the adequacy and appropriateness of RTA's current information security risk management framework according to recognised standards, including AS/NZS ISO/IEC 17799:2001 and AS/NZS 4360:1999.

Appendix 2   Online services

Type of Online Service	Purpose	Service Delivery Channel
Registration renewal	Allows customers to renew selected vehicle registration	Internet, Interactive Voice Response (IVR) or Call Centre
Number plate sale	Allows customers to design, search for availability and purchase personalised vehicle number plates	Internet and Call Centre
Address change	Allows customers to change their residential and mailing addresses	Internet and Call Centre
Test booking	Allows customers to book for Driver Knowledge Test, Hazard Perception Test or Driving Test	Internet and Call Centre
Property inquiry	Allows customers to lodge property related inquiries	Internet
Planned incidents	Allows the lodgement of applications for activities that involve closure of a traffic line or impact on the efficiency of the arterial road network	Internet
e-Safety check	Allows Authorised Inspection Stations to send vehicle inspection information electronically to the RTA	Internet and IVR
Dealer online	Allows a limited number of high transaction volume motor dealers to perform selected registration transactions electronically	Internet
Compulsory third party insurance	Allows authorised insurance companies to send vehicle compulsory third party insurance information electronically to the RTA	Internet
Heavy vehicle licence enquiry system	Allows RTA accredited heavy vehicle operators to confirm the status and class of an employee or contractor's NSW driver licence	Internet
Common expiry date fleet	Allows authorised fleet managers to maintain the details of fleet vehicles	Internet
Written-off vehicle register	Allows insurance companies, dealers and automotive dismantlers to send written-off vehicle notification electronically to the RTA	Internet
Government Access Centre	Allows Government Access Centres' staff to conduct business with the RTA online	Internet

Performance Audits by the Audit Office of New South Wales

Performance Auditing

What are performance audits?

Performance audits are reviews designed to determine how efficiently and effectively an agency is carrying out its functions.

Performance audits may review a government program, all or part of a government agency or consider particular issues which affect the whole public sector.

Where appropriate, performance audits make recommendations for improvements relating to those functions.

Why do we conduct performance audits?

Performance audits provide independent assurance to Parliament and the public that government funds are being spent efficiently and effectively, and in accordance with the law.

They seek to improve the efficiency and effectiveness of government agencies and ensure that the community receives value for money from government services.

Performance audits also assist the accountability process by holding agencies accountable for their performance.

What is the legislative basis for Performance Audits?

The legislative basis for performance audits is contained within the *Public Finance and Audit Act 1983, Part 3 Division 2A*, (the Act) which differentiates such work from the Office's financial statements audit function.

Performance audits are not entitled to question the merits of policy objectives of the Government.

Who conducts performance audits?

Performance audits are conducted by specialist performance auditors who are drawn from a wide range of professional disciplines.

How do we choose our topics?

Topics for a performance audits are chosen from a variety of sources including:

- our own research on emerging issues
- suggestions from Parliamentarians, agency Chief Executive Officers (CEO) and members of the public
- complaints about waste of public money
- referrals from Parliament.

Each potential audit topic is considered and evaluated in terms of possible benefits including cost savings, impact and improvements in public administration.

The Audit Office has no jurisdiction over local government and cannot review issues relating to council activities.

If you wish to find out what performance audits are currently in progress just visit our website at www.audit@nsw.gov.au.

How do we conduct performance audits?

Performance audits are conducted in compliance with relevant Australian standards for performance auditing and our procedures are certified under international quality standard ISO 9001.

Our policy is to conduct these audits on a "no surprise" basis.

Operational managers, and where necessary executive officers, are informed of the progress with the audit on a continuous basis.

What are the phases in performance auditing?

Performance audits have three key phases: planning, fieldwork and report writing.

During the planning phase, the audit team will develop audit criteria and define the audit field work.

At the completion of field work an exit interview is held with agency management to discuss all significant matters arising out of the audit. The basis for the exit interview is generally a draft performance audit report.

The exit interview serves to ensure that facts presented in the report are accurate and that recommendations are appropriate. Following the exit interview, a formal draft report is provided to the CEO for comment. The relevant Minister is also provided with a copy of the draft report. The final report, which is tabled in Parliament, includes any comment made by the CEO on the conclusion and the recommendations of the audit.

Depending on the scope of an audit, performance audits can take from several months to a year to complete.

Copies of our performance audit reports can be obtained from our website or by contacting our publications unit.

How do we measure an agency's performance?

During the planning stage of an audit the team develops the audit criteria. These are standards of performance against which an agency is assessed. Criteria may be based on government targets or benchmarks, comparative data, published guidelines, agencies corporate objectives or examples of best practice.

Performance audits look at:
- processes
- results
- costs
- due process and accountability.

Do we check to see if recommendations have been implemented?

Every few years we conduct a follow-up audit of past performance audit reports. These follow-up audits look at the extent to which recommendations have been implemented and whether problems have been addressed.

The Public Accounts Committee (PAC) may also conduct reviews or hold inquiries into matters raised in performance audit reports.

Agencies are also required to report actions taken against each recommendation in their annual report.

To assist agencies to monitor and report on the implementation of recommendations, the Audit Office has prepared a Guide for that purpose. The Guide, *Monitoring and Reporting on Performance Audits Recommendations,* is on the Internet at www.audit.nsw.gov.au/guides-bp/bpglist.htm

Who audits the auditors?

