



The Parliamentary Counsel Office
Public Access to Legislation (PAL)
Project
Post Implementation Review

12 January 2009



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Preface

This document is specifically designed for use by multiple audiences.

In addition to this Preface, the document contains an Executive Summary and two Parts:

- # Part I: Post Implementation Review of the third stage of the Public Access to Legislation Project (PAL3); and
- # Part II: Considerations for Other Projects, which highlights those aspects of PAL3 that were identified as providing valuable insights for consideration by other agencies who may be considering the implementation of a new, business critical, system.

Appendices referred to in the text are presented at the end of the document.



Executive Summary

The prime catalyst for the Public Access to Legislation system was to provide free access, via the World-Wide Web, to New Zealand legislation. It did not, "... seek to justify the project by financial quantification of the benefits of improving public access to legislation ...", but rather permitted the State to be, "... able to adequately fulfil its statutory responsibility to make legislation available to the public, both as enacted and in an up-to-date form with amendments incorporated."¹

This principle was supported by Treasury and the State Services Commission, in terms of the public good.

The full timeline of the Public Access to Legislation (PAL) Project stretches back over ten years, or more. A discussion paper on the topic was published by the Parliamentary Counsel Office in 1998. This was followed, in 1999, by a PricewaterhouseCoopers report on options for improving public access to legislation.

In April 2000 Cabinet gave approval for a business case to be prepared. In November 2000 Cabinet provided authorisation for the initial stage of the project.

The first stage, to establish the detailed costs, ran from July to December 2001. In February 2002 Cabinet approved funding for the second stage of the project.

The delivery deadline of January 2003 was not met, and the project was halted in June 2003, pending an independent technical review.

The third phase of the project commenced in March 2005 following agreement between the Parliamentary Counsel Office and Unisys regarding the technical and commercial basis on which the project could be completed. The Legislation New Zealand web site went live in January 2008.

The project was completed in March 2008, with the signing of an ongoing support and maintenance agreement with Unisys.

This report provides the Post Implementation Review (PIR) of the third phase of the project. Research for the report was undertaken in June 2008.

¹ "Business Case Summary"; Parliamentary Counsel Office; 20 November 2000.



The intent of this PIR is not to find fault or apportion blame nor is the intent to give praise or recognise achievement. Rather it provides an impartial assessment based upon both positive and negative feedback obtained from those involved in various parts of the process.

The approach adopted for this review consisted of the following stages:

- # Background research and a review of available documentation;
- # A series of interviews with project participants and external observers;
- # A systematic analysis of the facts and opinions presented in the preceding stages;
- # The consolidation of the analysis into a draft report which was distributed for comment; and
- # Correlation and incorporation of comment as received on the draft report.

Given the extended timeframe of the project, and the changes of personnel along the way, different people have had different perspectives of the project, at different times. Rather than reflect all of the individual opinions expressed, the different opinions have been correlated across the interviewees and then consolidated into this report.



Part I: Post Implementation Review

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1 Background

Some understanding of the background to the Public Access to Legislation Project (PAL) is necessary in establishing a context for this Post Implementation Review.

New Zealand was amongst the first countries to develop a system to support the drafting and publishing of legislation. The Tasmanian EnAct system² was implemented before PAL. The Canadian federal system was being developed at the same time as PAL as was a system in New Brunswick.

New Zealand was reportedly the first to develop a fully integrated end-to-end solution.

1.1 The Early History

In 1990, the Government of the day sold the Government Printing Office as one of a number of asset sales during the period 1988 to 1999.³

Among its many responsibilities, Government Print was responsible for formatting and printing legislation for the Executive agencies⁴ (regulations and other statutory instruments), and for Parliament.

A consequence of the sale was that the intellectual property surrounding the formatting and physical presentation of legislation, passed from public to private ownership. This left the central role of the State in providing public access to legislation in some doubt.⁵

The legislation of several overseas jurisdictions (examples being Australia, Canada, the United States, and a number of smaller countries and territories) was publicly available via the Internet. In New Zealand, legislation was only available in printed form.

The Parliamentary Counsel Office (PCO) issued a public discussion paper "Public Access to Legislation: A discussion paper for public comment" in September 1998. Ninety two submissions were received.

² The Tasmanian Government initiated the Legislation System Project in early 1994, and a public access service was put into production in April 1998. <http://www.thelaw.tas.gov.au/about/project.w3p>

³ "The sale [of the Government Printing Office] was announced prior to the 1988 Budget [with an agreement being] entered into on 24 January 1990, [with settlement being effected] at the end of June 1990". "New Zealand Government Asset Sales as at 30 September 1999 – Completed Sales"; The Treasury; 30 September 1999.

⁴ The executive agencies in the parliamentary complex are the Department of the Prime Minister and Cabinet, the Department of Internal Affairs, and the Parliamentary Counsel Office.

⁵ "[The] ownership of an electronic database of legislation could, in terms of the existing contractual relationship between the Parliamentary Counsel Office, the Office of the Clerk, and the Printer, be subject to some debate"; Improving Public Access to Legislation; PricewaterhouseCoopers; December 1999.



In December 1999, PricewaterhouseCoopers delivered a report on options for improving public access to legislation⁵.

In April 2000, Cabinet approved the preparation of a business case for a project that would provide an authoritative, accurate, and up-to-date electronic database of New Zealand legislation, made publicly available over the Internet.

The prime catalyst for the Public Access to Legislation system was to provide free access, via the World-Wide Web, to New Zealand legislation. It did not, "... seek to justify the project by financial quantification of the benefits of improving public access to legislation ...", but rather permitted the State to be, "... able to adequately fulfil its statutory responsibility to make legislation available to the public, both as enacted and in an up-to-date form with amendments incorporated."⁶

This principle was supported by Treasury and the State Services Commission (SSC), in terms of the public good.

1.2 Stages of the PAL Project

In June 2000, the PCO issued a Request for Expressions of Interest (RFI). The RFI sought a recommended approach and indicative costs to enable a Business Case to be submitted for Government approval.

In November 2000, Cabinet authorised the PCO to proceed with the PAL Project. A Request for an Implementation Partner was issued in December 2000.

1.2.1. Stages 1 and 2 (PAL1 and PAL2)

In April 2001, Unisys was selected as the preferred implementation partner. The first stage of PAL (now known as PAL1) commenced in July 2001.

In April 2000, the Controller and Auditor-General had published a document entitled, "Governance and Oversight of Large Information Technology Projects". That specifically described the governance and oversight of projects.

⁶ "Business Case Summary"; Parliamentary Counsel Office; 20 November 2000.



We note that this document states that, “the larger and more complex a project is, the more likely it is that a co-operative relationship with a competent lead supplier may be more effective than an arm’s-length relationship based on tight output specifications”.⁷

Within the PAL project framework, the PCO’s role was to explain the requirements of the legislative drafting process, and Unisys’s role was to craft the technology to meet those requirements.

In August 2001, slightly after the project started, the State Services Commission and Treasury published a document describing the management and monitoring of IT projects.⁸

We are advised that all stages of the PAL project were both managed, and monitored, in accordance with the guidelines contained in these two documents.

A Steering Committee was established, with membership from the Parliamentary Counsel Office, the Office of the Clerk (OoC), Inland Revenue Department (IRD), Unisys, the State Services Commission e-Government Unit, and consultants to the PCO.

PAL1 completed in December 2001, with the identification of detailed costs for Stage 2.

In February 2002, Cabinet approved additional funding for Stage 2. The contractual arrangement between Unisys and PCO was formalised in May 2002, with an overall delivery deadline of 31 January 2003. This stage is now referred to as PAL2.

On 22 November 2002, it became apparent that the delivery date would need to be postponed by two weeks. PAL2 then identified a large number of defects during the testing phases. In effect, the system did not work as intended.

In February 2003, the Attorney-General and the Minister of Finance were informed that a February go-live date could not be achieved.

The project was halted in June 2003, and an independent technical review was commissioned in August of that year.

⁷ Report of the Controller and Auditor-General: Governance and Oversight of Large Information Technology Projects, page 9

⁸ “Guidelines for Managing and Monitoring Major IT Projects”; State Services Commission and the Treasury; August 2001.



1.2.2. Stage 3 (PAL3)

The project recommenced (as PAL3) in March 2005 following agreement between the PCO and Unisys regarding the commercial and technical basis on which the project could be completed.

PAL3 incorporated the experience gained from the previous iterations. In effect, PAL1 and PAL2 provided a proof of concept that could be carried forward into PAL3, albeit with rework. PAL3 also implemented revised governance and project management structures.

The PAL3 project plan was reviewed multiple times, due to the planned schedule not being met. There was one formal amendment to the project plan at the end of 2005, when it was agreed that the final acceptance date would be moved from 12 October 2006 to 17 November 2006.

During 2006, significant slippage occurred in the build and test phases due to technical issues that needed to be resolved.

The system was finally implemented for internal use within PCO on 14 November 2007, with the public website being implemented on 16 January 2008.



2 The LENZ System

The Parliamentary Counsel Office is responsible for drafting and publishing most of New Zealand's legislation.

The Public Access to Legislation project implemented a system which is now referred to as the Legislative Enactments of New Zealand (LENZ) system. Appendix B provides an overview of the various components of the system.

The LENZ system supports the legislative drafting and publication process.⁹ It is used by the Parliamentary Counsel Office, the Inland Revenue Department, and the Office of the Clerk.

The system supports the drafting of legislation, the passage of legislation through the House of Representatives (the House),¹⁰ and the publication of legislation on the New Zealand Legislation website¹¹ and in printed format which is then made available from Legislation Direct and selected bookshops.

It is intended that the legislation on the New Zealand Legislation website will become an official source of New Zealand legislation in the future. This will involve two steps. Firstly, the PCO will "officialise" the material, giving it "semi-official" status. The process is expected to take at least three years. Secondly, when it is completed, the PCO intends to promote legislation to make the New Zealand Legislation website an official source of legislation.

The "officialisation" process includes the exercise of the powers conferred by section 17C of the Acts and Regulations Publication Act 1989. That section authorises the PCO to make certain editorial changes to a reprinted enactment so that it can be reprinted in a format consistent with current legislative drafting practice.

Items that have been "officialised" will include an image of the New Zealand Coat of Arms in the PDF or "View whole" HTML version.

⁹ It also supports the reprinting process, which enables the PCO to publish up to date versions of legislation on the New Zealand Legislation website and some hard copy reprints.

¹⁰ The New Zealand Parliament website provides information on how Parliament works and how Laws are made at <http://www.parliament.nz/en-NZ/HowPWorks/Laws/>

¹¹ www.legislation.govt.nz



In addition, legislation published since the website went live will have "semi-official" status and will not need further "officialising", as it will be published from the same source files as official printed legislation published since the go-live. This legislation will also include an image of the New Zealand Coat of Arms.



3 Introduction to the PIR

3.1 Document Purpose

The primary purpose of this review is to comment on PAL3; bounded by the Variation Agreement, signed in March 2005, which restarted the project; and the Support and Maintenance Agreement, signed in March 2008, which effectively moved the system into Production status.

Some references are made to PAL1 and PAL2 where a brief explanation of historic events is required to place things in the correct context.

3.2 PIR Approach

The approach adopted for this review consisted of the following stages:

- # Background research and a review of available documentation;
- # A series of interviews with project participants and external observers;
- # A systematic analysis of the facts and opinions presented in the preceding stages;
- # The consolidation of the analysis into a draft report which was distributed for comment; and
- # Correlation and incorporation of comment as received on the draft report.

The intent of this PIR is not to find fault or apportion blame nor is the intent to give praise or recognise achievement. Rather it provides an impartial assessment based upon both positive and negative feedback obtained from those involved in various parts of the process.

Given the extended timeframe of the project, and the changes of personnel along the way¹², different people have had different perspectives of the project, at different times. Rather than reflect all of the individual opinions expressed, the different opinions have been correlated across the interviewees and then consolidated into this report.

A list of interviewees and information sources is provided in Section 8, "Consultation and Research", on page 30.

¹² At the final Steering Committee meeting in February 2008, it was noted that, "... 34 Steering Committee meetings have taken place since the project restarted in 2005. The PCO and Unisys have had 10 project managers and five project sponsors between them during the course of the project, ...



Appendix A provides an overview of the PAL project timeline.

3.3 The PIR Framework

Given the timeframe of the PAL project, it is important to remember that, over time, standards evolve, processes change, and knowledge increases. This is especially true when considering Information and Communications Technology (ICT) projects, which are subject to almost constant evolution of project management standards, changes to technology engineering practices, and the accumulated wisdom of hindsight.

3.3.1. Guidelines for Managing and Monitoring Major IT Projects

The PAL project was managed, and monitored, in accordance with the “Guidelines for Managing and Monitoring Major IT Projects”, which were published by the State Services Commission and Treasury in 2001.¹³

The Guidelines provide a framework, among others, for what might be included in a typical Post Implementation Review:

- # Determine whether the benefits and timelines, the project objectives, and the critical success factors have been met.
- # Determine how well the project has achieved the goals set out in the business case.
- # Compare financial performance against the project budget.
- # Highlight what has been learned so that it can be incorporated into future projects.
- # Identify other opportunities to add value to the system/project.
- # Identify the strengths and weaknesses of the project for future reference and action.
- # Make any other recommendations on the future of the system / project.

¹³ The Guidelines superseded the 1998 publication “Principles and Good Practice for Selecting and Managing Information Technology Projects”.



3.3.2. The Gateway Review Process

In the period since the PAL project was initiated, the Government has introduced a new Capital Asset Management Regime. This is combined with a requirement that new, high risk, capital expenditure proposals are subject to an additional layer of project or programme assurance, based upon the Gateway process.¹⁴

The Capital Asset Management regime includes a formal two stage Cabinet approval process which will apply to all new capital investment proposals with a whole-of-life cost greater than NZ\$25 million (including GST), or are assessed as high risk based upon the Gateway risk profiling methodology.

New, high risk capital expenditure proposals will be subject to an additional layer of project or programme assurance, based upon the Gateway process, irrespective of the source of funding¹⁵.

Hence, in addition to the Guidelines for Managing and Monitoring Major IT Projects, this Post Implementation Report addresses aspects of the Gateway process; in particular Gateway 4 (Readiness for Service) and Gateway 5 (Operational Review and Benefits Realisation).

The Gateway Review 4 focuses on whether the solution is robust before implementation; how ready the organisation is to implement the business changes that occur before and after delivery; the contract management arrangements; and whether there is a basis for evaluating ongoing performance. For strategic partnership contracts, it is particularly important to ensure that the project is well prepared for the contract management phase. This would mean that a governance structure is being developed for the operational phase of the project, together with adequate budgets, appropriately skilled staff from the client and the provider, and appropriate accommodation for the service management team.

A Gateway Review 5 may occur several times over the life of an operational service. The first Gateway 5 review concentrates on the Business Case and how well arrangements have been set up for the service delivery and associated contract management.

¹⁴ The Gateway Process was developed by the Office of Government Commerce (OGC) in the United Kingdom. Further information is available on the State Services Commission's website.

¹⁵ Given that this document is intended for future guidance, SSC specifically requested that the Gateway process be considered.



3.3.3. Considerations for Other Projects

A key component of a Post Implementation Review is to “Highlight what has been learned [both good and ill] so that [experience] can be incorporated into future projects”.

