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Executive Summary

7.001 The Year 2000 problem represents one of the most serious management challenges currently facing public sector entities. The results of our most recent survey – carried out between August and December 1998 – indicate that encouraging progress has been made, particularly in identifying critical systems and setting priorities for fixing identified problems. Nevertheless, reports from our auditors highlighted two essential tasks which many entities had yet to address:

- drawing up a programme for testing systems and applications; and

- developing business continuity plans for Year 2000 contingencies.

7.002 We surveyed six groups of public sector entities:

- government departments;

- Hospital and Health Services (formerly Crown Health Enterprises);

- State-owned enterprises;

- Crown Research Institutes;

- local authorities[1]; and

- a selection of other public bodies.

7.003 In evaluating the progress made by individual entities we considered three factors:

- the entity's assessment of when it will have completed planning;

- when the entity's critical systems will be ready for the Year 2000; and

- whether key risk management processes have been followed.

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1 Regional and territorial local authorities under the Local Government Act 1974.

7.004   Our analysis indicates that many entities have continued to underestimate the extent of the problem and the work involved to address it. A significant proportion of Hospital and Health Services and local authorities, in particular, still have a lot of essential tasks to complete, placing them at risk of missing their deadlines.

7.005   Local authorities are responsible for managing important items of community infrastructure – including water supply and sewage disposal. Disruption to the operation of hospitals may endanger lives. Many Hospital and Health Services and local authorities are large and complex, making the task of addressing the Year 2000 problem a difficult one. Nonetheless, given that health, safety and welfare are at stake, and deadlines are fast approaching, there is no margin for error.

Further Monitoring of Progress

7.006   We will continue to take a close interest in the efforts which the public sector is making to address the Year 2000 problem. In particular, we will be watching the progress of those entities that, at the time of our 1998 survey, were not meeting our expectations for being ready for the Year 2000.

7.007   Our auditors are required to alert us to any information which gives rise to doubt that, as a consequence of the Year 2000 problem, an entity will be able to continue as a going concern, or deliver essential services. We will also seek special reports through our auditors and, if necessary, direct assurance from individual entities wherever we have reason to believe that governing bodies and senior management may not be making satisfactory progress.

7.008   The ongoing responsibility for monitoring progress in managing the Year 2000 problem rests with central government agencies and sector groups. We are aware of the leadership role played by the Y2K Readiness Commission set up by the Government last year. We are also aware that the Ministry of Health and the State Services Commission, and Local Government New Zealand are monitoring progress in the health sector and in local government respectively, providing ongoing assessment, guidance and co-ordination. Each of these monitoring agencies has an

important role to play in promoting good practice, and in facilitating the sharing of information.

7.009 We have briefed each monitoring agency on the general findings from our survey. Some of our findings differ from those reached by the State Services Commission and other monitoring agencies, the reasons for which we have discussed with them.

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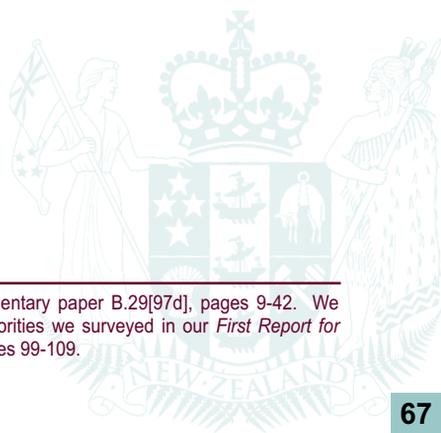
2 See our *Fourth Report for 1997*, parliamentary paper B.29[97d], pages 9-42. We summarised the results of the local authorities we surveyed in our *First Report for 1998*, parliamentary paper B.29[98a], pages 99-109.

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Introduction

7.010   In December 1997 we published a report *Is the Public Sector Ready for the Year 2000?*[2] That report was based on the findings from a survey we conducted of Year 2000 risk management practices among public sector entities.

7.011   The results of that survey provided us with a benchmark against which to monitor progress in each entity. We carried out a follow-up survey from August to December 1998, to provide Parliament with a further assessment of how well public sector entities are handling the issue. This report:

- outlines our role as auditors in respect of the risks posed by the Year 2000 problem;

- describes the initiatives we have taken to provide guidance and assessment through our auditors; and

- analyses the results of our recent survey.

