

All redactions 9(2)(ba) and 9(2)(b)(ii)

Office of the Minister for Primary Industries
Office of the Minister of Customs

Cabinet Committee on State Sector Reform and Expenditure Control

JOINT BORDER MANAGEMENT SYSTEM: PROGRESS REPORT

Proposal

1. This paper provides an update on the delivery of the Joint Border Management System, and the approach being taken by the New Zealand Customs Service (Customs) and the Ministry for Primary Industries (MPI) to finish the project.

Executive Summary

2. JBMS is an information technology system that supports Customs and MPI activities in managing goods and craft at the border. In November 2009, Cabinet approved the first phase (Tranche 1) [CAB Min (09) 39/22], with funding provided to agencies in Budget 2010.
3. Customs and MPI have been working with the prime vendor, IBM, to deliver the project since 2011. More than 70 per cent of the Trade Single Window (TSW), primarily an e-commerce platform for trade, is currently operational, and Customs and MPI are using sophisticated off-line analytical tools for risk assessment and targeting that were delivered as part of the project in 2015.
4. [REDACTED]
5. The new approach to deliver the final major release, release 10, puts the focus on completing the TSW components of the system, with R&I de-coupled from this release. [REDACTED]
6. [REDACTED] Customs and MPI will further develop the unfinished tools with this money and implement them in the next 12-24 months.
7. IBM will exit the programme after delivering the fully tested TSW components.
8. Customs and MPI will complete a testing phase before implementing TSW functionality, expected to be in early 2017. The JBMS programme will be considered closed at this point.

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9. The TSW first approach means it will be in place faster than it otherwise would have been. It also ensures the benefits from R&I are realised faster, as two years of rich TSW data is needed to maximise the effective use of analytics tools for risk assessment and targeting.
10. The deliverables expected from the 2009 business case will have largely been met at the completion of the project, and will be fully met following the progressive roll out of remaining R&I tools. The business benefits expected will accrue albeit over a longer timeframe than originally planned.
11. We propose to report back to the Committee on the implementation of JBMS by July 2017.

Background

12. Customs and the (then) Ministry of Agriculture and Forestry received \$75.9 million capital in Budget 2010 to develop the first stage of a Joint Border Management System (JBMS) to modernise ageing computerised border systems.
13. This first tranche would deliver a Trade Single Window (an e-commerce platform) to allow all border requirements for goods and craft to be met in one place, provide improved risk management and intelligence tools, and replace failing technologies.
14. Subject to a separate business case, a second tranche was envisaged to deliver further business functions and retire part, or all, of Customs' and MPI's respective border management systems, CusMod and Quantum (a decision was taken in late 2012 not to pursue a tranche two in its original form, but to add functionality to border systems in a modular way over time).
15. Following a procurement process and prime vendor negotiations that took longer than originally planned, IBM was appointed in June 2011 to design and build tranche one of the JBMS. The original go-live date of mid 2012 set in the business case needed to be updated to account for the delay in commencing the project. It was re-set for 1 April 2013, a delay of nine months from the business case.
16. As development of the system progressed, a decision was taken in June 2012 to change how the system was delivered to de-risk the project. Functionality would be rolled out in phases instead of all at once.
17. Two major change requests were then identified, including the need to incorporate the latest version of the World Customs Organisation's data model (WCO3) into the system. The second request was necessary to deliver the single window concept, as the design stage highlighted not all registrations and lodgement activities could be processed within the system as scoped. The change needed would enable TSW to pass the data MPI needs to assess biosecurity risk within its existing systems and respond to TSW
18. In March 2013, the State Sector Reform and Expenditure Control Committee approved an increase of \$13.8m to the project's capital budget [SEC Min (13) 4/3 refers] to \$89.7m. The increase was met within Customs' and MPI's

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baseline funding, with \$2.9m relating to change requests, \$4.9m a fiscally neutral change (opex to capex) related to multi release implementation and a \$6m contingent reallocation from 2013/14 capital baselines to cover costs of delivering the remaining Tranche 1 functionality.

19. Following testing delays, TSW went live in August 2013. It delivered four of the five main transaction types, and risk and intelligence functionality for food safety. Cost recovery from industry began at this point for the functionality that had been delivered.

20. In June 2014, SEC approved a further increase in expenditure from within capital expenditure baselines of \$14.4m. This was required to complete TSW and risk and intelligence capability [SEC Min (14) 11/7 refers], and included \$2.5m of contingency funding. This project's capital budget was now \$104.1m.

21.

[REDACTED]

22. The next release (release eight), was launched in July 2015, allowing brokers online self-service registration and management of certain required information in TSW.