Part II of this report contains key learning’s from PAL3.

The report is constructed to highlight those aspects of PAL3, that were identified by interviewees, in terms of providing valuable insights for consideration by other agencies who may be considering the implementation of a new, business critical, system.

The topics address aspects of Gateway reviews 4 and 5. They also address the following aspects of a PIR, as noted in the Guidelines for Managing and Monitoring Major IT Projects.

- # Identify other opportunities to add value to the system/project.
- # Identify the strengths and weaknesses of the project for future reference and action.
- # Make any other recommendations on the potential future of the system/project.



4 The Project Timeline

4.1 The Timeline

PAL3 commenced on the 17 March 2005, following agreement between the PCO and Unisys on the technical and commercial basis on which the project could be completed.

The terms of the commercial settlement were reflected in a variation to the contract between PCO and Unisys. The Variation Agreement was signed on 16 March 2005 after Cabinet approval of the commercial settlement.

The original planned completion date was 12 October 2006. The completion date was reviewed at various stages of the project.

Delays occurred during 2006 due to a number of technical and performance issues which were addressed by Unisys. Resolution of these issues continued into 2007.

User Acceptance Testing was signed off by the PCO and Unisys in September 2007.

The actual go-live dates were subject to a number of considerations:

- # Unisys required time to complete work before go-live;
- # The PCO Reprints Unit required time to update legislative data so that the website would be as up to date as possible;
- # The expenditure on support and maintenance was greater than approvals that had been received to date. This required further Cabinet approval, which was dependent on the Cabinet timetable; and
- # To proactively manage and minimise operational risks surrounding the stability and performance of the LENZ system, the go-live dates were synchronised with the Parliamentary timetable, and a period when the public website was unlikely to be heavily used.

The LENZ system was implemented for internal use on 14 November 2007, with the New Zealand legislation website (the public website) becoming operational on the 16th January 2008.

Appendix A provides a historical perspective of the project timeline.



4.2 The Management of Contractual Arrangements

4.2.1. The Variation Agreement

The Variation Agreement for the completion of the PAL Project was on the basis that the Crown owns the PAL System, with Unisys providing housing, maintenance, support, and enhancement services.

Under the terms of the Agreement, the Crown agreed to pay Unisys an additional amount to complete the project. The amount payable by the PCO was capped. The PCO would supply hardware and software up to a certain amount. Should further expenditure be required, then Unisys would bear the additional cost.

Unisys agreed to accept all development risks for completion of the project. Should any changes be required to any of the technologies, then Unisys was committed to implement those changes, and to bear any associated costs. Unisys had sole discretion as to the technologies that were utilised, so long as the developed system met the requirements.

Both Unisys and the PCO agreed to work together to standardise and simplify output requirements and functional requirements.

It was also agreed that Unisys would provide ongoing services for the LENZ system, post implementation.

4.2.2. The Services Agreement

The LENZ system is a technically complex system. The nature of the system design and customisation predicated that ongoing support and maintenance services would be required from Unisys.¹⁶

When the project restarted in March 2005, the costs for ongoing maintenance, support, and enhancement were best estimates, based upon the design and configuration of the system as at that time. It was recognised that the design could change, with resulting impacts on maintenance, support and enhancement costs. This was identified in Cabinet papers.

The final agreement between the PCO for ongoing support, maintenance, and enhancement services was significantly different from the arrangement that was originally set out in the 2005 Variation Agreement.

A lot of work was required to reach the final agreement.

¹⁶ Appendix B: "LENZ System Overview" describes the LENZ system and its complexity



In May 2006, PCO initiated work to develop an ongoing services agreement. Unisys was unable to supply a proposal for ongoing services until December 2006, when the PCO received "ballpark" information on costs for ongoing services. The costs were significantly different to those in the Variation Agreement.

The PCO made a contingent budget bid as part of the 2007 budget round, noting that the bid was based upon figures that were still preliminary and very tentative.

In August 2007, the PCO received a draft proposal from Unisys relating to the provision of ongoing services.

This proposal from Unisys also indicated a substantial increase in the cost of delivery of ongoing services. Unisys advised that the increase was based upon the completed LENZ system being larger and more complex than envisaged when the Variation Agreement was signed in March 2005, with more resources being required to maintain the system.

User Acceptance Testing was signed off by the PCO and Unisys on 10 September 2007.

The PAL system could not be put into production until agreement was reached on ongoing services arrangements between the PCO and Unisys. An external commercial review of the support arrangements was initiated in September 2007. On 15 October 2007, the PCO sought approval from Cabinet to negotiate with Unisys on the ongoing services costs.

Cabinet approval was given on Monday 12 November 2007 to put the PAL system into production within PCO, IRD, and OoC.

An interim ongoing services agreement between PCO and Unisys was signed on 14 November 2007. The web site element of the project went live on 16 January 2007.

The warranties included within the Variation Agreement of 2005 were reviewed with a separate Warranty Agreement being included within the final ongoing services agreement.

The commercial terms of the Agreement for the supply of Ongoing Services for the PAL system (the Unisys Supply Agreement) were finalised on 16 March 2008.



5 Project Team Structure

5.1 Governance

The Governance structure was revised for PAL3. The overall project structure had multiple layers, which included:

- # The Monitoring and Advisory Group
- # The Project Steering Committee
- # External Assurance - both Independent Technical Assurance which focused on technical aspects of the system, and Independent Quality Assurance (IQA) which focused on the project.
- # The Project Directors and Project Managers (Unisys and PCO).

Appendix C provides details of the membership of the Monitoring and Advisory Group and Project Steering Committee.

The layers of the structure were seen as necessary, given the profile and history of the project. Servicing the different layers, in terms of time spent in meetings, and developing reports, required a significant investment of time from the PCO Project Sponsor, Project Director, and Project Managers.

It is noted that the investment of time and effort was balanced by the assistance, and experience, that was provided to the project, and that enabled the project to address a number of difficult issues. This assistance was greatly appreciated by the PCO.

The various governance layers reinforced a “whole of government” approach to the project, and to the management of the relationship with Unisys.

5.1.1. Monitoring and Advisory Group

Government officials on the Monitoring and Advisory Group were at a sufficiently senior level to make key decisions when they were necessary, and advise Ministers where appropriate.

The SSC had a dual role in that it acted as a monitoring agency, but also was proactive in facilitating external assistance to the PCO.

The PCO Project Sponsor and Project Director noted that the experience in the monitoring agencies of other large and complex Information and Communications Technology projects was valuable.



5.1.2. Steering Committee

The State Services Commission worked with PCO to identify two experienced senior managers in the public sector who acted as members of the Steering Committee.

Some members of the committee found that the level of inexperience with major ICT projects amongst PCO personnel presented a challenge which brought with it frustrations around how the governance and management of such projects might be best achieved. In the early stages of the project, there was a perception of resistance to advice about these matters.

The presence of an experienced Chief Information Officer on the Steering Committee from the start of PAL3 was seen as extremely valuable.

When it was recognised that there was a need for external assistance at various points in the project, the monitoring agencies and external Steering Committee members identified highly experienced resources that had the ability to address specific problem areas.

5.1.3. Project IQA

The reports from the project IQA were seen as valuable by the various Governance layers. The IQA did not raise many issues that were not already known, but they provided a summary and consolidation of the issues that could then be openly discussed within the project context.

From a project perspective, the IQA was seen as being sometimes in conflict with the pragmatic reality of the immediate problems faced by the project team.

Interviewees noted that members of the IQA team were extremely helpful; they were sought out by the project team for advice and guidance.

5.1.4. Technical IQA

When PAL2 experienced difficulties, an international search was initiated for a reviewer who had the expertise to provide an authoritative opinion on the system that had been developed.

A technical review was undertaken in the second half of 2003, after PAL2 was brought to a halt. The review provided comfort that the LENZ system could be developed, and maintained.

The expertise of the technical reviewer was recognised by PCO and Unisys, and the reports were seen as valuable by all parties.



In addition, an independent technical expert was engaged by the PCO to provide quality assurance of the PAL system architecture and design document deliverables.

A series of technical reviews were scheduled at specific points during PAL3 to provide comfort on selection of products and to provide advice on customisation and the technical design of the system.

5.2 PCO, IRD, & OoC

The project was managed by PCO. IRD and the OoC were represented on the Steering Committee.

IRD and the OoC made resources available to the project team throughout the course of PAL3. They participated in the requirements definition process, the testing phases, and in the implementation of the LENZ system.

5.2.1. Project Management

PCO appointed an external Project Manager and an external Test Manager. The experience that these individuals brought to the project was extremely valuable.

An external PCO Project Director was appointed in August 2005, but had to retire due to ill health in November 2005, at which point the Deputy Chief Parliamentary Counsel (Access) took over the role.¹⁷

5.3 Unisys

Senior representatives from Unisys' Asia Pacific offices and Unisys Australia were involved in the negotiations that preceded PAL3. They continued to be involved as members of the Steering Committee and the negotiations leading to acceptance of the LENZ system, and the finalisation of the ongoing services agreement.

The negotiations reinforced the importance of the PAL project for the New Zealand Government and Parliament. This resulted in a "whole of government" perspective being applied to the project.

The importance of PAL was reinforced on 30 March 2005, at a meeting between senior Unisys representatives and the Minister of Finance and the Minister of State Services. This meeting was instigated and arranged by the SSC.

¹⁷ The Deputy Chief Parliamentary Counsel (Access) had held the role prior to this appointment. Apart from this brief period during 2005, the Deputy Chief Parliamentary Counsel was the PCO Project Director during the life of the PAL project.



The importance of the project was further reinforced during a visit in late 2005, by the Chief Parliamentary Counsel, to Unisys Headquarters in the USA.

5.3.1. Project Management

The Unisys team that started work on PAL3 was different from the team that had worked on PAL1 and PAL2.

During the course of PAL3, there were a number of changes in the Unisys team which included changes of Project Manager (3), chief architect (3), and other team members.

The Unisys Project Director took over the management of the project after the second project manager retired. The Unisys and the PCO Project Managers worked well together, and are jointly credited with the focus and determination that was required to deliver the project.

5.3.2. Subcontractors

Unisys subcontracted resources from organisations that could provide specialist expertise for the customisation and integration of the LENZ system. The contract variation agreement contained named resources from Elkera, ADG, e-Gloo (Australian companies), and Brookers (New Zealand).

The degree of precision required in the output from the LENZ system was such that Unisys, and Unisys's subcontractors, were unable to verify that the output met specifications. The PCO team were required to verify the accuracy of the output.

There was concern over the quality of some of the subcontractor deliverables. This is in part due to the complexity of the specifications, and to the manner in which product customisation was developed.

An ongoing major risk is the continued availability of specialist resource in the subcontractors.

This risk is being addressed by Unisys and PCO under the terms of the ongoing support and maintenance agreement.

5.4 Other Contracted Parties

The PCO maintained ongoing contractual relationships with several parties during the PAL project, as discussed below. The consensus is that the working relationship between PCO and the contracted parties was open, professional, and well managed.



5.4.1. Printed Copy of Legislation

The extensions to the PAL project timelines required extension of contractual arrangements, including:

- # The arrangement between PCO and Securacopy for the printing, distribution, and sale of legislation; and
- # The arrangement with Legislation Direct to maintain a website that provided a list of recently published legislation and a facility to order legislation online.

Legislation Direct was also involved in the process of migrating data from the existing drafting system into the LENZ system.

Following the implementation of the LENZ system, PDF renditions of legislation are sent to SecuraCopy for professional (and bulk) printing.

5.4.2. The Legislation Website

Brooker's was selected, in 2002, to work with Unisys, and provide the PCO with the electronic legislation database and associated services for the PAL project.

Brookers are continuing to work with the PCO to maintain the database of legislation that "sits behind" the New Zealand Legislation website, and to update it with legislative changes while the PCO concentrates on officialisation.

5.4.3. The Interim Website

An Interim Website of New Zealand Legislation was provided by Brookers from 2002 until June 2008.



6 Project Management

6.1 Project Plan

The project management plan was subject to scrutiny by three parties (the Project Manager, Project IQA, and the Technical Reviewer) in September and October 2004. The revised plan was subject to further review before PAL3 commenced in March 2005.

The plan was re-visited at a number of points during the course of the project. Appendix A, on page 77, provides a project timeline.

6.2 Risk Management

Concerns were raised in the various reviews of the drafts of the Variation Agreement and the Project Management Plan, regarding the balance of risk between Unisys and the PCO, and whether the schedule allowed sufficient time to resolve the technical integration of products.

A range of measures were put in place to identify and manage the risk to the Crown. These included the contractual arrangements with Unisys for the delivery of the system, the inclusion of allowance in the project budget for change requests, and for the contracting of external expertise to assist in the resolution of issues.

Even so, some unforeseen risks were encountered. These required a high degree of focus from the PCO management team.¹⁸

Unexpected technical integration and performance issues introduced delays.

A great deal of time and external expertise was required to resolve problems surrounding contractual arrangements for the ongoing support and maintenance of the system.

6.3 Reporting

Reporting evolved during the course of PAL3. The external Steering Committee members provided feedback on what information was useful in enabling them to perform their roles.

The consensus is that reporting worked well.

¹⁸ For example, three key technical issues were encountered, and Unisys initiated a technical change request for an operating system and Database change. This change was subject to external technical opinion and the costs of the change were negotiated under the terms of the contractual arrangements.



6.4 Communication

PCO adopted the strategy of making information available to the Press and other parties as soon as it could do so.

The PCO website provides a history of the project and a set of documents that were made available to the public. These documents include the technical review reports.¹⁹

External communications expertise was engaged to develop communications materials towards the end of the project.

6.5 Financial Management

This report has not performed an independent assessment of the PAL costs as this work has earlier been performed by independent experts, in discussion with the Audit Office. All costs noted are in New Zealand dollars.

The original Government approval of the project in 2000 was based upon an estimated cost of 5.19 million (GST inclusive) to complete the project, and ongoing operating costs estimated at 0.782 million (GST inclusive) per annum.²⁰

These original cost estimates were revised at the end of PAL1. The total cost of implementation was revised to 8.174 million (GST inclusive), with ongoing operational costs of 1.13 million (GST inclusive) per annum.²¹

The arrangements for the resumption of the project in 2005 included agreement between PCO and Unisys to share the additional costs of completing the project.²² Ongoing support costs were estimated at 0.8 million per year (excluding GST), for the Initial Term of the agreement.²³

All of the cost revisions required Cabinet approvals. The project completed slightly under the revised budget.

¹⁹ <http://www.pco.parliament.govt.nz/pal>

²⁰ PCO website, Media statement, 1 April 2005

²¹ Ibid

²² Ibid

²³ A period of five years commencing on final acceptance.



6.5.1.1 Reconciliation of Costs

Independent accounting advice was sought, in discussion with the Audit Office, to review costs incurred through the duration of the PAL project, and separately to provide a valuation of the PAL system.²⁴ This required extensive reconciliation of costs, including consideration of costs arising from delays to the project.

"The project costs were \$14.643 million (GST exclusive) and the interim arrangement costs were \$13.801 million (GST exclusive). The overall cost of the PAL project combining these two elements is \$28.444 million (GST exclusive). Details of these two areas of expenditure are as follows.