Clarifying the Respective Responsibilities of Management and Auditors

7.012   Responsibility for addressing the risks associated with the Year 2000 problem lies with governing bodies and management. For the auditor the Year 2000 issue does not create any new responsibilities. In particular, the auditor is not responsible for ensuring that the entity is prepared for the Year 2000 date change.

> *Responsibility for addressing Year 2000 risks lies with governing bodies and management.*

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7.013 However, the Year 2000 issue may nonetheless merit our attention in the normal course of the audit where it constitutes a significant source of risk. The auditor may consider it appropriate to make enquiries of management about the entity's strategy for addressing the Year 2000 issue, and may make observations about the processes followed to identify and manage its Year 2000 project. The potential impact on the financial statements, and on the ability of the entity to continue carrying out its business, will be important considerations for the auditor in deciding what enquiries should be made of management.

7.014 Recognising the need to clarify the respective responsibilities of management and the auditor, in 1998, the Institute of Chartered Accountants of New Zealand (ICANZ) issued an Audit Guidance Statement *Implications for Management and Auditors of the Year 2000 Issue*. The objectives of that statement were to:

- assist in clarifying the respective responsibilities of the auditor and management;

- suggest inquiries for an auditor to make of management;

- suggest matters which might be reported to management;

- provide assistance in the application of the Auditing Standards and other Audit Guidance Statements to this issue;

- outline circumstances where an auditor may issue a modified audit report; and

- assist in overcoming the risk of an audit expectation gap arising.

7.015 All of our auditors are required to comply with the ICANZ guidance.

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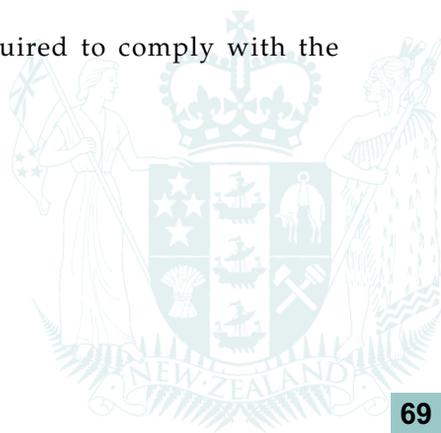
What Approach Have We Taken to the Year 2000 Issue?

7.016 Our objectives have been to:

- raise awareness of the issue across the public sector, and provide general guidance where appropriate;

- encourage entities to make public disclosures about their handling of the Year 2000 issue in annual plans, financial statements, and other core public accountability documents;

- fulfil our reporting responsibilities to Parliament on any potential financial and non-financial performance consequences of the Year 2000 issue;

- encourage public sector entities to take a systematic risk management approach to the Year 2000 issue – which entails following a robust project management approach in tackling the issue, and directing efforts to fixing those systems critical to the delivery of essential services;

- ensure that Year 2000 issues are considered in the planning and conduct of audits, and that auditors raise concerns with management or the governing body where appropriate; and

- maintain regular contact with government agencies responsible for the co-ordination of Year 2000 work across sectors.

7.017 Figure 7.1 opposite shows the range of initiatives we have taken to bring Year 2000 issues to the attention of entities throughout the public sector, promote good practice, and inform Parliament of progress.

7.018 The public sector entities we surveyed in the second half of 1997 were made aware of the expectations we had of their risk management processes, and the report of our findings was widely distributed. Instructions to our auditors for the 1997-98 and 1998-99 audits required them to:

- monitor progress made by individual entities against the results of our 1997 survey;

- raise any significant concerns with management; and

- report those concerns to us.