23. In November 2015, a significant upgrade to the Risk and Intelligence analytics toolset and data repository to support their use was deployed. Both agencies are using these tools to improve risk management at the border.

24. The final major release (release 10) would deliver remaining TSW functionality and risk and intelligence (R&I) tools. This was scheduled for May 2016.

25.

[REDACTED]

26.

[REDACTED]

27.

[REDACTED]

28. [REDACTED] Customs and MPI made a decision to de-couple R&I from the next release to focus on completing the Trade Single Window first.

29.

[REDACTED] IBM will exit the project after it hands over fully

tested TSW functionality [REDACTED]

- 30. The R&I tools will continue to be developed over the next 12-24 months, as part of Customs' programme to continually enhance border systems, [REDACTED]
- 31. [REDACTED] no additional funding is required to complete Trade Single Window. Costs will also be met from within the project's capital and operating budgets.
- 32. A go live date for the new functionality is expected to be set for early 2017. The date will be set in consultation with industry and will be after the seasonal trade peak. The JBMS project will be considered completed once go live has occurred.
- 33. [REDACTED]

Delivering on the Business Case

- 34. When all Trade Single Window functionality is live in 2017, Customs and MPI will have largely delivered on the 2009 tranche one business case. All business case objectives will have been met after R&I tools are progressively implemented.
- 35. The business case set out four key objectives:
 - 35.1. implementation of the transactional components of Trade Single Window
 - 35.2. improved risk management and intelligence tools
 - 35.3. reduced risk of CusMod failure
 - 35.4. Introduction of MPI passenger processes into CusMod
- 36. The following outlines the specific deliverables agreed as part of the business case and current delivery against them.

| KEY BUSINESS CASE PROPOSALS AND DELIVERY | |
|---|--|
| Specific Deliverables/Performance | Progress to Date |
| Implementation of the transactional components of Trade Single Window (TSW) | |
| <ul style="list-style-type: none"> • Provide all TSW transactional functions required by Customs and MPI (including self-service registration) for all goods lodgment types. • Enable users to connect direct to TSW using a range of technologies, including web services, rather than having to use third party arrangements. • Introduce the WCO3 data model for all transactions. WCO3 is an international | <ul style="list-style-type: none"> • TSW launched 1 August 2013. Four of the top five border transactions available (Export declaration, Import declaration, Cargo Report Export, Outward Cargo Report). Almost four million transactions processed to date. • 100% of outward messages and more than 65% of inward transactions sent through TSW and transaction times reduced from up to 24 hours to less than a minute. |

| KEY BUSINESS CASE PROPOSALS AND DELIVERY | |
|--|---|
| Specific Deliverables/Performance | Progress to Date |
| standard data model that links biosecurity (MPI) and Customs data, provides rich data to inform R&I activities and future-proofs data collection and country-to-country data sharing. | <ul style="list-style-type: none"> High level of industry satisfaction with TSW. By using the WCO3 message standards New Zealand future-proofs border security data collection and integration with partner countries, and data feeds into risk management and intelligence activity. Release 10 in early 2017 will deliver the remaining TSW functionality |
| Improved Risk and Intelligence | |
| <ul style="list-style-type: none"> Implement an intelligence and risk management component that integrates Customs and MPI data collection and risk management. Risk and intelligence activities (entity mining, matching and merging, risk profiling and rating, and pattern analysis) are automated and occur in real time, providing new R&I capability to MPI and enhancing Customs' existing R&I capability. Action plans - advice to frontline staff on structured responses to identified threats. | <ul style="list-style-type: none"> Offline analytics, which underpins (R&I) capability, has been delivered: Food safety analytics in use by MPI since September 2013. Enhanced offline analytics covering wider range of goods delivered and in use by Customs and MPI since November 2015. All remaining functionality to be implemented in next 12-24 months following the completion of the Trade Single Window. |
| Reduced risk of CusMod failure | |
| <ul style="list-style-type: none"> Replace existing EDI translator with new translator technology as part of the TSW - EDI is single largest potential source of failure. Replace CusMod servers and operating systems and increase Customs data storage. | <ul style="list-style-type: none"> New EDI translator technology, as part of the TSW, completed 2012. Supporting infrastructure risk mitigated. Data storage risk mitigated. |
| Introduction of MPI passenger processes into CusMod | |
| <ul style="list-style-type: none"> CusMod extended to support MPI Biosecurity passenger clearance. | <ul style="list-style-type: none"> MAFPAX implemented in Nov 2011. |

Budget and Commercial Situation

37. The JBMS project is expected to remain within its revised capital budget of \$104.1 million when it concludes after the deployment of release 10.