The total cost to the PCO of completing the PAL Project (Stage 1 and Stage 2) is \$14.643 million (GST exclusive). This compares with the original estimated cost in 2000 of \$5.19 million (GST inclusive), and the revised cost in 2002 of \$8.174 million (GST inclusive).

... The total costs of maintaining the interim prepublication arrangements from Legislation Direct (LD), and for free public access to legislation from the Interim Website of New Zealand Legislation (provided by Brookers) from March 2003 until the completion of the PAL project was \$13.801 million (GST exclusive). This figure is comprised of \$12.609 million (GST exclusive) for prepublication services from LD, which were phased out on 29 February 2008, and \$1.192 million (GST exclusive) for Brookers' interim website hosting and maintenance. That agreement expires on 30 June 2008"²⁵

Approximately \$3 million of the \$14.643 million cost to the PCO was absorbed by Unisys.²⁶ The asset valuation of the LENZ system was established as \$11.652 million.

The valuation of the system was noted by the Cabinet Economic Development Committee in February 2008.

Audit New Zealand (Auditors to the PCO) has recommended taking principally 5 years as the depreciation period. Depreciation expenditure continues to increase over the five year period of the support and maintenance contract due to planned investment in upgrades, enhancements, and simplification of the LENZ system.

²⁴ Costs and Life of the Public Access to Legislation System, PricewaterhouseCoopers, 15 January 2008

²⁵ Parliamentary Counsel Office Estimates 2008/09: Justice and Electoral Committee – Additional Questions..

²⁶ Report of the Justice and Electoral Committee, 2008/09 Estimates, Vote Parliamentary Council



6.5.1.2 Ongoing Support and Maintenance Costs

PCO receives appropriations for the support and ongoing enhancement of the LENZ system. The appropriations take into account use of the system by the IRD and the Office of the Clerk.

Changes to appropriations were approved to enable the full implementation and ongoing support of the system. The additional funding was designed to cover enhancing the capability within PCO to manage the future strategic direction of the LENZ system, depreciation, and capital charge due to a change in the LENZ asset and the negotiation, support and maintenance of the system with Unisys.

In February 2008, the Cabinet Economic Development Committee approved the terms of the agreement with Unisys for the support, maintenance, and ongoing enhancement of the LENZ asset.

The appropriations for ongoing capital and operational expenditure have been increased for ongoing support of and capital investment in, the LENZ system.²⁷

6.6 Change Control

A change control process was put in place, from the start of PAL3, to record changes that were requested by the business users during the course of the project. This was based upon a transparent process to determine why the change was needed. In this way, the impact of each suggested change could be gauged and assessed, supporting decisions on the need and priority for each change.

The PCO Project Director signed off any changes, which were then approved by the Chief Parliamentary Counsel.

6.7 Change Management

6.7.1. Organisational Change

The PCO has historically been a drafting and compiling organisation. The business case for the PAL project introduced change that has resulted in the PCO becoming a drafting, compiling, and publishing office.

²⁷ Performance Information for Appropriations, Vote Parliamentary Counsel: Justice Sector – Information Supporting the Estimates, 2008/09, The Treasury



The PCO senior management recognised that the PCO would require change in order to manage the demands that the operation and ongoing maintenance, support and enhancement would place on the office.

Pricewaterhouse Coopers (PwC) were engaged during 2006 to make recommendations on management structure and organisational arrangements that would support the organisation going forward. PwC also addressed issues regarding the development of leadership and management capability in relation to the changed responsibilities and size of the organisation.

Recommendations on organisational structure were also received from the IQA providers.

6.7.2. Ongoing Change Management

The PCO has implemented an ongoing change management plan to:

- # Manage change and develop the strength and depth of leadership and management capability given the wider responsibility and increased size of the PCO
- # Develop better risk management processes for the LENZ system and other core business processes
- # Achieve key deliverables from the PCO's strategic human resources plan.
- # Manage the LENZ system enhancements under the ongoing support and maintenance agreement.

6.8 Operational and Maintenance Acceptance

Transition planning activities were identified at the start of PAL3.

In November 2006, a set of operational readiness recommendations were produced. This contributed to a decision in December 2006 to appoint an implementation manager.

A Unisys Implementation Manager was appointed in April 2007, and a PCO Implementation Manager was appointed in May 2007.

A project IQA review in June 2007 highlighted the work that was required to transition from a project structure to ongoing business operations. This clarified the need for capability in PCO to manage the ongoing development of the LENZ system, and the need for detailed transition planning.



The PCO Project Manager had to leave the project before it completed, because of the extended timeframes of the project. The external Test Manager and Implementation Manager assumed the Project Management responsibilities at this point. Interviewees noted that they performed a very good job.

A Chief Information Officer, with experience of managing an environment where Unisys were the contracted services provider, was seconded to the PCO, from September 2007 to January 2008, to assist in the development of the Unisys services agreement, and planning for transition to ongoing business operations. PCO appointed a permanent Chief Information Officer in January 2008.

An experienced Systems Architect was seconded to PCO in March 2008.

A Cabinet bid was developed for appropriation to build the Information Systems capability within PCO. This is discussed under Section 6.5.1.2, "Ongoing Support and Maintenance Costs", on page 24.



7 Benefits Realisation

7.1.1. The Business Case

The prime catalyst for the PAL project was the need to improve public access to legislation.²⁸

The Project was one of the core components of the Government's e-government vision. The rationale for the project was based on the benefit for public good, rather than a quantified financial rate of return to the Crown. A detailed discounted cash flow analysis was not undertaken.²⁹

7.1.2. The Aim of the Project

The business case identifies that the project was designed to improve the way in which New Zealand legislation, including Bills, is made publicly available.

The aim of the project was to provide public access to legislation in both printed and electronic form. Public access would be improved by:

- # Making legislation available electronically and in printed form from a database owned and maintained by the Crown.
- # Providing access to Acts and Statutory Regulations as soon as possible after they have been enacted and made.
- # Providing access to legislation with amendments incorporated as soon as possible
- # Providing electronic access to Bills at key stages during their progress through the House
- # Providing free electronic access to Bills, Acts, and Statutory Regulations via the Internet, both as enacted and in an up-to-date form with their amendments incorporated
- # Making it possible to see the effects of proposed amendments on existing legislation
- # Making it easier to see the effect of amendments to proposed legislation during its passage through the House.

²⁸ Public Access to Legislation Project, Summary Business Case, <http://www.pco.parliament.govt.nz/pal/sumbuscase.pdf>

²⁹ Ibid.



7.1.3. Delivery against the Business Case

New Zealand now owns and can maintain its own database of legislation.

The New Zealand Legislation website provides free access to legislation in up to date form: to Acts after they have been enacted; to regulations after they have been made; and to Bills after their introduction and during their passage through Parliament.

Legislation is available in PDF and HTML formats; both printed and electronic copy can be produced. The website provides browse and search functionality and hyperlinks.

The LENZ system makes it possible for users to track the progress of Bills through Parliament, see amendments to Bills, and in selected cases, see the effects of proposed amendments on existing legislation.

Versions of Acts that show the effect of amendments that are proposed in Bills are termed "prospective consolidations". While the LENZ system provides the facility to produce prospective consolidations, it is a manually intensive process, and is practical only in selected cases.³⁰

Legislative data is made available free of charge to legal publishers in an authoritative form.

Through the officialisation process, the electronic version will become another official source of New Zealand legislation.

7.1.4. Tracking the Ongoing Benefits

The primary benefit of the LENZ system is one of public access to legislation. There are some benefits to the IRD, PCO, and the OoC, but these are balanced by staff frustrations arising from performance and usability issues. There are identified performance issues when dealing with large documents, and with documents that require large numbers of changes.

The business case noted it was probable that some efficiencies would result from the Project, but that efficiencies were not the dominant consideration. There were no metrics designed at that stage.

At the time of this report, work is underway to design and develop suitable metrics to quantify efficiencies, and the impacts of any performance or usability issues.

³⁰ "Public Access to Legislation: Enhancing the Access Experience", *Geoff Lawn*, Parliamentary Counsel Office, July 2007.



Website statistics are being monitored. However, metrics will also be required to track benefits that eventuate from the public use of the website.

Metrics have been developed to support planning for the ongoing officialisation of electronic copy of New Zealand legislation.

7.1.4.1 The Realisation of Benefits

An immediate focus is to determine the impacts of the New Zealand legislation website on the demand for official printed legislation. There is also a need to understand future trajectories of use, and how the website could be enhanced to support its various users.

It is noted that liaison with external parties, for example Law Librarians, practitioners, and the Judiciary, will provide suggestions on how the website could be further developed as input to the PCO Information Systems Strategic Planning process.

We understand that the Chief Parliamentary Counsel and the PCO CIO will meet with Law Librarians and representatives of the Judiciary in 2009 to discuss the use of the website, the officialisation programme, and any impacts on the demand for official printed legislation. This process will extend to discussions with the State Services Commission, Government agencies, and other key stakeholders regarding their use of the site content.



8 Consultation and Research

The following people were interviewed or consulted in the production of this report:

	Involvement and period of involvement (where applicable)	
Sharon Andrews	IRD - PAL Team	2001 - current
Dr Tim Arnold-Moore	PCO IQA Technical Reviewer	2001 - 2008
Grant Avery	Monitoring Agencies (SSC)	2003 - 2008
Mark Bacon	Unisys Business Analyst	2005 - current
Clare Barrett	Brookers - Relationship Manager	
Sandi Beatie	PAL Project Steering Committee (Justice)	2005 - 2008
Jim Black	Monitoring Agencies (SSC)	2007 - 2008
Andrew Beaumont	Unisys Programme Manager	2007 - current
Melanie Bromley	PCO Drafter, Subject Matter Expert for the PAL project team	2001 - current
Amanda Burgess	PCO PAL Project Manager (Opticon consultant)	2003 - 2007
Alan Burton	E-Gloo, Unisys Sub-contractor	2001 - 2007
Helen Churchill	Co-ordinator Secretarial Services	2001 - current
Warren Cole	PAL Project Steering Committee (IRD)	2001 - 2008
Deborah Cullen	PCO Training Consultant	2007 - 2007
Graeme Davies	PCO Enterprise Architect (on secondment from Land Information New Zealand)	2008 - current
Haydn Davies	Product Development Manager, Brookers	2001 - current
David Espie	Monitoring Agencies (SSC)	2006 - 2008
Geoff Donovan	Monitoring Agencies (Treasury)	2001 - 2008
John Farrell	PCO Acting Manager Support Services	2006 - current
Simon Francis	Unisys Technical Team Lead	



Involvement and period of involvement (where applicable)		
Margaret Greville	Law Library Manager, University of Canterbury	
Michelle Groves	Co-ordinator Pre-Publishing Unit	2001 - current
Sally Hardham	PCO Business Analyst	2008 - current
Mary Harris	PAL Project Steering Committee (Office of the Clerk)	2001 - 2008
Judy Hill	Co-ordinator IS Team	2001 - current
Brett Hodgson	Managing Director, Unisys NZ Ltd	2003 - current
Iona Holsted	PAL Officials Group - SSC	2001 - 2003
Chris Hourigan	PCO Test Manager	2005 - 2008
Laurence Ilott	PCO Publishing Systems Development Adviser	2002 - 2008
Terry Jackson	IQA and former PCO Project Manager	2002 - 2003
Ian Jamieson	Deputy Chief Parliamentary Counsel, Drafting	2002 - current
Grant Johnson	PCO Implementation Manager	2007 - current
Ross Johnston	KensingtonSwan - PCO Legal Counsel	2002 - current
Allen Koehn	Unisys Director, Australia/New Zealand	2003 - current
Geoff Lawn	Former PAL Project Director	Throughout
Tony Lester	PAL Project Steering Committee (LINZ)	2005 - 2008
Julie Melville	PCO Drafting Team Leader	2001 - current
Laurence Millar	Monitoring Agencies (SSC)	2003 - 2008
Bill Moore	PCO Drafting Team Leader	2001 - current
Scott Murray	PCO Drafter, Subject Matter Expert for the PAL project team	
Narayanan S Narayanan	Unisys, PAL Project Director	2004 - current
David Noble	Chief Parliamentary Counsel	Nov 2007 - current



Involvement and period of involvement (where applicable)		
Fay Paterson	PAL Project - Office of the Clerk	2001 - 2008
Mark Prentice	Editorial Services - Co-ordinator	2004 - current
Juliet Price	Co-ordinator Reprints Unit	2001 - current
Nigel Prince	Prince Consultants - Financials, PCO Consultant	2007 - 2008
Frank Riley	PCO Drafting Team Leader	2001 - current
Phil Royal	HPNZ IQA (formerly with Capgemini)	2005 - 2007
Nigel Royfee	Brookers	
Michael Rubacki	Former PCO PAL Project Director (Legal Publishing & Management Consultant - with New South Wales PCO)	Aug 2005 – Nov 2005
Maria Sandiford	Unisys Test Manager	2007 - current
Jonathan Scholes	PCO PAL Project Manager (Carson Group)	2001 - 2002
George Tanner	Former PAL Project Sponsor	Throughout
Paul de Wijze	PCO Chief Information Officer	Jan 2008 - current
Sean Wilson	Former Project Director, Unisys NZ Ltd	2005 - 2008
Tony West	Acting Chief Information Officer (on secondment from Land Transport New Zealand)	Sep 2007 – Jan 2008

The following documentation provided source information for this report.

- # Cabinet Papers
- # Contractual Agreements
- # Governance Reports
- # IQA and Technical Review Reports
- # Project Management Plans
- # Project Management Reports
- # Risk and Issues Registers



- # Steering Committee Minutes
- # Testing Documentation



Part II: Considerations for Other Projects

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9 Introduction

9.1 Background

One of the key aspects of a Post Implementation Review is to capture key learning's for the benefit of future projects. The Post Implementation Review for the third stage of the Public Access to Legislation (PAL) project (PAL3) was designed so that the benefits of hindsight from the project could be made available to other agencies.

This document is not intended to be a project management manual. It is constructed to highlight aspects of PAL3 that may provide valuable insights for consideration by other agencies, in particular smaller agencies, when business critical projects may be small enough to "slide under the radar" of the Government monitoring regimes for state sector projects.

9.2 The PAL Project

The PAL project was a complex project that encountered problems throughout its life. It commenced in 2001 and had to overcome numerous difficulties before the Legislation New Zealand website³¹ was finally implemented in January 2008.

Technology projects can be notoriously difficult. Some projects will fail. There are numerous examples of projects that have experienced problems. Some of these have been high-profile, and have commanded media attention.

The PAL project did not fail, but it did experience a number of problems that provide opportunities to share experience with other agencies.

Unisys New Zealand Ltd was the implementation partner for the PAL Project. Unisys has actively supported the development of the Post Implementation Review for PAL3, and provided input to this document.

Key aspects of PAL3 were identified by project participants, in the hope that they may be of benefit to other agencies who are about to embark on projects of their own.

³¹ www.legislation.govt.nz



Given the extended timeframe of the project, and the changes of personnel along the way³², different people have had different perspectives of the project, at different times. Rather than reflect all of the views expressed, the different perspectives have been correlated across the interviewees and then consolidated into this report. Where differences of opinion occur, these have been noted.

Considerations were identified in hindsight, and consequently the positioning of any consideration within the project timeline is somewhat subjective.