B.29[99a]

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Figure 7.1
Audit Office Initiatives to Date on the Year 2000 Issue

	Aug -97	Sep -97	Oct -97	Nov -97	Dec -97	Jan -98	Feb -98	Mar -98	Apr -98	May -98	Jun -98	Jul -98	Aug -98	Sep -98	Oct -98	Nov -98	Dec -98	Jan -99	Feb -99	Mar -99
General Policy Statements Issued to Auditors								*					*				*			
Reporting to Parliament					SR					LGR										SR
Advice to Select Committees				Financial Reviews							Estimates					Financial Reviews				
Survey and Updates																				
Sector Audit Briefs				Specific Y2K Requirements for Auditors																
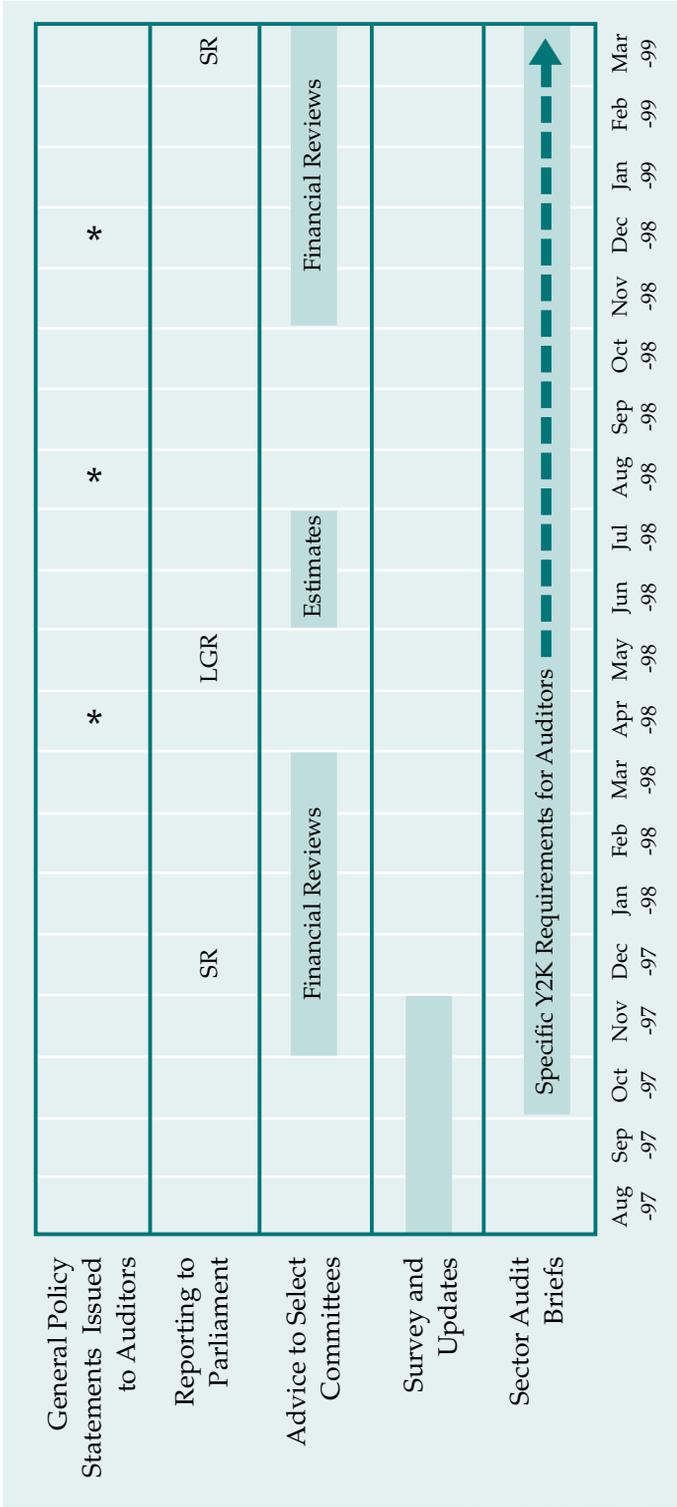
SR = Survey Results
LGR = Local Government Readiness

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7.019   Where auditors considered it necessary, they were instructed to obtain representations from the entity's management about the steps taken, or plans in place, to address the Year 2000 issue.

7.020   We have encouraged all select committees (when carrying out financial reviews) to seek assurance from the management of government departments and agencies about progress in addressing the Year 2000 issue. In addition, we briefed the Government Administration Committee and the Prime Minister's Year 2000 Taskforce on the findings from our 1997 survey.

7.021   We have also maintained contact with those government agencies and relevant bodies with a direct interest in the issue. These include the State Services Commission, the Ministry of Commerce, and the Ministry of Health.

7.022   Where information obtained through our auditors gives rise to concern we have sought additional assurance from the entity concerned.