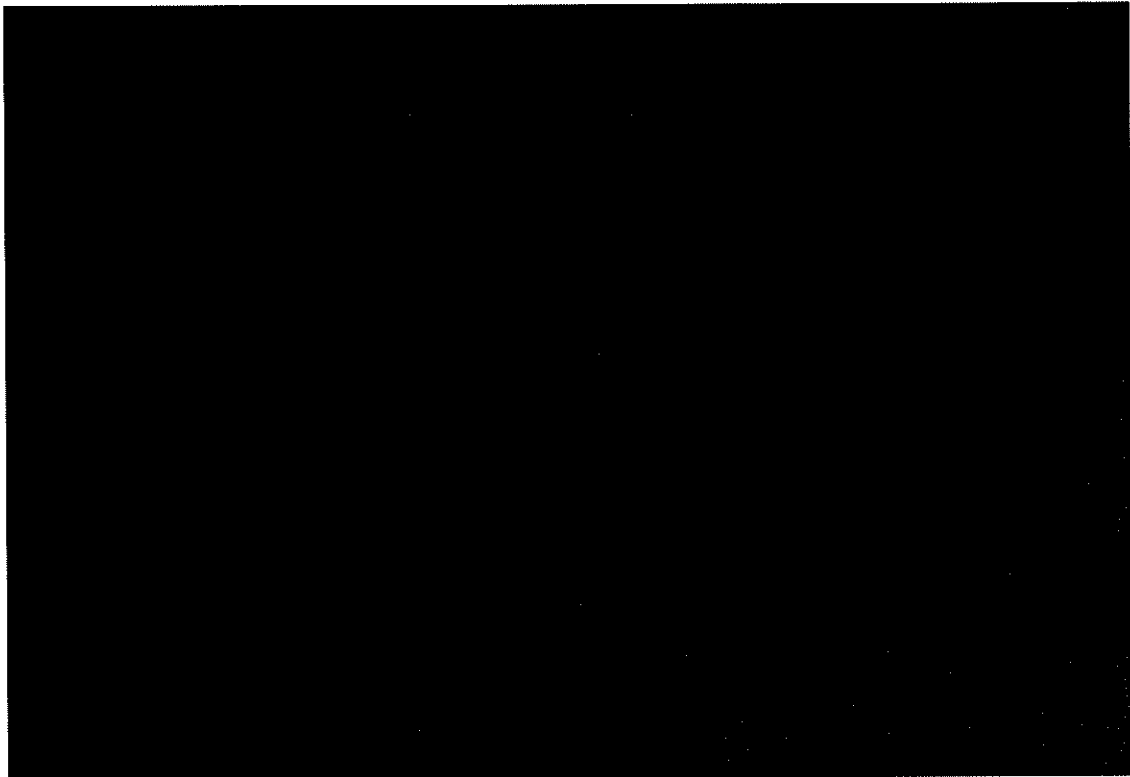
38. As at 30 June, \$101.7 million of the capital budget had been spent. \$2.5m of contingency funding is yet to be drawn down.

39.



40.





41.



Customs and MPI will not require any further funding to complete the remaining work.

42. The following shows how the JBMS budget has changed since the original capital allocation of \$75.9m in Budget 2010.

| JBMS Budget Changes | Total \$000 |
|--|--------------------|
| Capital funding – Budget 2010 | 75,871 |
| | |
| Customs – fiscally neutral transfer from Opex to Capex (March 2013) | 4,900 |
| Customs baseline capex - Multi release implementation and WCO3 data model change requests (March 2013) | 8,900 |
| Original planned funding | 89,671 |
| | |
| Customs & MPI baseline capex – [REDACTED] – August 2014 | 14,400 |
| | |
| Total approved JBMS capital expenditure funding | 104,071 |

Risk and Intelligence tools

43. The Crown has retained ownership of all work products developed by IBM, and Customs plans to progressively implement these tools over the next two years.

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- 44. Work is underway to determine how to do this as a series of smaller discrete projects, which will take advantage of Customs' mobility platform already in place. These projects will be prioritised to give best business impact.
- 45. [REDACTED]
- 46. The delivery plan for R&I will be scoped in the coming months, and Central Agencies will be kept informed as it is developed. Customs and MPI will also brief Investment Ministers once details plans are finalised.
- 47. The decision to de-couple R&I to complete TSW first will also help the ensure benefits from R&I are realised faster. Customs and MPI need two years of rich TSW data before R&I tools can fully distinguish patterns and anomalies in the data for risk assessment and intelligence purposes.
- 48. As already noted, a comprehensive package of offline analytical tools has been delivered as part of JBMS. It will be the backbone behind a joint border analytics team being formed this financial year by Customs, MPI and Ministry of Business, Innovation and Employment (Immigration).