This document presents considerations in three ways:

1. Against the PAL project timeline;
2. By topic area; and
3. As a summary in Appendix E.

Some information from the Post Implementation Review Report is intentionally duplicated within this part of the document, to provide background, and assist in terms of readability.

9.3 A “Whole-of-Life” Focus

It is important to remember that, over time, standards evolve, processes change, and knowledge increases. This is especially true when considering ICT projects, which are subject to almost constant evolution of project management standards, changes to technology engineering practices, and the accumulated wisdom of hindsight.

³² At the final Steering Committee meeting in February 2008, it was noted that, "... 34 Steering Committee meetings have taken place since the project restarted in 2005. The PCO and Unisys have had 10 project managers and five project sponsors between them during the course of the project ...".



The governance structure and management of the PAL project conformed to the guidance that was provided by the Audit Office, Treasury, and State Services Commission for the management of major ICT projects.

The Government has since introduced a new Capital Asset Management Regime. This is combined with a requirement that new, high risk, capital expenditure proposals are subject to an additional layer of project of project or programme assurance, based upon the Gateway process³³.

The Capital Asset Management (CAM) Regime includes a formal two stage Cabinet approval process which will apply to all capital investment projects that have a whole-of-life cost greater than NZD 25 million (including GST), or are assessed as high risk based upon the Gateway risk profiling methodology.

The whole-of-life perspective of costs can be approximated as requiring the assessment of capital and operating costs over a five year period, regardless of the source of funding.

The considerations in this document are structured to reflect a whole-of-life perspective of a system, and the work that an agency may face in the development of a comprehensive business case.

PAL was not subject to the CAM Regime or the Gateway process. However, had such regimes been in place when the project commenced, it very probably would have qualified due to (i) a risk assessment of the complexity of the project, and (ii) the overall, whole-of-life, costs.

³³ The Gateway process was developed by the Office of Government Commerce (OGC) in the United Kingdom. Further information is available on the State Services Commission's website.



10 The PAL Timeline

10.1 The Early History

This early history is provided to give a perspective of how PAL3 came into existence.

10.1.1. PAL1 and PAL2 (2001 to 2003)

The first stage of PAL (now known as PAL1) commenced in June, 2001, using Unisys as an implementation partner.

PAL1 completed in December 2001, with the identification of detailed costs for stage 2 (PAL2).

Cabinet gave approval for the project to proceed in February 2002. The overall delivery deadline was 31 January 2003.

PAL2 experienced progressive slippages, with large numbers of defects being reported during testing. In effect, the system did not work as intended.

The project was halted in June 2003.

10.1.2. Project Suspension

Because of the difficulties experienced with PAL2, an international search was initiated for a reviewer who had the expertise to provide an authoritative opinion on the system that had been developed. The review sought assurance that the system, when implemented, would be operationally stable, maintainable, and capable of supporting future enhancement and development.

The technical review was completed by October 2003.

Concerns over the rendering subsystem, which supports the production of accurate, high quality, paper and PDF renditions of documents, led to a second review, which was completed by May 2004.

The technical reviews provided comfort that the PAL system could be developed, and maintained. This provided confidence that the project could be completed once agreement could be reached on the commercial and technical arrangements for continuing.



The project resumed, as PAL3, in March 2005 after Cabinet approval of the commercial agreement between Unisys and the PCO. The terms of the commercial settlement were reflected in a variation to the earlier contract between PCO and Unisys.

The PCO and Unisys agreed that Unisys will provide ongoing services for the LENZ system post implementation for an initial five-year period. This agreement was set out in the Application Enhancement Support and Housing Services Description which formed part of the Variation Agreement

The planning for PAL3 incorporated both the commercial and the technical basis of the agreement to continue the project.

The variation to the original contract agreement was supported by a Project Management Plan, an agreement for the hosting and ongoing support of the developed system, and a set of Key Performance Indicators that described the performance required of the system.

Experienced resources were contracted to assist the PCO. These people had good experience of ICT projects, and were able to engage with the Unisys team at a peer-to-peer level.

The State Services Commission had a dual role in that it acted as a monitoring agency, but also was proactive in providing external assistance to the PCO.

Two experienced senior public sector managers were approached to provide advice to the project, and to act as Steering Committee members.

There was varied opinion regarding the amount of contingency for technology risk that needed to be factored into the project schedule. The contractual arrangements and the project management plan were subject to five reviews before the project restarted.

The approach adopted for PAL3 recognised the problems that had been encountered in PAL1 and PAL2, and sought to provide expert advice to the project.

References:

Consideration 1 – Business Specialisation

Consideration 2 – ICT Project Expertise

Consideration 3 – Build on the Experience of Other Agencies

Consideration 4 – Understand the Demands on the Business

Consideration 5 – Consider the Scale of the Project



Consideration 6 – Consider the Form of the Contract

Consideration 7 – Legal and Business Advice

Consideration 8 – Negotiation Strategy

Consideration 10 – Business Change Management

Consideration 13 – Communications

Consideration 19 – Independent Quality Assurance of the Project

Consideration 20 – Technical Assurance

10.2 The PAL3 Timeline (2005-2008)

The original completion date for PAL3 was 12 October 2006.

The completion date slipped at various stages of the project due to a number of issues.

The system was implemented for internal use on 14 November 2007, and the Legislation New Zealand website went live on 16 January 2008.

The following aspects of the PAL3 project were noted as valuable for consideration by other agencies.

The relationship between Unisys and PCO had deteriorated after PAL2. Interviewees noted that during PAL3 both parties put history behind them and worked constructively to build the system.

A high degree of effort was put into building the relationships between PCO and Unisys, both in New Zealand and overseas, with the then Chief Parliamentary Counsel visiting the Unisys Head Office in the USA in the later stages of 2005.

Reference: Consideration 11 – Relationship Management

The degree of turnover of Unisys staff was a major cause of concern to the PCO during the project. Due to the extension of the project timeframes, there was also some turnover of personnel within PCO.

Reference: Consideration 12 – Churn

The functional specifications and the output specifications were redeveloped during PAL3, and signed off by the Chief Parliamentary Counsel in late December 2005.

Reference: Consideration 21 – Requirements Definition



The project encountered a number of technical and performance problems that had to be addressed before user acceptance testing could start. Work to address the problems involved review of the technical components, including a change of database and operating system.

Issues surrounding the use of the system and the need for user training were addressed comparatively late in the project, when there was a degree of certainty that the system would work. Some Parliamentary Counsel did not have good keyboard skills and required one-on-one training. The new system introduced changes to the way in which PCO staff worked, and the training that was provided on the system was seen as inadequate as it lacked business context. The business units have now adopted ongoing responsibility for training.

Testing focused on what "had to work" to support legislative publishing and drafting.

User Acceptance Testing was signed off by the PCO and Unisys on 10 September 2007.

Each business unit had to determine if the system was able to meet the needs of the business. Each business unit had to accept compromises.

Reference:

Consideration 14 – Training

Consideration 23 – Test Planning

Consideration 24 – Business Acceptance

Consideration 25 – Transition Planning

The system could not be put into production until agreement was reached regarding the ongoing services arrangements between the PCO and Unisys.

The PCO initiated work on support and maintenance provisions during 2006.

In August 2007, the PCO received a draft proposal from Unisys relating to the provision of ongoing services. The proposal indicated a substantial increase in the cost of delivery compared to the original estimates. The increase was based on the developed system being larger and more complex than envisaged when the Variation Agreement was signed in March 2005, with more resources being required to maintain the system.

An experienced Chief Information Officer was seconded to PCO to help the organisation, and an external commercial review of the support arrangements was initiated in September 2007.



It took a lot of effort to get the terms of the agreement finalised. The experienced resources were able to act as a “bridge” between Unisys and the PCO.

The existing Support and Maintenance agreement between Land Transport New Zealand and Unisys was used as a template for the agreement between Unisys and the PCO. The framework of the Agreement is based upon business principles, and is designed to reflect the priorities of the ongoing business. The Agreement is defined as an open document that can “live”, potentially for the life of the LENZ system.

Reference:

Consideration 15 – Ongoing Costs

Consideration 16 – Ongoing ICT Capability

Consideration 17 – The Support and Maintenance Contract

Consideration 18 – Consider the Use of an Existing Service Model

10.3 Benefits Realisation, and Ongoing Support and Development

10.3.1. Benefits Realisation

At the time of this report, metrics are being investigated to quantify efficiencies, and the impacts of any performance and usability issues.

Metrics are being developed to support planning for the ongoing officialisation of the electronic copy of New Zealand legislation.

An immediate focus is to determine the impacts of the New Zealand legislation website on the demand for printed legislation. There is also a need to understand future trajectories of use, and how the website could be enhanced to support its various users.

10.3.2. Ongoing Support and Development

The continued availability of the LENZ system is critical (i) to the New Zealand legislative process, and (ii) for public access to legislation. Continued availability of the system will become more critical as reliance is placed upon the Legislation New Zealand website as an official alternative to paper copies of legislation. Business continuity plans need to be formalised and a Disaster Recovery capability put in place.



Financial planning for the ongoing support and maintenance of the LENZ system had to recognize the need to maintain the operational currency of system components. In addition, work was required to further develop the system. Major hardware and software components, which were selected when the project restarted in 2005, will need to be upgraded before the end of the 2008/9 financial year.

The degree of system customisation has effectively dictated that PCO and Unisys must work together to build the skills and capability for ongoing support, maintenance, and further development of the system.

Both Unisys and the PCO recognise the reliance on key individuals, and there are plans to cross skill and up skill members of the PCO and Unisys teams.

References:

Consideration 9 – Understand the Implications of Subcontract Arrangements

Consideration 22 – Understand the Long-Term Implications of Customisation

Consideration 26 – Continuity of Business Operation

Consideration 27 – Understand how Benefits Will Be Tracked and Measured



11 Considerations for Other Projects

11.1 Business Specialisation

The drafting and presentation of legislation is important and extremely precise. The format of legislation, regulations, and other subordinate legislation is embedded in history and law. Legislative drafters undertake specialised training, and the legislative agencies take great pride in the consistency (and hence, the quality) of output.

The PCO is responsible for drafting, compiling, and publishing most of New Zealand's legislation. Drafting is also performed by the IRD, and, to a limited extent, the Office of the Clerk.

The format of legislation is determined by its progression from a Bill to an Act by the requirements of Standing Orders for the House of Representatives (the House) and by other influences. The exact format of the components of legislation can be determined by the status of the legislation as it progresses through the House.³⁴

From an ICT perspective, the exact format of output is usually secondary to the actual functionality, and is therefore of secondary importance.

In PAL3 the Legislation Output specifications and Functional Specifications were developed to a high degree of precision.

The requirements for absolute precision in the content and format of output created tensions within the project, not the least of which was that it was difficult for Unisys, and its subcontractors, to verify the quality of the output before exposing it to the PCO.

In PAL3 some compromise in the area of legislative history was undertaken to simply the requirements. A decision was made not to show the changes to a Bill at every stage. Opinions differed on this - it simplified the presentation of Bills for ordinary users. However, some expert users were not comfortable with the change.

Feedback from PAL Project Team members in PCO, IRD, and OoC is that all that could be done to simplify the LENZ system was done.

³⁴ The Technical Review Report of October 2003 includes discussion of "Why legislation is different". The report is available from the PCO Website. "Final Report - New Zealand PCO Technical Assurance Review", InQuirion Pty Ltd.



Consideration 1.

In general, solution vendors tend to have a set of “standard models” that they use to estimate the size and potential cost of a project. It is important to make sure that any unusual requirements are identified during the preparation of the business case, and are explained clearly in the pre-contract Request for Information (RFI) and Request for Proposal (RFP) process and subsequent discussions.

Consider if the people in your organisation require special training, skills, or qualifications. If so, these can indicate unusual requirements, compared to a “standard model”.

Consider if there is any aspect of the project that is mandated by law or regulation, such as: the way that a service is provided; the way that material is processed; or the way that information is presented. If so, this can also indicate that unusual requirements may exist.

11.2 The Need for ICT Project Expertise

PCO was aware that it did not have experience of large Information and Communications Technology projects. The external resources that were contracted to assist the PCO project team during PAL3 had good experience of ICT projects, and were able to engage with the Unisys team at a peer-to-peer level.

Interviewees noted that organisations that have little experience of complex ICT development projects should ensure that they engage competent contractors, project managers, and other specialists to assist them.

Small agencies may not undertake many major projects, most large vendors undertake projects all of the time. With the benefit of hindsight, a number of cultural differences between PCO and the Unisys teams have been identified. These are shown as Appendix D, “Cultural Differences”, on page 84.

Both parties agreed on the need to be aware of cultural differences, and the need to ensure that such differences are identified and managed from a very early stage in a project.

Agencies should also be aware of the dichotomy inherent in staffing major ICT projects involving external or specialised expertise.



On the one hand, it is advisable to have internal ICT representatives involved as early as possible in the project in order for them to a) provide a translation between specialised business language and equally specialised technical terminology; and b) gain experience necessary to operate and maintain the new system.

On the other hand, it is often necessary to allow external designers and specialist developers to “look at a problem anew”, to evolve fresh ideas and solutions that align with the future needs of the agency.

In any event, the project needs to plan for the transfer of skills to internal ICT staff before the transition to operational status commences. The details of how this will be managed should be agreed during the initial planning stages of the project.

Consideration 2.

Consider the Information Communications Technology capability of the organisation, and the in-house experience of managing large, complex ICT projects.

Experience will be required within both the business and the Information Systems areas.

Talk to other agencies that have undertaken large projects of a similar nature, and request advice on the nature of the skills and expertise that will be required to undertake a project.

11.3 Build on the Experience of Other Agencies

PAL3 was managed and monitored according to the monitoring regime for major IT projects.

The State Services Commission had a dual role in that it acted as a monitoring agency, but also was proactive in providing external assistance to the PCO for PAL3.

Two experienced public sector senior managers provided advice and experience to PAL3, and acted as members of the Steering Committee from the start of PAL3. Their advice and experience was extremely valuable.

The delivery of PAL3 was a result of the combined expertise of the PCO and Unisys management and project teams; external experts who provided technical advice, Independent Quality Assurance and support, and other individuals who were seconded from other agencies to fill key roles.



11.3.1. The Government Capital Asset Management Regime

The Government Capital Asset Management (CAM) Regime includes a formal two stage Cabinet approval process which will apply to all capital investment projects that have a whole-of-life cost greater than NZD 25 million (including GST), or are assessed as high risk based upon the Gateway risk profiling methodology.

The development of a two-stage business case requires an assessment of the whole-of-life costs of a system, and risk to the development and ongoing operation of the system.

Expectations that a perfect system can be developed, and that it will not be put into operation until perfection is obtained, can be a recipe for disaster.

Any agency that is to undertake a complex, business critical, information and communications technology development would be well advised to form a Governance Body or Project Steering Committee at the time the business case is being considered.

The agency would also be well advised to seek external representation on the Governance body, early in its formation, from an agency that has successful experience of managing a project to deliver a business critical system. Experience in working alongside the vendor, and of managing ongoing support and maintenance arrangements is also extremely valuable.

The experience of the PAL project was that in the development of the original business case there was insufficient recognition of the likelihood of problems in design and development, and the impact of these on time and costs, including indirect costs.