Our performance audits are subject to internal and external quality reviews against relevant Australian and international standards.

The PAC is also responsible for overseeing the activities of the Audit Office and conducts reviews of our operations every three years.

Who pays for performance audits?

No fee is charged for performance audits. Our performance audit services are funded by the NSW Parliament and from internal sources.

For further information relating to performance auditing contact:

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Performance Audit Reports

No.	Agency or Issue Examined	Title of Performance Audit Report or Publication	Date Tabled in Parliament or Published
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65	Attorney General's Department	*Management of Court Waiting Times*	3 September 1999
66	Office of the Protective Commissioner Office of the Public Guardian	*Complaints and Review Processes*	28 September 1999
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68	NSW Police Service	*Enforcement of Street Parking*	24 November 1999
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89	Intellectual Property	*Management of Intellectual Property*	17 October 2001
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92	Department of Urban Affairs and Planning	*Environmental Impact Assessment of Major Projects*	28 November 2001
93	Department of Information Technology and Management	*Government Property Register*	31 January 2002
94	State Debt Recovery Office	*Collecting Outstanding Fines and Penalties*	17 April 2002
95	Roads and Traffic Authority	*Managing Environmental Issues*	29 April 2002
96	NSW Agriculture	*Managing Animal Disease Emergencies*	8 May 2002
97	State Transit Authority Department of Transport	*Bus Maintenance and Bus Contracts*	29 May 2002
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99	E-government	*User-friendliness of Websites*	26 June 2002

No.	Agency or Issue Examined	Title of Performance Audit Report or Publication	Date Tabled in Parliament or Published
100	NSW Police Department of Corrective Services	*Managing Sick Leave*	23 July 2002
101	Department of Land and Water Conservation	*Regulating the Clearing of Native Vegetation*	20 August 2002
102	E-government	*Electronic Procurement of Hospital Supplies*	25 September 2002
103	NSW Public Sector	*Outsourcing Information Technology*	23 October 2002
104	Ministry for the Arts Department of Community Services Department of Sport and Recreation	*Managing Grants*	4 December 2002
105	Department of Health Including Area Health Services and Hospitals	*Managing Hospital Waste*	10 December 2002
106	State Rail Authority	*CityRail Passenger Security*	12 February 2003
107	NSW Agriculture	*Implementing the Ovine Johne's Disease Program*	26 February 2003
108	Department of Sustainable Natural Resources Environment Protection Authority	*Protecting Our Rivers*	7 May 2003
109	Department of Education and Training	*Managing Teacher Performance*	14 May 2003
110	NSW Police	*The Police Assistance Line*	5 June 2003
111	Roads and Traffic Authority	*Delivering Services Online*	June 2003

* Better Practice Guides

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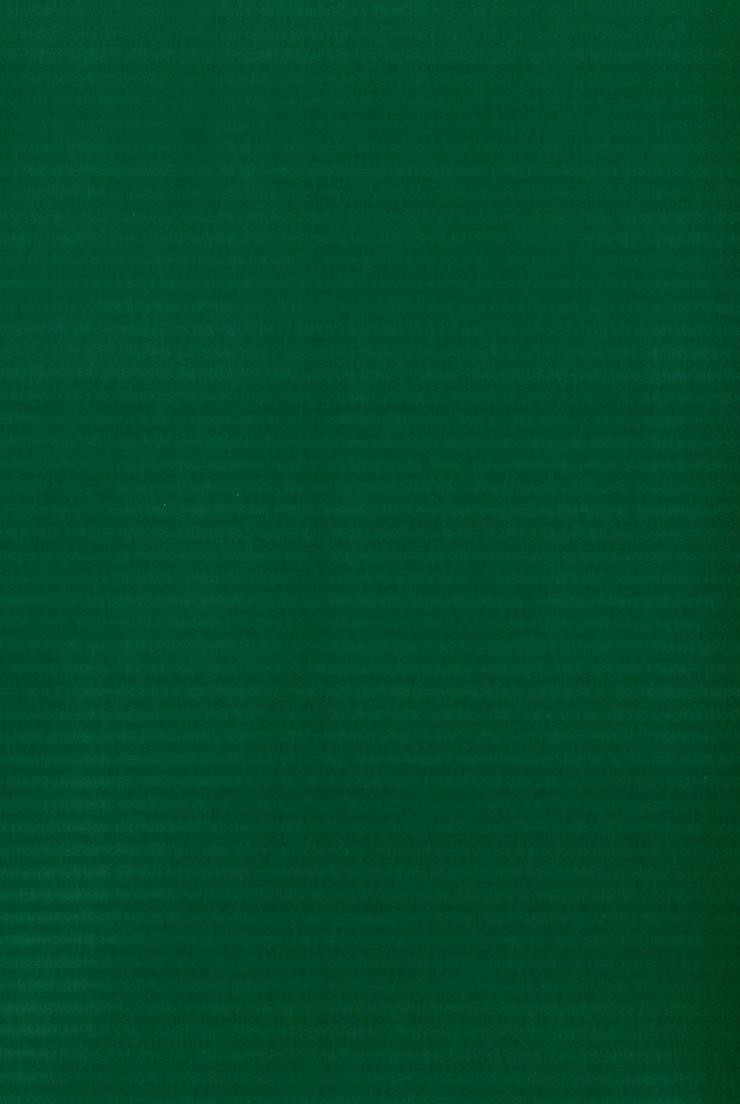
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