Managing Risks

- 49. Customs and MPI have prepared mitigation strategies to deal with the risks associated with the updated delivery plan. These are summarised below.

| PROJECT RISKS AND MITIGATIONS | |
|---|--|
| Risk | Mitigation Treatment |
| <ul style="list-style-type: none"> • The revised TSW only solution, excluding full R&I functionality, is not viable. | <ul style="list-style-type: none"> • In line with the adopted project methodology key requirements and design documentation is being updated and reviewed to reflect the new scope. |
| <ul style="list-style-type: none"> • The software delivered by IBM is not of a high enough quality to allow Customs/MPI to work with Trade and end users to implement the final solution in an acceptable timeframe. | <ul style="list-style-type: none"> • [REDACTED] includes a formal validation and acceptance period of two weeks. • Three independent technical reviews are underway of key areas that Customs/MPI are relying on IBM to test, including: <ul style="list-style-type: none"> ○ Code quality ○ Data migration ○ Nonfunctional testing. • Customs and MPI will have carried out extensive testing to verify the functionality of the solution prior to acceptance of it. • [REDACTED] |

| PROJECT RISKS AND MITIGATIONS | |
|--|--|
| Risk | Mitigation Treatment |
| | |
| <ul style="list-style-type: none"> The JBMS target go-live date may clash with the busy trade season peak, or with the implementation of other significant projects the Customs/MPI might be running in parallel to JBMS. | <ul style="list-style-type: none"> The programme regularly meets with trade to provide project updates, and they are actively engaged in the decision around the final go-live date. The delivery schedule and the associated decisions will be ratified by executive governance, which includes key decision makers from both Customs and MPI. |
| <ul style="list-style-type: none"> Customs and MPI are unable to complete the remaining elements of R&I, de-scoped from R10, and therefore cannot realise the benefits projected in the business case. | <ul style="list-style-type: none"> TSW, (once R10 is completed) and the existing analytics environments are the key elements of JBMS for the next two years as we build a history of richer trade data and analyse it to identify trends and anomalies to inform future targeting as described in the business case. Customs/MPI ownership of all work done to date on R&I. Customs has begun working with its operational business arms to plan the implementation of remaining functionality through a series of smaller projects in the next 12-24 months. Joint oversight by Customs and MPI, along with rigorous planning and resourcing, will help ensure the business needs of both agencies are met. Customs has a very capable application development group, which currently supports and enhances Border Systems such as Cusmod, Nexus, Smartgate and all of the integration systems. Customs compliment this team with input from systems vendors and through the use of contractors. |

Benefits Realisation

- The 2009 business case estimated JBMS would result in business benefits of \$535 million over 10 years once the first tranche was fully operational.
- Benefits of \$38.2 million had been realised as of February 2016. Those benefits reflect a reduction in headcount, the minimisation of risk relating to failure of

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existing border IT systems and biosecurity harm avoidance. Another \$87 million is expected to be realised from these same benefit streams in the next six years.

52. MPI believes that the original biosecurity benefits continue to be realised. Exit surveys in passenger and mail pathways highlight continued confidence in the biosecurity system. The Office of the Auditor General review of biosecurity readiness and response acknowledged these improvements as well as encouraging continuous improvement for MPI. JBMS will continue to be critical to this as well as achieving the continued business benefits sought.
53. The remaining benefits will result from the completion of Trade Single Window and R&I capability.
54. It is now expected to take 15 years to realise the full benefits of \$535 million. This is in part due to delivery delays and the phased implementation approach adopted in 2012. The 2009 business case also incorrectly assumed all benefits would accrue from day one of the system being in place, whereas R&I benefits need two years of TSW data before they begin to be realised in a meaningful way.
55. Customs and MPI undertook work in early 2016 on how benefits are valued and measured, and further work will be done this financial year to ensure processes in place to measure JBMS project benefits are robust.