11.3.1.1 The Gateway Process

In late 2007, the State Services Commission approved the use of the Gateway process for large state sector projects. The Gateway process is separate to the Monitoring regime for large state sector ICT projects and therefore does not preclude the provision of advice from other sources, including IQA. Gateway involves short, intensive reviews at critical points in the project's lifecycle by a team of reviewers not associated with the project. The findings of the reviews are confidential to the agency concerned. Gateway is not designed to replace the Independent Quality Assurance of projects, but is an option for consideration by agencies. Information on the Gateway process is available on the State Services Commission's web site.



A project, with similar complexity to the PAL project, may be seen as being small enough to “slide under the radar” of the Government monitoring regimes for state sector projects.

Interviewees noted that the State Services Commission should consider how it could facilitate the availability of public sector experience to agencies that are considering the implementation of complex systems. This has been discussed with the SSC Gateway Unit.

Consideration 3.

Agencies that plan to undertake a complex or business critical information and communications development should form a Governance Body at the time the Business Case is being considered. This body should exist for the duration of the project and have external representation from an agency, or agencies, with experience of managing a project of similar complexity or criticality.

The Management Team should also investigate engaging external subject-matter experts where their skills and experience could be of benefit.

11.4 Understand the Demands on the Business

Any agency that plans to undertake a complex ICT project needs to understand the resource demands that will be placed upon it.

11.4.1. Resource Demands

The PCO appreciated that there would be huge demands made on its resources and that the project would impact the “business as usual” work of drafting and publishing legislation.

A vendor will expect a client organisation to provide all of the staff resources that are necessary to allow the vendor to complete its various pieces of work. During PAL3, PCO staff needed to be available to spend time to fully brief Unisys architects and analysts on PCO systems and procedures and on legislative process, and to review the various iterations of specification documents.

The point was noted that a client organisation has to meet the direct and indirect costs of its own resources. A vendor will expect to be remunerated for any work that is performed outside of the contract. Any client organisation must be aware of the demands that will be placed on its staff, to enable it to work with the vendor to achieve mutually agreed project timelines.



PAL3 required the specialist knowledge of PCO, IRD, and OoC personnel to develop specifications, work with the developers, develop testing materials, and test the system.

The work was undertaken by the individuals who were best qualified irrespective of their level of seniority within the organisation. It was noted that some Parliamentary Counsel effectively put their legal drafting careers on hold for a number of years.

11.4.2. Governance

The Governance structure was revised for PAL3. The overall structure had multiple layers, which included:

- # The Monitoring Agencies
- # The Project Steering Committee
- # External Assurance - both Independent Technical Assurance which focused on technical aspects of the system, and Independent Quality Assurance (IQA) which focused on the project.
- # The Project Directors and Project Managers (Unisys and PCO).

The layers of the structure were seen as necessary, given the profile and history of the project. Servicing the different layers, in terms of time spent in meetings, and developing reports, required a significant investment of time from the PCO Project Sponsor, Project Director, and Project Manager. This was balanced by the assistance, and experience, that was provided to the project, and that enabled the project to address a number of difficult issues.

PAL3 encountered a number of technical, performance, and contractual issues. In at least one instance, the project required approval from Cabinet to proceed. The sequence of events meant that resource demands on the PCO continued far longer than was originally envisaged.

When serious problems arise within a complex project, as they did in PAL, they can create their own kind of turmoil. The various parties can become defensive and litigious; exchanges can become formal and carefully constructed; and relationships at all levels can change. The project may receive hostile media attention, and people can lose confidence and trust.

Considerable hard work was required to work through PAL project difficulties and to deliver the project. It required the focus and commitment of the management team in terms of management scope, reporting, approvals, finances, business change, and supplier relationships.



Consideration 4.

A business critical project will make large demands of the business. Subject matter experts will be required to work on the development of functional and non-functional specifications, review documents, clarify points of detail, test multiple iterations of the system, et al. Experts will also be needed to review business processes, and simplify these where possible. This may require extensive interactions with service providers and other subcontractors.

This work can not be delegated to junior staff as they will not have detailed knowledge of the business. The work does not stop when the project is completed, as work will be needed to train staff, bed in the system, resolve outstanding problems, and continually develop and upgrade the system.

The management of the project will require focus and commitment from the senior management team, in terms of management of scope, reporting, approvals, finances, business change, supplier relationships, et al.

Recognise that the delivery of a complex ICT project will not be free from problems; setbacks occur, and they may be large setbacks. One problem with a piece of software can effectively bring a project to a halt. Should a project run into difficulties, this will require a considerable amount of management time and focus.

11.5 Consider the Scale of the Project

There is a relatively small pool of international experts that understand the complexities of legislative systems. These experts tend to work across the globe to support the various legislatures. The consensus is that all legislative systems are complex due to the evolutionary differences in legislation and parliamentary procedures in various jurisdictions.

One other legislation system project had been undertaken prior to PAL. The Tasmanian Government initiated the Legislation System Project in early 1994, and a public access service was put into production in April 1998.³⁵ Other projects were in progress.

Interviewees noted that some other organisations that deal with legislation have adopted an incremental approach to the development of drafting and publication by developing one component, for example a drafting tool, and then expanding upon these components with phases of development.

³⁵ <http://www.thelaw.tas.gov.au/about/project.w3p>



This approach can be implemented as a series of smaller projects that can be undertaken with the direct assistance of experts. There is a need to plan for the longer-term integration of components and there may be a need for some rework along the way. This permits technical approaches to be tried and tested before a decision is made to select a particular set of technologies and implement that into production.

Should any problems be encountered, these do not have such an impact on the business, and tend not to attract the same degree of external attention, as problems that are encountered with a large project.

Gateway Review¹ (Business Justification and Options – Indicative Business Case), includes the question “*Should the project be broken down into a series of small steps?*” This is recommended for IT enabled projects and for complex projects.

During the planning stage for PAL3, Unisys, the PCO, and the PCO’s technical advisors undertook investigations into whether the project could be delivered in multiple incremental phases. It was decided that the detailed nature of the requirements, and the dependency on Document Type Definitions (DTDs), made this difficult to achieve without major rework costs, and increased risk.

Consideration 5.

During the preparation of a business case, consider the risks, complexity, and benefits of alternate approaches to the development of a system, and how the selection of technical components of the system will be performed.

Evaluation of other, similar, systems that have been developed and implemented within New Zealand or overseas can identify the risk factors that will support decisions to adopt and amend an existing system, or to develop a completely new system.

Consider how technical approaches can be tried and tested to ensure that the selected technologies are capable of meeting the business requirements.

Also consider the possibility of breaking down the overall project into a series of small projects.

11.6 Consider the Form of a Contract

Unisys and the PCO both noted that the form of a contract influences the ongoing behaviour of the parties.



The contract should support the working relationship that is required to deliver the desired results.

The PCO retained legal advice from external lawyers with expertise in IT contracts throughout the life of the PAL project. The contract, including the Variation Agreement in 2005, recorded the commercial relationship between the parties.

For support and maintenance, the PCO was able to leverage expertise that had been gained by another agency where Unisys supply such services. This provided an alternate approach to the negotiation of the contract, and gave the ability to adapt an existing contractual and relationship model.

We note that a contract will be specific to a business initiative. However, agencies could find that discussion of the pros and cons of particular types of contractual arrangement would provide the opportunity to reuse models that have been operated successfully by other agencies.

Consideration 6.

Early work to investigate the contractual models that have been successfully operated by other agencies can be valuable building an understanding of the pros and cons of alternate approaches to development, and support and maintenance, contracts.

11.7 Legal and Business Advice

PCO engaged experienced IT lawyers at key points of the PAL project.

IT contracts can be complex. The description of deliverables needs to be precise, the inter-relationships between the provisions have to be clear, and there has to be clarity surrounding the ownership of intellectual property. The rights and remedies available to a client need to be appropriate and effective.

Obtaining good legal advice in drawing up a contract is critical. If law firms are invited to tender, then ensure that an experienced IT lawyer will be assigned to undertake the work.

The PCO had access to good legal advice when addressing the problems that arose during the PAL project. It also obtained excellent advice from a barrister who was experienced in the resolution of complex business disputes. Any strategic decisions were made in consultation with the State Services Commission and Treasury.



Consideration 7.

Get good legal advice from a lawyer with expertise in ICT contracts.

Should a project run into problems; consult with the State Services Commission to determine the actions to be taken, and identify who may be best qualified to provide assistance.

11.8 Negotiation Strategy

The negotiations on conditions for the completion of the project adopted a whole of government approach. The State Services Commission initiated a meeting between Ministers and international representatives of Unisys that reinforced the importance of the project to the New Zealand Government and Parliament.

A multi-national vendor can be undertaking numerous projects in New Zealand, and other countries, at the same time. This can lead to competition for highly skilled resources. Reinforcement of the importance of a project, from a whole of government perspective, can sometimes assist the vendor's staff in New Zealand to source and commit the resources that will be required to deliver the project.

Consideration 8.

Think about the advantages of how a whole of government approach, and the experiences of other agencies, can be of assistance when negotiating the terms of the contract.

11.9 Subcontractor Arrangements

Unisys won the contract to develop the LENZ system, but did not have all the specialised technical knowledge required. They therefore proposed, with the agreement of the PCO, to subcontract this expertise from other providers.

Interviewees noted that the relationship between Unisys and its subcontractors was well managed during PAL3. The subcontractors provided additional support during the development phase.

There is an ongoing perception that the subcontract arrangements proved to be problematic because Unisys had difficulty in assessing the quality of the deliverables produced by one of its subcontractors in terms of the overall project quality requirements.



An agency needs to consider any ongoing reliance on subcontractors for support and maintenance. In one instance, post implementation of the LENZ system, there was reliance on a single resource, and this caused a delay to the implementation of changes.

Unisys and the PCO are now working together to manage the reliance on specialist subcontractor expertise that is critical to the ongoing support and maintenance of the system.

Consideration 9.

Arrangements where a primary vendor has back-to-back arrangements with third-party subcontractors should be subject to scrutiny because additional risk is added to the project for every level of contractual relationship. It should be noted that the agency has limited remedies available in regard to the performance of the subcontractors.

When developing contractual arrangements, consider how the vendor and subcontractor relationships will be managed, and the skills that will be required to support and further develop the system after the initial project has been completed. Where subcontractors will be required for ongoing support and maintenance; consider who will bear ongoing integration risks, and how contractual arrangements will transition to the organisation that will have responsibility for managing this ongoing work.

Where there is a need for scarce and highly experienced expertise, carefully consider the implications for the ongoing support and development of a system. The scarcity of specific skill sets may impact an organisations' ability to maintain and upgrade a system when it wishes to do so. Dependent upon the situation, it might be desirable for an organisation to explore the feasibility of developing its own in house capability.

11.10 Business Change Management

Differing opinions were noted amongst interviewees regarding the management of Business Change. These relate more to the management of changes to work practices than to changes in organisational structure.



11.10.1. Changes in Organisational Structure

The PCO has historically been a drafting and compiling organisation. The PAL project introduced organisational change that has resulted in the PCO becoming a drafting, compiling, and publishing office. Additional business functions were introduced into the organisation. The new system is used in the business activities of Drafters, the Pre Publishing unit, the Reprints Unit, the Secretaries, Editorial Services, the Office of the Clerk, and IRD.

It was recognised that the PCO would require change to manage the demand that the operation and ongoing maintenance, support and enhancement of the system would place on the organisation. Pricewaterhouse Coopers (PwC) were engaged during 2006 to make recommendations on management structure and organisational arrangements that would support the organisation going forward. PwC also addressed issues regarding the development of leadership and management capability given the changed responsibilities and size of the organisation.

Recommendations on the IT organisational structure were also received from the IQA providers.

A Chief Information Officer, with experience of managing an environment where Unisys were the contracted services provider was seconded to the PCO from September 2007 to January 2008 to assist in the development of the ongoing Unisys services agreement, and the planning for the transition to ongoing business operations. PCO appointed a permanent Chief Information Officer in January 2008.

An experienced Systems Architect was seconded to PCO in March 2008. PCO has since appointed a permanent Lead Architect.

11.10.2. Changes to Work Practices

The PAL system affects the manner in which many people, in PCO and beyond, work. Issues surrounding the use and usability of the LENZ system were addressed in the later stages of the project, once it was determined that the system functioned and could be implemented.

Parliament's processes are formal, and are enshrined in Standing Orders. The legislative process revolves around the introduction of Bills, the referral of Bills to Select Committees, the requirement for Bills to have three readings and a committee stage and Royal Assent. Major Parliamentary reform would be required to change these processes.



Requirements definition addressed the “as is” and “to be” business processes. Project staff concur that anything that could be done to simplify or change business processes was done. The business changes that were made required debate within the business, and were owned by the business.

The PCO has documentation about each stage of the business processes. However, it did not have an end-to-end description of how these stages interrelate in the work environment in terms of inputs, outputs, and dependencies, and how work practices need to be modified for use of the system.

There are identified system performance issues with large documents and with documents where a large number of changes are required. There is also some debate regarding how the “user friendliness” of the human/system interface impacts business productivity. This means that in some instances the PCO needs to plan ahead to determine how large and complex documents can be managed against the timeframes of the House.

The need for changes to the manner in which PCO works has led to ongoing internal debate about the project, and the suitability and usability of the delivered system.

On an ongoing basis, the PCO Information Systems team will facilitate reviews with the business to identify areas where there are opportunities to review processes and identify opportunities for longer-term simplification of the LENZ system.

11.10.3. Business Champions

PAL3 benefited from the interest and enthusiasm of several respected staff. They acted as Business Champions, provided information and motivation to staff, and acted as role models and trainers.

Interviewees noted that Business Champions can have considerable influence in developing support, particularly where substantial business change is involved, where the organisation has a conservative nature, and where an organisation has little experience of significant technologically enabled change.

Consideration 10.

All projects will create business change to some degree.



There should be a clear understanding of which parts of the business will be changed, and why; how they will differ; and what the expected outcomes are.

The people responsible for the areas where change will occur need to be consulted as soon as possible, and given the opportunity to have input to the changes to understand the impacts on business operations and work practices. The potential for ongoing negative comment must be recognised, and managed.

It is important to identify who will own the business outcomes, and provide leadership for organisational change

Consider the appointment of “Business Champions” who can discuss the implications of the project and organisational change with other staff, and who can assist other staff during training, implementation, and the operation of a new system.

11.11 Relationship Management

During PAL2 the relationship between PCO and Unisys deteriorated and both sides felt bruised and battered.

During PAL3, the PCO and Unisys took steps to form relationships at multiple levels. PCO also built relationships with Unisys at international levels. The international connections assisted Unisys New Zealand to work through financial issues and technical problems, and to apply resources to the project.

Unisys noted that a problem with one piece of software can effectively stop a project. The international connections proved their worth when Unisys had to negotiate with a multi-national software provider to fast track fixes that were required by the PAL project.

The importance of a good ongoing working relationship is reflected in the form of the ongoing Unisys support agreement. During PAL3 a huge amount of effort was put into building the relationships between the two organisations, and there was a constructive approach to the resolution of project issues. The State Services Commission and Treasury were intimately involved in the strategic decisions that were made by PCO during the project. When contractual matters were raised with Unisys, this was with the agreement of those agencies.



Interviewees noted that despite problems, it is possible with the right attitudes, to build a healthy relationship and deliver a system in the face of commercial and technical challenges.