Specific Requirements for 1998-99 Annual Audits

7.023   In April 1998 we issued a general policy statement to our auditors on the accounting implications of the Year 2000 issue. The following August we issued a further policy statement outlining the audit approach which auditors should take in light of the Auditing Guidance Statement issued by ICANZ.

7.024   In December 1998 we issued a third policy statement, outlining our specific requirements for 1998-99 annual financial audits. During the interim audit all auditors are required to specifically consider whether the Year 2000 issue is likely to have an impact on the ability of the entity to continue to operate as a going concern or continue to provide essential services. The auditor must notify us immediately where there is doubt on either account.

> *Every public sector entity should be able to demonstrate that it will continue to operate as a going concern, and continue to provide essential services.*

B.29[99a]

7.025 Our auditors have been told to encourage entities to disclose in their 1998-99 annual reports:

- the initiatives taken by the chief executive or the governing body to identify Year 2000 risks;

- the outcome of the risk identification process;

- the actions (or proposed actions) taken to minimise the risks identified; and

- any contingency plans that have been prepared in the event of systems failure.

7.026 Circumstances under which disclosure by an entity may be necessary include:

- where Year 2000 problems will result in the entity being unable to continue as a going concern;

- where Year 2000 problems will result in the entity being unable to continue to provide essential services (although the entity is still considered to be a going concern);

- where there is uncertainty attributable to the entity's operations or activities arising from the Year 2000 issue; and

- where the entity has identified a matter relating to the Year 2000 issue from which it is possible to identify and evaluate exceptional risks of operating.

We encourage every public sector entity to disclose publicly how it is handling the Year 2000 issue.

Our 1998 Survey

7.027 We surveyed the auditors of 195 public sector entities between August and December 1998. These entities comprised:

- government departments, Hospital and Health Services, State-owned enterprises and Crown Research Institutes;

- all regional and territorial local authorities; and

- a small number of other entities selected for their likely exposure to the effects of the Year 2000 factor.

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7.028 We consulted with an external adviser in drawing up a guide to our expectations of good practice and a survey form. The survey form contained six questions which we considered particularly relevant as deadlines approach for entities to become Year 2000 compliant. Our auditors answered all survey questionnaires, after the necessary consultation with the entities concerned.

7.029 As we do not audit all energy companies we were not in a position to survey all companies operating in this sector. Nonetheless, we have impressed on our auditors the importance of the Year 2000 issue for the energy sector, given that it provides an essential service on which businesses and every community depends.

What Questions Did We Ask Our Auditors?

7.030 We sought our auditors' assessments in six areas:

- targeting effort where the impact of failure is likely to be most severe;

- meeting statutory and contractual obligations;

- quantifying and obtaining the necessary resources to fix problems;

- developing testing programmes;

- developing business continuity plans; and

- meeting deadlines for the completion of planning and correction of critical systems, and for Year 2000 compliance.

Targeting Effort

Our Expectations

7.031 Some entities may not be able to obtain the resources, or have the time, to fix all Year 2000 problems or address all areas of potential risk. They must direct their efforts – and often scarce resources – to critical areas of their business where systems failure is likely to have the most serious impact on clients and the community.

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Targeting effort is about directing scarce time and resources to critical areas of the business where Year 2000 problems will have the most serious impact on health, safety and welfare.

7.032   Systems or processes can be defined as critical where their failure will affect the health, safety or welfare of individuals or the community. Other key systems or processes may have a serious impact on the effective functioning of the business, the amounts recognised and reported in the financial statements, and (in certain circumstances) the validity of the going concern assumption. We expected entities to have used a logical and systematic prioritisation process to rank their at-risk systems or processes in order of likely impact, consistent with the objectives of the business.

7.033   We put three questions:

- had the entity identified its most critical systems?;

- was the auditor satisfied that criteria used to differentiate between critical and non-critical systems reflected a logical and systematic process for setting priorities?; and

- was the entity focusing its remedial efforts on those areas of its business where the Year 2000 problem would have the greatest impact?

Our Findings

7.034   Figure 7.2 on the next page shows that almost all entities had identified their critical systems. This is vital where time is running out and resources more difficult to obtain.