Tranche two

56. The Joint Border Management System was originally to be a two-step project to be completed over four years, at a cost of \$140 million. The second tranche, costing approximately \$65 million and subject to its own business case, would help phase out legacy systems and deliver additional functionality.
57. As a result of the phased delivery approach adopted in 2012, it was decided any additional functionality to be added to JBMS, including what was planned for tranche two, would be subject to individual business cases and be added to the system in a modular way.
58. Some key elements of the originally envisaged second tranche will be, or have been, delivered in parallel to the first tranche through separate funding sources, as the table below illustrates.

| Tranche two – original business case scope | |
|--|---|
| Original Scope | Delivered/will be delivered |
| <ul style="list-style-type: none"> • Modernisation of Border Systems including replacement of core elements of CusMod and Quantum. • Ongoing enhancement of Risk and Intelligence systems as the Crown's use of these mature • Mobility for passengers, goods related | <ul style="list-style-type: none"> • Major upgrades undertaken to Customs' backend IT systems, including middleware, as part of JBMS (tranche one) readiness projects, have ensured the ongoing viability of CusMod. • Customs will explore in 2016/17 re-platforming CusMod, as part of its 2020 programme. • A mobility platform for frontline staff |

| Tranche two – original business case scope | |
|---|--|
| Original Scope | Delivered/will be delivered |
| <p>activities, investigations and for craft processing.</p> <ul style="list-style-type: none"> • Manage Customs Trade Assurance and Audit Programme. • Manage Secure Trade Programme • Workforce planning tool and development of resource management tools to support resource allocation based on risk. • Improved business reporting • Improvements in Intelligence Case Management. • Case management and enterprise search • Client Reference Library – online access to procedure information, rules, regulations to provide clarification about all border related activities | <p>introduced at Customs in 2015/16, with the roll out continuing in 2016/17.</p> <ul style="list-style-type: none"> • As part of Budget 2016 funding, Customs and MPI will develop Trusted Trader and Trusted Traveller pilots. • Customs is currently implementing a new rostering tool as part of its Operations Transformation Programme (Budget 2016 funding). • Customs' data warehouse, Nexus, has been upgraded to provide a better reporting platform. • An Enterprise Content Management System has been selected by Customs from the all of government as a service offering. • A new external website for Customs will be developed as part of the new Customs and Excise Act (Budget 2016 funding) to provide traders and travelers a one stop shop for information, based on the same platform as the Enterprise Content Management System. |

Border Systems

59. The Joint Border Management System is a key tool that's part of the overall system to manage the border and its associated risks. Border management tools will continue to be enhanced regardless of when the JBMS, which is primarily for trade purposes, is completed.
60. Ongoing depreciation that will accrue from the JBMS is expected to be reinvested to enhance border systems where appropriate.

Post Implementation Report Back

61. In April 2010, Cabinet directed Customs and MPI to submit a post implementation report on the costs and benefits as identified in the business case and the outcome of Tranche 1 funding to the Minister of Finance, the Minister of Customs and Minister for Biosecurity (now Primary Industries) [annex to CAB Min (10) 13/4(13) refers].
62. Delays to the project's delivery schedule has meant the report back has been deferred, but Customs and MPI have been reporting regularly to central agencies, the GCIO, Investment Ministers and to SEC.
63. Given Customs and MPI consider the JBMS project will be completed once the remaining TSW elements go live in early 2017, we propose to report back to the Committee on implementation by July 2017.

Consultation

64. The Treasury, State Services Commission, Ministry of Business, Innovation and Employment (Immigration) and Government Chief Information Officer have

been consulted and feedback has been incorporated into this paper. The Department of Prime Minister and Cabinet has been informed.

Implications

65. This paper has no implications in the following areas:

| | |
|---------------------------|----------------|
| Human Rights Implications | Not Applicable |
| Gender Implications | Not Applicable |
| Disability Implications | Not Applicable |
| Financial Implications | Not Applicable |
| Legislative Implications | Not Applicable |

Regulatory Impact Analysis

66. A regulatory impact statement is not required for this paper.

Publicity

67. The current JBMS communications plan has been updated to reflect the revised approach. The TSW first delivery plan has already been signalled publicly and has been reported by the media.
68. Customs and MPI will provide a full update to industry when appropriate.
69. We propose that Customs publish this paper on its website, redacted as appropriate.
70. Media enquiries will be dealt with on an as required basis.

Recommendations

71. It is recommended the Committee:

- 1 **note** [REDACTED]
- 2 **note** [REDACTED]
- 3 **note** [REDACTED]
- 4 **note** Customs and MPI will complete risk and intelligence tools [REDACTED] in the next 12 to 24 months, and will brief Investment Ministers once detailed plans are finalised

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- 5 **note** Customs' and MPI's proposed delivery plan to finish the Joint Border Management System project
- 6 **note** no additional funding is required to complete the last major release of Trade Single Window, or the R&I tools
- 7 **note** the benefits to be realised from the project will be met over a 15 year period
- 8 **invite** the Ministers of Primary Industries and Customs to report back to the Committee on the implementation of Joint Border Management System by July 2017.

Hon Nathan Guy
Minister for Primary Industries

Date: ____/____/____

Hon Nicky Wagner
Minister of Customs

Date: ____/____/____

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