It was also noted that:

- # The dispute resolution provisions of the contract were not invoked;
- # There were no disputes that required mediation under the alternate dispute resolution provisions of the contract;
- # There were no disputes that were referred to arbitration or became the subject of litigation in the Courts;
- # The payment of liquated damages was not demanded; and
- # The performance bond, provided by Citibank, was not called upon.

However, there is still residual distrust of Unisys within the wider organisation, and it will take time for this to be addressed. The situation is recognised, and the two organisations are now working to rebuild the degree of trust.

Consideration 11.

Although it is always necessary to have a sound contract that defines the obligations of both parties, it is far more important to form a good working relationship between the agency and the solution vendor. This relationship should be based on mutual understanding of what work must be undertaken by the project, and the approach that will be adopted to achieve the desired end-results.

“A successful project can be defined by the amount of dust on the contract”.

The relationship with the vendor should not be owned by IT. The focus of the relationship should enhance the vendor’s understanding of the required outcomes. The vendor needs to understand the importance of the project from a business perspective, and any impacts on business relationships between the contracting agency and other organisations in the public and private sector.

Notwithstanding the above, the IT team needs to be closely involved in the project’s development, given their role at the end of the project and after system implementation.



The actual manner in which any project issues are addressed requires a good working knowledge of how the commercial contract has been structured. Section 11.7 addresses this issue from a more legal perspective. Here we consider that the contractual agreement provides the point of last reference should the relationship totally break down.

11.12 Churn

The PCO subject matter experts remained constant throughout all three stages of the PAL Project. However, the PAL project demonstrated a history of turnover of Unisys staff, and to a lesser degree, staff on the PCO side – at both the management and the technical level. For example, there were three project managers on the PCO side and seven on the Unisys side. In part, this was an inevitable consequence of the time taken to complete the project.

Unisys subcontracted resources from organisations that could provide specialist expertise for the specification and customisation of the LENZ system. Testing statistics identify that a large number of defects were associated with specific deliverables. This was in part due to the complexity of the specifications, and to the manner in which the customisation of a software product was developed.

After the system was in use, the PCO experienced some delays when specific resources were not available to undertake certain tasks required to implement changes. There is ongoing concern regarding the continued availability of resources with the required levels of expertise to support and further develop key components of the LENZ system.

Unisys has addressed the skills issue in the ongoing services contract by using local resources whenever possible and only utilising people from overseas where specialised skills are not available locally. There is intent to cross-train the support team to ensure continuity of skills, and avoid reliance on any single person.

Consideration 12.

There is a tendency to assume that a larger organisation will have a more stable resource pool than one or more smaller organisations, or to assume that large companies will be better able to manage the risk of having a number of specialist subcontractors.

Both of these assumptions are flawed.



Intellectual knowledge rests with people, not organisations. Capable people, especially those with specialised knowledge or skills, are in great demand and are frequently “poached” between organisations, especially if their knowledge or skills are required to win new business. In such competitive circumstances, the concept of institutional knowledge is a myth.

Similar knowledge and skills can often be found in smaller, “one or two ‘man’ bands”, since the formation of such companies is a natural progression for specialists looking to move out of large corporations.

Large organisations are in no better position to manage any risk that might be associated with specialist resources than is the contracting agency.

Also, the “arms length” relationship that can be created by some subcontract arrangements can impede the flow of information between subcontractors and the contracting agency, introducing a new category of project communication risk.

An agency that develops a system where there is reliance on the skills of scarce expertise must understand the ongoing business risks surrounding the continued availability of that expertise, regardless of whether the expertise is resident in a large or a small organisation.

11.13 Communications

PCO adopted the strategy of making information available as soon as it could do so throughout the life of the project.

Delays to the PAL project attracted media interest. A media strategy was agreed with Unisys. The PCO managed all communications with the press. Regular briefings were offered to the media throughout the project and every effort was made to respond promptly to media inquiries.

The PCO website provides a history of the project and a set of documents that were made available to the public. These documents include the technical review reports.

External communications expertise was engaged to develop communications materials towards the end of the project.

Internal communications also need to be considered. Within the PCO some staff wanted to know a lot about the project, whilst others preferred to become engaged when the project finished. There is always likely to be a tension between providing adequate information to staff, and overwhelming them with information that they may not wish to know until a system has been developed.



Some organisations have highly effective internal networks. Interviewees noted the general point that communications to staff, from a vendor or the host organisation, need to be carefully managed for credibility against staff awareness of the status of the business and the project.

Consideration 13.

Think about the internal and external communications strategy when developing the business case.

Recognise that circumstances may change throughout the life of a project, and plan to develop and refine the communications strategies constantly during the project.

11.14 Training

In PAL2 the PCO was trained in and exposed to a system that was not delivered. In PAL3 the PCO wished to avoid this situation, hence the PCO engaged a professional trainer when there was a degree of certainty that the system would work.

Parliamentary Counsel were invited to familiarise themselves with the system during systems testing, and before the training was delivered. The PCO Project Manager carried out a survey of staff which was designed to identify how they wished training to be provided. In addition, a member of staff visited the legislative drafting offices in Canada during 2006, and discussed training issues with that office.

A train the trainer's course was provided for selected PCO, IRD and OoC personnel. This brought a lot of people together, and was a good team building exercise.

A third of the Counsel did not have good keyboard skills and preferred to use longhand or a secretary. Individual training was provided by subject matter experts.

The training had to address different groups of people, each with different business needs. The needs of Drafting, Editorial Services, the Secretaries, PCO Information Systems, the Prepublication Unit, the Reprints Unit, the Inland Revenue Department, and the Office of the Clerk all had to be considered. It was noted that a lack of end-to-end business process documentation made the job of preparation of the training material difficult.



There is an ongoing perception that the training that was received was poor, primarily because the trainer could explain the way the system worked, but did not understand the business, so could not explain the manner in which the system should be used within a business context.

Business Units have now taken responsibility for training. Project team members have also produced a mini-manual which is useful for other staff.

Consideration 14.

Agencies should not solely rely on vendors to provide training. Vendors can only explain how the systems work and can not explain the business implications of system operation, nor answer questions regarding exceptions to the norm.

Rather, agencies should require the vendor to a) identify the various training needs, b) advise agency staff regarding training techniques, and c) prepare the training material.

Training manuals should be prepared jointly between the vendors training staff and the agency trainers, with primary focus on business process, rather than the features of the system. The training manuals should be reviewed by senior team members prior to the start of training, with plenty of time being allocated for the preparation, and review and update, of the materials.

Training material will need to be maintained for the induction of new personnel.

11.15 Ongoing Costs

External advice was sought on the valuation of the LENZ system. This was ratified by Cabinet and PCO is able to depreciate the system principally over 5 years.

Financial planning for the ongoing support and maintenance of the LENZ system took into account the requirements to maintain the operational currency of system components, in addition to work required to further develop the system.

The timing of upgrades will always be a factor to consider in an ICT project. It can be a question of whether to wait for an upgrade, or to develop a version of a system in the knowledge that an upgrade is due, and that additional work will be required to apply the upgrade.



Major hardware and software components that were selected when the PAL project was restarted in 2005 will need to be upgraded before the end of the 2008/09 financial year. Business Continuity plans need to be developed and a Disaster Recovery capability implemented.

An additional appropriation was required to build internal information and communications technology capability within PCO. External financial advice was required to assist the PCO with budget formulation and contract price negotiation.

Consideration 15.

For a large or long-running project, equipment and software products may be out of date (and out of warranty) before the system enters production. Hence, they will need to be replaced or upgraded.

The requirement to ensure the technical currency of a system should be a requirement that is clearly specified to suppliers. This should also be recognised in the financial planning for the project and for ongoing business operations. Consider the need for external financial advice on budget formulation, contract negotiation, and system valuation.

Any need to build ongoing ICT capability within the organisation should be identified during the business case. This may require the development of a skills assessment of existing ICT staff against the skills that will be required to manage and further develop the system once it is in production. Such considerations will assist in the determination of whether the system should be supported in-house, or by an external services provider.

11.16 Ongoing ICT Capability

Systems are very rarely implemented with all of the functionality that was originally specified. The LENZ system is no exception.

The PCO was aware that the complete functionality was unlikely to be delivered when the system was first implemented.

Ongoing work is required to upgrade hardware and software components, resolve outstanding problems, and implement outstanding change requests.

The LENZ system is a technically complex and highly integrated system. Any technical upgrades may be significant undertakings.



IT capability within the PCO had to be built to manage and control the ongoing development of the system. A Chief Information Officer was appointed in January 2008, a Lead Architect has been appointed, and there is an ongoing change plan to build capability within the organisation.

An Information Systems Strategic Plan is being developed to support the prioritisation of work required for system and technology upgrades, address performance concerns, and to implement change requests and additional functionality.

Consideration 16.

Realise that systems are very rarely implemented with all of the functionality that was originally specified.

Systems are usually implemented with a set of outstanding problems and Change Requests that need to be addressed.

Understand the internal capability that will be required to manage and further develop a system, and plan to have this capability in place before the system is implemented into production.

Early consideration should also be given to how the personnel that will be responsible for the ongoing support and maintenance of a system can gain experience before the system is put into production.

Ensure that the hardware and software that is needed for the ongoing development and testing of the system is included in the business case and cost planning, and is communicated to manage expectations.

11.17 The Support and Maintenance Contract

The nature of the LENZ system design and customisation predicated that ongoing support and maintenance services would be required from Unisys.

A lot of hard work and effort went into the development of the ongoing support and maintenance contract.

In May 2006 the PCO initiated work to develop an ongoing services agreement. Unisys was unable to supply a proposal for the ongoing services until December 2006, when "ballpark" information was provided to the PCO on costs for ongoing services. These costs were significantly different to those identified in the Variation Agreement of March 2005.

The PCO used the information provided to make a contingent budget bid as part of the 2007 budget round, noting that the bid was based upon figures that were preliminary and very tentative.



In August 2007 the PCO received a draft proposal from Unisys relating to the provision of ongoing services. This proposal also indicated a substantial increase in costs. Unisys advised that the increase was based upon the completed LENZ system being larger and more complex than envisaged when the Variation Agreement was signed, with more resources being required to maintain the system.

An external review of the support arrangements was initiated in September 2007. As a result, another agency's Support and Maintenance agreement was adapted for use by PCO. This provided a bridge between the PCO and Unisys. Even so, it took a lot of effort to get the terms of the agreement finalised.

A Chief Information Officer, with experience of managing an environment where Unisys were the contracted services provider, was seconded to the PCO to assist in the development of the Unisys services agreement, and the planning for transition to ongoing business operations. An experienced Systems Architect was also seconded to PCO.

On 15 October 2007 the PCO sought approval from Cabinet to negotiate with Unisys on the ongoing services costs.

Cabinet approval to put the PAL system into production was received in November 2007, and an interim ongoing services agreement between PCO and Unisys was signed on 14 November 2007.

Warranties included within the Variation Agreement of 2005 were revised and a separate Warranty Agreement was included within the final supply agreement. The commercial terms of the Agreement for the supply of Ongoing Services for the PAL system (the Unisys Supply Agreement) were finalised in March 2008.

Consideration 17.

Plan for any ongoing support and maintenance contract to be reviewed and updated before the system implementation date.

Recognise and commit the time and resources required to finalise an ongoing support and maintenance contract, in advance, so that it is signed before the system goes into operation.



11.18 Consider an Existing Services Model

The framework for the Unisys Services Agreement is based on an existing contract developed by the Land Transport Safety Authority (now Land Transport New Zealand (LTNZ)³⁶). Unisys provides services to LTNZ and so had experience in the operation of the contract.

The Agreement is defined as an open document that can “live”, potentially for the life of the system. Basic principles are expressed in the main body of the contract. Details are included in the schedules, which often refer to other reference documents.

The framework is based upon business principles, and is designed to reflect the priorities of the ongoing business.

Consideration 18.

The contracts between an agency and its suppliers need to reflect the relationships and interdependencies between the organisations, in recognition that all the parties to the project wish to see a successful outcome.

Explore the form of support contracts that are in use by other agencies to determine what contractual models are tried and tested.

11.19 Independent Quality Assurance of the Project

From a Governance perspective, the Independent Quality Assurance (IQA) provided a valuable source of advice. The IQA provided an independent assessment of project risks, and how Unisys and the PCO team were performing. It provided a summarisation and consolidation of issues that could then be openly discussed within the project context.

At the Project level some interviewees noted a different perspective. At the start of the project some project members found it difficult to understand what was expected, and how that was directly relevant to the nature of the specific project.

Interviewees noted that during the course of the project the members of the IQA organisations were extremely helpful to the project team. They were sought out for advice.

³⁶ Land Transport New Zealand has since become the New Zealand Transport Agency (NZTA)



Consideration 19.

The intent of an Independent Quality Assurance review is to look at a project, and to provide an independent assessment of status at that point in time.

It is an opportunity to have hard discussions, but also represents an opportunity for the reviewer to make suggestions and provide advice.

In a complex project, consider whether Independent Quality Assurance of the project should provide an opportunity for the Project Team to use the IQA reviewer as an impartial sounding board for concerns and ideas.

11.20 Technical Assurance

The intent of a Technical Assurance review is to provide an independent expert opinion on the feasibility of the technology being employed to address the business requirement.

There was a period in the PAL project where questions were being raised about the technical strategy adopted. An independent expert from Australia was commissioned to undertake a series of technical reviews. These reviews expressed an opinion that the technology was feasible in terms of the business requirements.

The expertise of the technical reviewer was recognised by PCO and Unisys. The reviews inspired confidence in both PCO and Unisys, and gave the PAL project the credibility that was required to continue.

Technical reviews continued during PAL3. In addition, a technical expert was engaged by the PCO to provide quality assurance of the PAL system architecture and design document deliverables.

Several people have noted that the availability of independent technical expertise at the very start of the PAL project would have been very valuable. However, as the technical reviewer had tendered to undertake the project, this would have introduced issues of conflict of interest that would have needed to be addressed.

Consideration 20.

The early involvement of an independent technical expert can be valuable to provide comment upon the interpretation of business requirements into the design of a system.



Technical experts should be identified for all specialised technology, or technology being used for complex or mission-critical applications. Arrangements should be made in advance for these experts to conduct one or more technical IQA reviews during the life of the project.

11.21 Requirements Definition

During the early stages of the PAL project, the PCO visited a number of drafting offices in Australia to assess different approaches to authoring, publishing, and printing. Functional requirement specifications were then prepared based, in part, on what had been observed in the reviewed projects.

The requirements documentation was revisited in PAL3.

Legislative drafting demands a high degree of precision in the content and format of the output. A high degree of precision was also present in the development of the specifications for the system. Unisys noted twenty seven iterations of the functional specifications. The PCO PAL team noted that they can now “talk IT” – they had to learn how to communicate with IT professionals.

An external organisation (Elkera Pty Limited) with expertise in the structure and design of legislative documents was engaged to work with PCO to develop the output specifications. This worked well.

The functional specifications and the output specification were signed off by the Chief Parliamentary Counsel in late December 2005.

Despite the level of precision applied, the specifications were open to interpretation. This is a common problem that is frequently encountered in development projects.