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Figure 7.2
Entities That Had Identified the Most Critical Systems

Group	Yes	No
Government departments	43	–
Hospital and Health Services	23	1
State-owned enterprises	14	–
Crown Research Institutes	9	–
Local authorities	81	6
Other public bodies	18	–
Totals	**188**	**7**

7.035 Similarly, in the judgement of our auditors, nearly all entities had used a logical and systematic process to set priorities (Figure 7.3 below), and were focusing remedial effort where the impact would be most serious (Figure 7.4 opposite).

Figure 7.3
Entities That Had Used a Logical and
Systematic Process To Set Priorities

Group	Yes	No
Government departments	42	1
Hospital and Health Services	24	–
State-owned enterprises	14	–
Crown Research Institutes	9	–
Local authorities	82	5
Other public bodies	18	–
Totals	**189**	**6**

Figure 7.4
Entities That Had Focused Remedial Effort
Where the Impact Would Be Most Serious

Group	Yes	No
Government departments	42	1
Hospital and Health Services	23	1
State-owned enterprises	14	–
Crown Research Institutes	9	–
Local authorities	83	4
Other public bodies	18	–
Totals	**189**	**6**

7.036 Those few entities that have failed to set priorities for risk assessment and action plans are, in effect, relying on their ability to remedy a range of problems to a number of different deadlines. We view this as a high-risk strategy when resources are becoming scarce and there is fundamental uncertainty about the likely impacts of the Year 2000 problem. For each entity some potential impacts from the Year 2000 problem will be more severe than others. Setting priorities for taking remedial action is an essential step in the risk management process if entities are to mitigate any such impacts.

Meeting Statutory and Contractual Obligations

Our Expectations

7.037 The entity's business impact assessment process should take into account its ability to meet statutory and contractual obligations. All public sector entities are required to comply with a range of statutory obligations. They may also have contractual obligations to parties such as clients, suppliers, funders and other stakeholders. Should key systems or processes fail entities may not be able to meet those obligations, placing them at risk of legal action and damaging their reputation.

> *All public sector entities must consider their ability to meet their legal obligations to stakeholders.*

7.038   We asked auditors whether entities had identified their statutory and contractual obligations, and considered the possible impact of the Year 2000 problem on their ability to meet those obligations.

Our Findings

7.039   With the exception of a number of local authorities, nearly all entities had identified their statutory and contractual obligations, and considered their ability to meet those obligations (Figure 7.5 below).

Figure 7.5
Entities That Had Identified Their Statutory
and Contractual Obligations and Considered
Their Ability To Meet Those Obligations

Group	Yes	No
Government departments	43	–
Hospital and Health Services	23	1
State-owned enterprises	14	–
Crown Research Institutes	8	1
Local authorities	68	19
Other public bodies	18	–
Totals	**174**	**21**
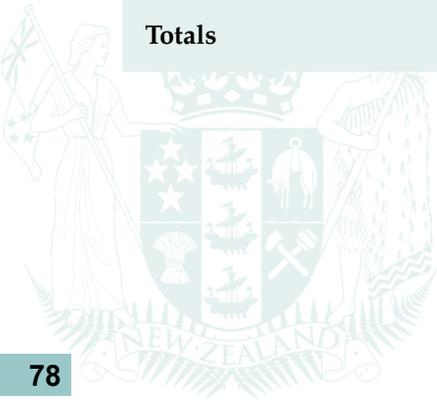
Quantifying and Obtaining the Necessary Resources

Our Expectations

7.040   As deadlines approach, it is likely to become more difficult to find the necessary technical skills in the market. As entities compete for the same resources the necessary skills and expertise may not be available when most needed, and such skilled people as are available may be more expensive to retain or engage. This is likely to be particularly relevant to entities with large and complex in-house developed computer processing systems.

> ***Entities need to have enough skilled people on hand when needed.***

7.041   We asked auditors whether entities had quantified the necessary skills and resources to fix Year 2000 problems in time, and whether they would be able to obtain those skills and resources when required.

Our Findings

7.042   Over the survey population our auditors said 14% of entities had not quantified the necessary skills and resources – with local authorities again proportionately over-represented in this group (Figure 7.6 on the next page above). For 14 entities the auditors were not confident that the necessary skills and resources would be obtained when required (Figure 7.7 on the next page below).