Several perspectives were noted:

- (i) Developers found it hard to comprehend the level of precision required
- (ii) Functionality was delivered that did not meet the business need, and demonstrated a basic lack of understanding of the business environment
- (iii) Some function was influenced by what “was technically easy to deliver”, as opposed to being what was really needed by a user of the system
- (v) Some of the specifications reflected how PCO wished to use specific aspects of the products, as opposed to detailing the desired business use



(vi) The specifications were specific to business function, as opposed to an “across the business” view of how the various functions inter-operate.

During the PAL project detailed design documentation was not available to support the interpretation of requirements into technical design. If the interpretation had been available for review then this may have reduced the opportunity for misunderstandings.

Consideration 21.

The agency can be expected to be experts within their business domain.

Likewise, the solutions vendor can be expected to be experts in the disciplines required to assemble and integrate a set of products and bespoke functionality.

The vast majority of projects suffer from the misinterpretation of requirements by system designers and developers. This often leads to debate, and rework, at relatively late stages of the project when problems are identified by business experts during testing.

Experienced “business analyst” or “application architect” expertise should be used to; a) prepare the required specification documentation; and b) act as a translator between the language used in the business domain and the language used by the solution vendor; and c) provide input to the testing design process.

This role should exist from the start of requirements specification through to the completion and acceptance of the vendor’s detailed design documentation.

11.22 Understand the Long Term Implications of Customisation

Some components of the LENZ system are highly customised.

This has led to concern regarding the level of knowledge, skill, and experience that is required to maintain and further develop the system. In particular, there is reliance on the continued availability of specific resources in subcontracted organisations.

The degree of customisation has effectively dictated that PCO and Unisys must work together to build the skills and capability for ongoing support, maintenance, and further development of the system.

Both Unisys and the PCO recognise the reliance on key individuals, and there are plans to cross skill and up skill members of the PCO and Unisys teams.



Consideration 22.

Engage professional assistance to study and document the business functions that will be addressed by the proposed application. This document should include descriptions of the major end-to-end business processes, and the key high-level information required by, or produced from each stage in the processes. The document should also explain how user interactions with the application are expected to work.

This (possibly considerable) list of requirements can then be compared with the capabilities of candidate solutions to determine a) the best fit; b) how much additional work might be necessary to bring the requirements and capabilities into a closer alignment; and c) where the business may need to consider a change to the requirements.

Understand the long-term development path of the software that is selected. Any customisation of the software will be expensive to maintain. If the software undergoes a radical change, or is “discontinued”, then there may be a need to start a new project to update the customised code, or replace pieces of the software.

Customisation may introduce the longer-term business problem of how to retain people with (i) the knowledge of how the customisation works, and (ii) the expertise required to modify and maintain the customisation.

11.23 Test Planning

The process of testing should exercise the application against a known set of requirements. The object of testing is to ensure that the functionality works as intended, and does not have any errant behaviours or unintended consequences.

During PAL3 the PCO engaged an experienced Test Manager who worked closely with the PCO Project Manager. Test Planning Acceptance Criteria were developed and over one thousand pages of requirements were mapped to the test cases.

Unisys noted that 3,500 test scripts were developed, and that testing required twenty-two person years of effort.

The System Test tested the functional requirements. The User Acceptance Test tested against the “To Be” business processes.

Requirements documentation has an ongoing life after the project, in that it is used to support the ongoing development and maintenance of the system.



The primary documentation for the LENZ system is the system functionality requirements document. This document has been open to misinterpretation, both by the system developers and by the system testers.

System design documentation is not available. This is a Unisys deliverable, and the lack of this documentation is a serious problem for the ongoing testing of changes to the LENZ system. This was recognised during the negotiation of the ongoing services agreement, with “as built” documentation being a deliverable under that agreement.

The lack of design documentation, in combination with the high level nature of the functional specifications document, has necessitated the change request process being used to clarify the actual requirements to the level where they can be meaningfully built and tested.

Consideration 23.

Engage an experienced test manager, and plan to develop a testing and acceptance strategy early in the project.

Ensure the provision of as-built documentation as part of the implementation phase.

Recognise that the requirements documentation and testing documentation will need to be retained to support ongoing support and development activities after the project has been completed.

11.24 Business Acceptance

In order for the system to be accepted, each business unit had to determine that the system was able to meet the needs of the business.

Testing focused on what “had to work” to support legislative publishing and drafting.

Problem resolution, and testing, continued until the business units could accept the level of quality that was provided. Some compromises had to be made.

Consideration 24.

Problems will always be identified during testing. Acceptance needs to focus on what has to work to support the business operations. This needs to consider how the business can operate under periods of heavy load.



Testing timeframes should not be compressed, even if a project is running late. Any problems that are not found in testing will become problems that the business then has to manage.

11.25 Transition Planning

The need for transition planning was identified from the start of PAL3.

In November 2006 a set of operational readiness recommendations were produced. A Unisys Implementation Manager was appointed in April 2007, and a PCO Implementation Manager was appointed in May 2007.

Areas that needed to be addressed included (this is not a complete list):

- # Termination of the pre-publication function that was performed by Legislation Direct;
- # Work in progress, including Bills before Parliament, had to be carried over into the new system;
- # The interim website had to be replaced by the new Website
N.B. the interim website remained available until the end of June 2008 as a contingency measure.

A transition management plan was developed and the transition was performed over several months.

Consideration 25.

The cut over from an existing system to a new system is a significant risk area in any complex IT project. The transition will require careful planning and management. A phased approach, where possible, helps to mitigate risks for the business.

Contingency and fall-back plans should be developed in the case that problems are identified during the transition to the live system.

11.26 Continuity of Business Operations

The continued availability of the LENZ system is critical to (i) the New Zealand legislative process, and (ii) for public access to legislation. The continued availability of the system will become more critical as reliance is placed upon the Legislation New Zealand website as a replacement to paper copy of legislation.



Consideration 26.

Understand the impacts on the business should the system be unavailable for any reason. Develop business continuity plans (BCP plans), and Disaster Recovery (DR) capability, during the course of the project. Ensure that the BCP plans and DR capability are tested and operational from the date that the system is implemented.

11.27 Metrics to Measure Results

The prime catalyst for the PAL project was the need to improve public access to legislation.³⁷

The Project was one of the core components of the Government's e-government vision. The rationale for the project was based on benefits for the public good, rather than a quantified financial rate of return to the Crown. A detailed discounted cash flow analysis was not undertaken.

The summary business case noted it was probable that some efficiencies would result from the Project, but that efficiencies were not the dominant consideration.

If it is accepted that some projects in the public sector will be approved on the basis of the "public good", then a corollary is that some benefits will be so intangible that they can not easily be distilled into metrics that can be measured.

In the PAL project it was deemed that it would be difficult, if not impossible, to quantify the benefits of the project or the value of the public good. The whole-of-life costs of the LENZ system can now be assessed. These costs are greater than were originally foreseen.

Future projects should be aware of potential difficulties when establishing a business case on the basis of the public good. The question would be what is reasonable and defensible? For example, if the project costs change, then what mechanisms will be used to evaluate the value of the public good against the revised cost estimates?

At the time of this report, the PCO is undertaking work to design and develop suitable metrics to quantify efficiencies arising from the implementation of the LENZ system, and the impacts of any performance or usability issues.

³⁷ Public Access to Legislation Project, Summary Business Case, <http://www.pco.parliament.govt.nz/pal/sumbuscase.pdf>



Metrics are being developed to support planning for the ongoing officialisation of electronic copy of New Zealand legislation.

Website statistics are being monitored. However, metrics will also be required to track benefits that eventuate from the public use of the website.

The immediate focus is to determine the impacts of the New Zealand legislation website on the demand for printed legislation. There is also a need to understand future trajectories of use, and how the website could be enhanced to support its various users.

It is noted that liaison with external parties, for example the Law Librarians, will provide suggestions on how the website could be further developed as input to the PCO Information Systems Strategic Planning process.

Consideration 27.

Understand how benefits will be identified, measured, and tracked across time.

Where a project is approved on considerations of the “public good”, develop a mechanism that permits evaluation of the value of the public good. This supports the business case, planning for the realisation of benefits, and the continued justification of a project should the costs or the timeframe of the project change.

Also, consider how business users of the system can provide feedback on the priorities for continued development of the system.



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Appendix A The Timeline

A.1 The Early History

1988-1989	Sale of the Government Printing Office.
September 1998	PCO releases the public discussion paper "Public Access to Legislation: A Discussion paper for Public Comment" 92 submissions are received.
December 1999	PricewaterhouseCoopers delivers a report on the options for improving public access to legislation.
April 2000	The Government authorises PCO to produce a business case.
June 2000	A Request for Expressions of Interest is issued
November 2000	A business case for a project to improve public access to legislation is completed. Cabinet authorises the PCO to proceed with the project.
December 2000	Issue of Request for an Implementation Partner
April 2001	Unisys is selected as the preferred Implementation Partner.

A.2 The PAL Project Timeline [abridged]

July 2001	PCO has signed a contract with Unisys. Stage 1 of the project (PAL1) is expected to be completed by late November 2001.
December 2001	PAL1 is completed with detailed user requirements, functional specifications, and firm costs for Stage 2.
February 2002	Cabinet approves additional funding for Stage 2 (PAL2).
May 2002	Contractual arrangement for PAL2 are formalised with an implementation date of 31 January 2003.
September 2002	Interim New Zealand legislation website goes on-line.
November 2002	The implementation date is postponed by two weeks.
February 2003	The Attorney-General and the Minister of Finance are



informed that the implementation date would not be achieved.
Unisys and PCO work to identify the issues that need to be addressed in the completion of the system.

May 2003	Cabinet approves approach to resolving project delays
June 2003	The project is halted, pending technical reviews
August 2003	Technical review commences.
October 2003	Technical assurance report is completed.
December 2003	PCO commissions an evaluation of alternate print rendering engines.
<i>December 2003 – March 2005</i>	Continued discussions on the contractual and technical basis for completion of the project.
March 2005	PAL3 starts with an implementation date of 12 October 2006.
June 2005	The project is identified as running late.
December 2005	Unisys and PCO commence a Spotlight review. One outcome of the review is a change in the implementation date to 17th November 2006. It was noted that flexibility would be required to allow for unanticipated delays.
July 2006	Significant slippage in the build and test phases with three key technical issues that need to be resolved. Note: Once significant slippage occurred in mid 2006, there was no change to the contracted final acceptance date until the interim ongoing services agreement was signed in November 2007.
February 2007	The final acceptance date is estimated to be 16 July 2007.
April 2007	Accessibility Audit of the PAL system. System Integration Testing is signed off on 30 April 2007.
June 2007	The final acceptance date is 7 August 2007.
August 2007	Draft proposal from Unisys relating to the provision of ongoing services.
September 2007	User Acceptance Testing is signed off by the PCO and Unisys on 10 September 2007.



	<p>The PAL system cannot be put into production until agreement has been reached on ongoing services arrangements between the PCO and Unisys. A review of the Unisys proposal for ongoing support and maintenance is initiated.</p>
November 2007	<p>Cabinet approval to put the PAL system into production. An interim ongoing services agreement between PCO and Unisys is signed. The system is put into production internally on 14 November 2007.</p>
December 2007	<p>Extension of the interim website agreement</p>
January 2008	<p>The Legislation New Zealand website goes live on 16 January 2008.</p>
February 2008	<p>Cabinet approval of the valuation of the LENZ system and changes in appropriations to enable the full implementation and ongoing support of the system.</p>
March 2008	<p>The commercial terms of the ongoing Unisys services agreement and warranty agreement are confirmed.</p>



Appendix B LENZ System Overview

The LENZ system is made up of a number of components which include the:

- # Database of New Zealand legislation,
- # Authoring environment (PTC/ArborText Epic Editor),
- # Print rendering solution (PTC/ArborText PrintComposer and PTC/ArborText E3), including
 - o user preview, and
 - o final PDF camera-ready production,
- # Generation of HTML for the website via custom built transforms and stylesheets,
- # Content Management System (Documentum),
- # Link management infrastructure (PTC/ArborText DLM),
- # Unified User Interface (UII) including:
 - o the interface to the CMS, and
 - o the editorial diary,
- # Public website.

The precision required in the format of legislation is supported by the customisation of LENZ system components. The customisation is described in the reports of the technical reviews of the system. These reports are available for public review on the PCO website; the technical detail of the customisation is not reproduced in this report.

Interviewees noted that the degree of complexity is a feature of an integrated legislative drafting and publishing system.

In an XML based publishing system the various elements that make up a document are defined by Document Type Definitions (DTDs) or content schemas. The way that each of the document elements are rendered (transformed into an output or presentation medium) is prescribed by stylesheets or specialised schemas for formatted output.

In the case of legislative systems, the XML components are always custom written, because:

- a. There is no generally accepted standard for a legislative DTD or content schema;



- b. Every jurisdiction is different, so the stylesheets and schema for formatted output need to be specifically written for the complexities in layout and format that are found in legislation for each jurisdiction; and
- c. The whole publishing process is further complicated by the need to render legislation on the editing screen in the same format that is used for the final rendering onto a print medium.

Every jurisdiction is different; customisation is not interchangeable across jurisdictions.

In summary, the customisation is based upon a set of rules that govern how the various elements of legislation appear on a visual display device, on a printed page, and in a web browser, or similar device.

The rules identify the format of the elements of the legislation during the period from the initial drafting of a Bill through all of its stages of progression through the House.

New Zealand's extensive use of Select Committees (nearly every Bill is referred to a select committee) and the Committee of the whole House has lead to a sophisticated markup scheme to track changes from the introduction of a Bill through the various committee processes to the third reading.

The degree of sophistication is reflected in the complexity of document stylesheets in the authoring environment and the print rendering components. Numerous combinations of formats can occur in legislation and these have to be supported by the LENZ system.

The level of customisation has been identified as introducing problems both in terms of performance, and in the long-term maintenance of the system.

A change in one component of the system can have unexpected impacts on other components of the system, such that the output from the print rendering elements is not correctly formatted.

The interactions between the various components of the system are not always predictable. Changes made in one area of the system may result in unexpected changes occurring elsewhere in the system, or unexpected formatting of the output.

This means that for any change, a large amount of testing is required to ensure that no unforeseen errors have been introduced into the system.



Appendix C PAL3 Governance Bodies

C.1 Steering Committee

Meeting frequency: Monthly

Composition:

Chair	PCO Project Sponsor (Chief Parliamentary Counsel)
Administrator	PCO Project Administrator
Attendee	PCO Project Director
Attendee	Deputy Chief Executive, Ministry of Justice
Attendee	Chief Information Officer, Land Information New Zealand
Attendee	PCO Project Manager
Attendee	Unisys Engagement Partner
Attendee	Unisys Project Director
Attendee	Unisys Project Manager
Attendee	Representative of the Office of the Clerk
Attendee	Representative of the Inland Revenue Department
Attendee	PCO Test Manager
Attendee	Unisys Test Manager

In August 2005 the role of Unisys Engagement Partner transitioned from the Managing Partner, Australia, and New Zealand, to the Managing Director, Unisys New Zealand.

In May 2006 the Unisys Director of New Zealand Public Sector, joined the Steering Committee.



C.2 Monitoring and Advisory Group

Meeting frequency: Monthly

Composition:

Chair	PCO Project Sponsor (Chief Parliamentary Counsel)
Administrator	PCO Project Administrator
Attendee	PCO Project Director
Attendee	PCO Project Manager
Attendee(s)	Representatives of the State Services Commission
Attendee(s)	Representatives of Treasury

Audit New Zealand indicated that it did not wish to be represented at monitoring meetings, but wished to receive copies of documents made available to the monitoring agencies.



Appendix D Cultural Differences

With the benefit of hindsight, a number of cultural differences between PCO and IT development expectations have been identified. These are shown below.

Both Unisys and the PCO noted that the cultural differences between the client and a vendor (supplier) are very important, and the management of these differences are a key determinant of project success.

IT Development Expectations (Generic)	Culture of Legal Drafting
Trained in IT disciplines	Expert in legislative drafting
Expect a turnover of staff	High retention of staff
Expect decisions to be made rapidly	Expect decisions to be made with due and detailed consideration
Use consultation to discuss and modify approach	Reliance upon the terms of the contract
Review processes for simplification	Process is fixed in the statute book and parliamentary process
Expect to modify requirements in line with the capabilities of a software package	Expect customisation to meet the full requirements and all variables, minimising change in business practice or operations
Expect to tailor output specifications to minimise development	Expect 100% accuracy for all legislative documents
Expect to use change control to remove functionality if problems occur (defer the delivery of functionality)	The output must be accurately produced
Project documentation "fit for purpose"	Project documentation must be precise and accurate
Sub-contract specialised technical expertise	Have contacts with other drafting offices and are aware of other international developments
Sales team replaced by delivery team	Expect the delivery team to fulfil obligations made by the sales team.



Unisys and the PCO noted that it is important that organisations who do business with ICT developers appreciate the difference between a polished performance from a sales team; that can be followed by a not so polished performance from a delivery team. This is unfortunate, and is not good for the reputation of the ICT industry as a whole.

The PAL Sponsor and Project Director noted that there was no sign of this in PAL3, which reflected well on the Unisys senior management and project team.



Appendix E List of Considerations

E.1 Consideration 1 – Business Specialisation

In general, solution vendors tend to have a set of “standard models” that they use to estimate the size and potential cost of a project. It is important to make sure that any unusual requirements are identified during the preparation of the business case, and are explained clearly in the pre-contract Request for Information (RFI) and Request for Proposal (RFP) process and subsequent discussions.

Consider if the people in your organisation require special training, skills, or qualifications. If so, these can indicate unusual requirements, compared to a “standard model”.

Consider if there is any aspect of the project that is mandated by law or regulation, such as: the way that a service is provided; the way that material is processed; or the way that information is presented. If so, this can also indicate that unusual requirements may exist.

E.2 Consideration 2 – ICT Project Expertise

Consider the Information Communications Technology capability of the organisation, and the in-house experience of managing large, complex ICT projects.

Experience will be required within both the business and the Information Systems areas.

Talk to other agencies that have undertaken large projects of a similar nature, and request advice on the nature of the skills and expertise that will be required to undertake a project.

E.3 Consideration 3 – Build on the Experience of Other Agencies

Agencies that plan to undertake a complex or business critical information and communications development should form a Governance Body at the time the Business Case is being considered. This body should exist for the duration of the project and have external representation from an agency, or agencies, with experience of managing a project of similar complexity or criticality.



The Management Team should also investigate engaging external subject-matter experts where their skills and experience could be of benefit.

E.4 Consideration 4 – Understand the Demands on the Business

A business critical project will make large demands of the business. Subject matter experts will be required to work on the development of functional and non-functional specifications, review documents, clarify points of detail, test multiple iterations of the system, et al. Experts will also be needed to review business processes, and simplify these where possible. This may require extensive interactions with service providers and other subcontractors.

This work can not be delegated to junior staff as they will not have detailed knowledge of the business. The work does not stop when the project is completed, as work will be needed to train staff, bed in the system, resolve outstanding problems, and continually develop and upgrade the system.

The management of the project will require focus and commitment from the senior management team, in terms of management of scope, reporting, approvals, finances, business change, supplier relationships, et al.

Recognise that the delivery of a complex ICT project will not be free from problems; setbacks occur, and they may be large setbacks. One problem with a piece of software can effectively bring a project to a halt. Should a project run into difficulties, this will require a considerable amount of management time and focus.

E.5 Consideration 5 – Consider the Scale of the Project

During the preparation of a business case, consider the risks, complexity, and benefits of alternate approaches to the development of a system, and how the selection of technical components of the system will be performed.

Evaluation of other, similar, systems that have been developed and implemented within New Zealand or overseas can identify the risk factors that will support decisions to adopt and amend an existing system, or to develop a completely new system.

Consider how technical approaches can be tried and tested to ensure that the selected technologies are capable of meeting the business requirements.



Also consider the possibility of breaking down the overall project into a series of small projects.

E.6 Consideration 6 – Consider the Form of the Contract

Early work to investigate the contractual models that have been successfully operated by other agencies can be valuable building an understanding of the pros and cons of alternate approaches to development, and support and maintenance, contracts.

E.7 Consideration 7 – Legal and Business Advice

Get good legal advice from a lawyer with expertise in ICT contracts.

Should a project run into problems; consult with the State Services Commission to determine the actions to be taken, and identify who may be best qualified to provide assistance.

E.8 Consideration 8 – Negotiation Strategy

Think about the advantages of how a whole of government approach, and the experiences of other agencies, can be of assistance when negotiating the terms of the contract.

E.9 Consideration 9 – Understand the Implications of Subcontract Arrangements

Arrangements where a primary vendor has back-to-back arrangements with third-party subcontractors should be subject to scrutiny because additional risk is added to the project for every level of contractual relationship. It should be noted that the agency has limited remedies available in regard to the performance of the subcontractors.

When developing contractual arrangements, consider how the vendor and subcontractor relationships will be managed, and the skills that will be required to support and further develop the system after the initial project has been completed. Where subcontractors will be required for ongoing support and maintenance; consider who will bear ongoing integration risks, and how contractual arrangements will transition to the organisation that will have responsibility for managing this ongoing work.



Where there is a need for scarce and highly experienced expertise, carefully consider the implications for the ongoing support and development of a system. The scarcity of specific skill sets may impact an organisations' ability to maintain and upgrade a system when it wishes to do so. Dependent upon the situation, it might be desirable for an organisation to explore the feasibility of developing its own in house capability.

E.10 Consideration 10 – Business Change Management

All projects will create business change to some degree.

There should be a clear understanding of which parts of the business will be changed, and why; how they will differ; and what the expected outcomes are.

The people responsible for the areas where change will occur need to be consulted as soon as possible, and given the opportunity to have input to the changes to understand the impacts on business operations and work practices. The potential for ongoing negative comment must be recognised, and managed.

It is important to identify who will own the business outcomes, and provide leadership for organisational change

Consider the appointment of "Business Champions" who can discuss the implications of the project and organisational change with other staff, and who can assist other staff during training, implementation, and the operation of a new system.

E.11 Consideration 11 – Relationship Management

Although it is always necessary to have a sound contract that defines the obligations of both parties, it is far more important to form a good working relationship between the agency and the solution vendor. This relationship should be based on mutual understanding of what work must be undertaken by the project, and the approach that will be adopted to achieve the desired end-results.

"A successful project can be defined by the amount of dust on the contract".



The relationship with the vendor should not be owned by IT. The focus of the relationship should enhance the vendor's understanding of the required outcomes. The vendor needs to understand the importance of the project from a business perspective, and any impacts on business relationships between the contracting agency and other organisations in the public and private sector.

Notwithstanding the above, the IT team needs to be closely involved in the project's development, given their role at the end of the project and after system implementation.

The actual manner in which any project issues are addressed requires a good working knowledge of how the commercial contract has been structured. Section 11.7 addresses this issue from a more legal perspective. Here we consider that the contractual agreement provides the point of last reference should the relationship totally break down.

E.12 Consideration 12 – Churn

There is a tendency to assume that a larger organisation will have a more stable resource pool than one or more smaller organisations, or to assume that large companies will be better able to manage the risk of having a number of specialist subcontractors.

Both of these assumptions are flawed.

Intellectual knowledge rests with people, not organisations. Capable people, especially those with specialised knowledge or skills, are in great demand and are frequently "poached" between organisations, especially if their knowledge or skills are required to win new business. In such competitive circumstances, the concept of institutional knowledge is a myth.

Similar knowledge and skills can often be found in smaller, "one or two 'man' bands", since the formation of such companies is a natural progression for specialists looking to move out of large corporations.

Large organisations are in no better position to manage any risk that might be associated with specialist resources than is the contracting agency.

Also, the "arms length" relationship that can be created by some subcontract arrangements can impede the flow of information between subcontractors and the contracting agency, introducing a new category of project communication risk.



An agency that develops a system where there is reliance on the skills of scarce expertise must understand the ongoing business risks surrounding the continued availability of that expertise, regardless of whether the expertise is resident in a large or a small organisation.

E.13 Consideration 13 – Communications

Think about the internal and external communications strategy when developing the business case.

Recognise that circumstances may change throughout the life of a project, and plan to develop and refine the communications strategies constantly during the project.

E.14 Consideration 14 – Training

Agencies should not solely rely on vendors to provide training. Vendors can only explain how the systems work and can not explain the business implications of system operation, nor answer questions regarding exceptions to the norm.

Rather, agencies should require the vendor to a) identify the various training needs, b) advise agency staff regarding training techniques, and c) prepare the training material.

Training manuals should be prepared jointly between the vendors training staff and the agency trainers, with primary focus on business process, rather than the features of the system. The training manuals should be reviewed by senior team members prior to the start of training, with plenty of time being allocated for the preparation, and review and update, of the materials.

Training material will need to be maintained for the induction of new personnel.

E.15 Consideration 15 – Ongoing Costs

For a large or long-running project, equipment and software products may be out of date (and out of warranty) before the system enters production. Hence, they will need to be replaced or upgraded.



The requirement to ensure the technical currency of a system should be a requirement that is clearly specified to suppliers. This should also be recognised in the financial planning for the project and for ongoing business operations. Consider the need for external financial advice on budget formulation, contract negotiation, and system valuation.

Any need to build ongoing ICT capability within the organisation should be identified during the business case. This may require the development of a skills assessment of existing ICT staff against the skills that will be required to manage and further develop the system once it is in production. Such considerations will assist in the determination of whether the system should be supported in-house, or by an external services provider.

E.16 Consideration 16 – Ongoing ICT Capability

Realise that systems are very rarely implemented with all of the functionality that was originally specified.

Systems are usually implemented with a set of outstanding problems and Change Requests that need to be addressed.

Understand the internal capability that will be required to manage and further develop a system, and plan to have this capability in place before the system is implemented into production.

Early consideration should also be given to how the personnel that will be responsible for the ongoing support and maintenance of a system can gain experience before the system is put into production.

Ensure that the hardware and software that is needed for the ongoing development and testing of the system is included in the business case and cost planning, and is communicated to manage expectations.

E.17 Consideration 17 – The Support and Maintenance Contract

Plan for any ongoing support and maintenance contract to be reviewed and updated before the system implementation date.

Recognise and commit the time and resources required to finalise an ongoing support and maintenance contract, in advance, so that it is signed before the system goes into operation.



E.18 Consideration 18 – Consider the Use of an Existing Service Model

The contracts between an agency and its suppliers need to reflect the relationships and interdependencies between the organisations, in recognition that all the parties to the project wish to see a successful outcome.

Explore the form of support contracts that are in use by other agencies to determine what contractual models are tried and tested.

E.19 Consideration 19 – Independent Quality Assurance of the Project

The intent of an Independent Quality Assurance review is to look at a project, and to provide an independent assessment of status at that point in time.

It is an opportunity to have hard discussions, but also represents an opportunity for the reviewer to make suggestions and provide advice.

In a complex project, consider whether Independent Quality Assurance of the project should provide an opportunity for the Project Team to use the IQA reviewer as an impartial sounding board for concerns and ideas.

E.20 Consideration 20 – Technical Assurance

The early involvement of an independent technical expert can be valuable to provide comment upon the interpretation of business requirements into the design of a system.

Technical experts should be identified for all specialised technology, or technology being used for complex or mission-critical applications.

Arrangements should be made in advance for these experts to conduct one or more technical IQA reviews during the life of the project.

E.21 Consideration 21 – Requirements Definition

The agency can be expected to be experts within their business domain.

Likewise, the solutions vendor can be expected to be experts in the disciplines required to assemble and integrate a set of products and bespoke functionality.



The vast majority of projects suffer from the misinterpretation of requirements by system designers and developers. This often leads to debate, and rework, at relatively late stages of the project when problems are identified by business experts during testing.

Experienced “business analyst” or “application architect” expertise should be used to; a) prepare the required specification documentation; and b) act as a translator between the language used in the business domain and the language used by the solution vendor; and c) provide input to the testing design process.

This role should exist from the start of requirements specification through to the completion and acceptance of the vendor’s detailed design documentation.

E.22 Consideration 22 – Understand the Long-Term Implications of Customisation

Engage professional assistance to study and document the business functions that will be addressed by the proposed application. This document should include descriptions of the major end-to-end business processes, and the key high-level information required by, or produced from each stage in the processes. The document should also explain how user interactions with the application are expected to work.

This (possibly considerable) list of requirements can then be compared with the capabilities of candidate solutions to determine a) the best fit; b) how much additional work might be necessary to bring the requirements and capabilities into a closer alignment; and c) where the business may need to consider a change to the requirements.

Understand the long-term development path of the software that is selected. Any customisation of the software will be expensive to maintain. If the software undergoes a radical change, or is “discontinued”, then there may be a need to start a new project to update the customised code, or replace pieces of the software.

Customisation may introduce the longer-term business problem of how to retain people with (i) the knowledge of how the customisation works, and (ii) the expertise required to modify and maintain the customisation.

E.23 Consideration 23 – Test Planning

Engage an experienced test manager, and plan to develop a testing and acceptance strategy early in the project.



Ensure the provision of as-built documentation as part of the implementation phase.

Recognise that the requirements documentation and testing documentation will need to be retained to support ongoing support and development activities after the project has been completed.

E.24 Consideration 24 – Business Acceptance

Problems will always be identified during testing. Acceptance needs to focus on what has to work to support the business operations. This needs to consider how the business can operate under periods of heavy load.

Testing timeframes should not be compressed, even if a project is running late. Any problems that are not found in testing will become problems that the business then has to manage.

E.25 Consideration 25 – Transition Planning

The cut over from an existing system to a new system is a significant risk area in any complex IT project. The transition will require careful planning and management. A phased approach, where possible, helps to mitigate risks for the business.

Contingency and fall-back plans should be developed in the case that problems are identified during the transition to the live system.

E.26 Consideration 26 – Continuity of Business Operation

Understand the impacts on the business should the system be unavailable for any reason. Develop business continuity plans (BCP plans), and Disaster Recovery (DR) capability, during the course of the project. Ensure that the BCP plans and DR capability are tested and operational from the date that the system is implemented.

E.27 Consideration 27 – Understand how Benefits Will Be Tracked and Measured

Understand how benefits will be identified, measured, and tracked across time.



Where a project is approved on considerations of the “public good”, develop a mechanism that permits evaluation of the value of the public good. This supports the business case, planning for the realisation of benefits, and the continued justification of a project should the costs or the timeframe of the project change.

Also, consider how business users of the system can provide feedback on the priorities for continued development of the system.