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Figure 7.6
Entities That Had Quantified the Necessary
Skills and Resources

Group	Yes	No
Government departments	40	3
Hospital and Health Services	19	5
State-owned enterprises	13	1
Crown Research Institutes	8	1
Local authorities	70	17
Other public bodies	18	–
Totals	**168**	**27**

Figure 7.7
Entities That Expected To Be Able To Obtain
the Necessary Skills and Resources

Group	Yes	No
Government departments	41	2
Hospital and Health Services	21	3
State-owned enterprises	14	–
Crown Research Institutes	9	–
Local authorities	78	9
Other public bodies	18	–
Totals	**181**	**14**

7.043 Some entities may assume that there is no need to plan for resourcing the Year 2000 project. Some have simple systems, and others may have assigned management of the Year 2000 project to a contractor whom they expect to be responsible for engaging the necessary staff when needed. Whatever the type of systems or project arrangements, we advise all

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Developing Testing Programmes

Our Expectations

7.044 The best way to secure some assurance that computer applications or other chip-controlled systems will handle the Year 2000 changeover is to test them. Testing:

- should be undertaken for diagnosis and to ensure that remedies have worked; and

- will take place at different levels – from individual applications or pieces of equipment to entire networks or systems.

7.045 Businesses potentially affected by the Year 2000 problem are looking at a period of 18 months or more during which a number of dates may cause problems. These problems may be triggered by:

- business process cycles, such as the beginning of a financial year, which involve date calculations;

- date processing practices, such as the use of special dates to signify the end of files; or

- a computer's failure to process correctly date formats, such as because of the character make-up of the date.

7.046 Testing programme managers need to determine which dates are likely to cause which types of date-related problems and are most likely to affect their business operations.

> *Testing is likely to be the most resource-intensive phase of a Year 2000 project. The testing phase should be well under way by now.*

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7.047 Every entity should have a tailored testing programme to confirm compliance, testing the most critical devices or systems first. We asked our auditors whether entities had developed a programme for testing the operation of critical systems for their ability to handle Year 2000 dates.

Our Findings

7.048 Only a small number of responses to our 1997 survey referred to testing strategies. Our 1998 survey showed that over a quarter of the entities surveyed had still not developed a testing programme (Figure 7.8 below).

Figure 7.8
Entities That Had Developed a Testing Programme

Group	Yes	No
Government departments	33	10
Hospital and Health Services	17	7
State-owned enterprises	14	–
Crown Research Institutes	8	1
Local authorities	55	32
Other public bodies	15	3
Totals	**142**	**53**

7.049 Testing is an integral part of any Year 2000 risk management programme, and failure to do so exposes the entity to unacceptable risk.

Developing Business Continuity Plans

Our Expectations

7.050   Few entities can be certain of having addressed every area of possible risk. In addition, a supposedly Year 2000 compliant system may fail, and system conversions may not work. Even with the best planning, unanticipated failures may occur. The vulnerability of key business systems to unforeseen failure makes business continuity planning a vital aspect of Year 2000 project planning.

> *No entity can be certain that it will be unaffected by the Year 2000 problem. Business continuity planning recognises that not all risks can be eliminated, and should focus on the critical business processes.*

7.051   Business continuity plans should:

- identify the entity's core services and critical at-risk systems;

- identify the means by which the entity will continue its operations should key systems or processes fail; and

- outline the actions the entity needs to take (such as use of manual procedures or parallel processes) to resume normal operations as soon as possible, including the resources required.

7.052   Business continuity plans should be tested so that they can be implemented swiftly and smoothly when the need arises.

7.053   We asked auditors whether entities had drawn up business continuity plans which specifically reflected the risks associated with their exposure to the Year 2000 problem.

Our Findings

7.054   Less than one-third of the entities we surveyed had developed business continuity plans for Year 2000 contingencies (Figure 7.9 on the next page above).

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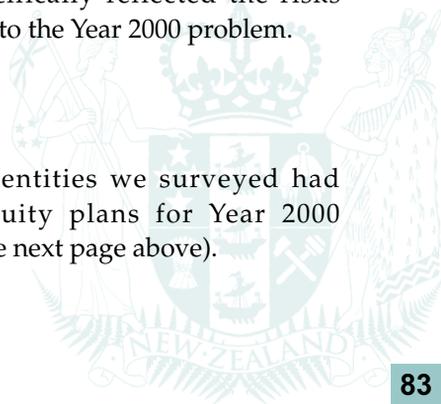
Figure 7.9
Entities That Had Drawn Up a Business
Continuity Plan for Year 2000 Contingencies

Group	Yes	No
Government departments	12	31
Hospital and Health Services	10	14
State-owned enterprises	6	8
Crown Research Institutes	2	7
Local authorities	25	62
Other public bodies	5	13
Totals	**60**	**135**

7.055   The reality is that no business can be certain that its operations will not be affected by unexpected events, however well it may be prepared. Preparing for contingencies through business continuity planning must be an integral part of the Year 2000 risk management programme. This is a vital task for those entities that deliver essential services.

Meeting the Deadlines

7.056   Effective project management is vital to ensure that problems will be fixed before the first impact occurs. Many entities are likely to have a range of target dates, distinguishing between critical and non-critical systems. The scale of the task and the growing scarcity of resources make meeting these deadlines a key issue.

> *Effective project management is the key to meeting Year 2000 deadlines. Entities need to know what their deadlines are, and allow enough time to complete tasks such as remediation, testing, and developing business continuity strategies.*

7.057   For each entity we compared the completion dates specified in the returns for our 1997 and 1998 surveys. The results of this comparison showed that in 1997 many entities had under-estimated the extent of the problem and the work involved in addressing it.

7.058   In analysing the returns from the 1998 survey we used two main indicators to establish whether there was a potential problem in their ability to meet Year 2000 project deadlines:

- planning completion dates after 31 December 1998; and

- indications that the entity would not be ready before 1 July 1999.

7.059   We considered it reasonable to expect most entities to have completed planning by December 1998. Our survey showed that 77% of entities were likely to meet this date. We accept that, in a few cases, planning for correction or replacement may be continuing into early-1999. However, delays in completing planning may also indicate that the entity has not yet addressed key aspects of the Year 2000 risk management process.

7.060   Auditors reported that 69% of the entities in the survey expected to be ready for the Year 2000 by 30 June 1999. This would have left a significant number of entities with much work to complete in the final six months before 1 January 2000.

7.061   Taking that information together with the data on planning completion dates indicates that some entities will need to make significant progress to complete the tasks required within an acceptable time. We expect that all of the entities will have rescheduled their project timelines since our survey. Our auditors will be monitoring their ability to meet the deadlines for progress over the coming months.

Conclusions

7.062   The findings from our 1998 survey and information from our discussions with monitoring bodies show that a significant number of Hospital and Health Services and local authorities still had a number of essential tasks to complete – placing them at risk of missing their deadlines.

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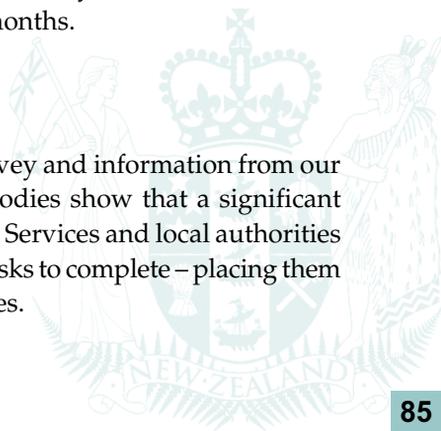
7.063   Our auditors will continue to monitor the progress of all public sector entities in being ready for the Year 2000, particularly those entities that, at the time of our 1998 survey, gave rise to the "No" responses in the various figures in this article. For those entities that we believe are not making enough progress, we will be seeking assurance directly from them about the steps they are taking to minimise this significant source of risk to their business.

7.064   We are aware that some of our findings differ from those reached by the State Services Commission and other monitoring agencies. These differences reflect:

- the time when the information was gathered;

- the methods used to gather the information;

- the type of information sought;

- the survey population; and

- the type of analysis undertaken.

7.065   We have discussed these differences with the Commission and other agencies to ensure that they fully understand the basis on which we have reached our findings. We encourage them to continue their efforts to promote responsible management of this key business risk.

7.066   In addition, we will be urging all public sector entities to disclose in their public accountability documents the progress they have made in addressing the issue.