

Royal Canadian Mounted Police – NCJI

Audit of NCJI Project Costs

For the period April 1, 1999 to March 31, 2003

Final Report

October 2003

This report and its contents and findings are confidential and are intended for RCMP Internal Audit use only. This report may not be appropriate for use by unintended users. Users are cautioned to consider the findings in the context of the scope.

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1. Background

National Criminal Justice Index (NCJI) is a component of the development of the Canada Public Safety Information Network (CPSIN), which is a major capital project of the federal government. One of the objectives of this capital project, Canadian Police Information Centre Renewal (CPIC-R), is to replace and augment the capacity of the existing 30 year old CPIC system and to provide a national gateway for all criminal justice partners to access essential crime and offender data. NCJI, as an original portion of CPIC-R, is currently being developed as an information-sharing structure providing linkages between autonomous information systems from different public safety organizations. The NCJI project will operate under the stewardship of the RCMP but will be guided by the participating criminal justice organizations. On direction from Treasury Board, NCJI was removed from CPIC-R this year.

The Treasury Board Secretariat has requested an audit of the NCJI related project costs up to March 31, 2003 and a description of the methodology for allocating costs to the NCJI project. The attribution of costs to NCJI is important since the development of its IT infrastructure is being performed concurrently with the development of other components of CPSIN.

NCJI is an IM/IT project and must report its project costs to Treasury Board in accordance with TBS policies. Under these policies, project costs should include all departmental resources involved in designing, developing and acquiring software; all implementation aspects (e.g. documentation, training, testing and installation), as well as the cost of acquiring information technology hardware.

2. Audit Objectives

The objective of this assignment was to provide reasonable assurance that the NCJI expenditures as at March 31, 2003 were fairly stated in all material respects, in accordance with relevant government policies and regulations. In addition to the primary objective, secondary objectives included summarizing the costing methodology used to allocate CPIC-R and other organization-related costs to NCJI and to provide management letter points and recommendations to improve the efficiency and effectiveness of the NCJI financial reporting processes.

The audit was carried out between September and October 2003 in accordance with the audit approach outlined below.

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3. Audit Scope

The audit focused on the NCJI Project Costs representing NCJI's portion of CPIC-R project expenditures, from April 1, 1999 to March 31, 2003. The components of these costs were provided to KPMG by RCMP staff in the original expenditure summary totaling \$7,393,466 provided in Appendix A for information.

During the audit, additional direct costs were identified and included in a revised expenditure summary. As well, calculation and transposition errors that were identified were corrected in the revised expenditure summary. The numbers included in this report are from the revised expenditure summary.

Our work was limited to, and our audit conclusions and findings are based on, the procedures outlined below in the "Audit Approach Section." The scope of our engagement was, by design, limited to those procedures required to provide an opinion on whether the NCJI expenditures were appropriately recorded as NCJI Project Costs, and as such did not include an assessment of the completeness of the NCJI Project Costs.

4. Audit Approach

The audit was conducted in three phases: planning, conduct and reporting. Our audit included a review of the transactions related to NCJI and such tests as we considered necessary to provide reasonable assurance that the audit objectives were achieved. The audit was conducted in accordance with the *Standards for the Professional Practice of Internal Auditing* from the Institute of Internal Auditors.

The audit plan was developed based on consultations held with RCMP Internal Audit Branch and NCJI management and a review of key program documents. Our approach and anticipated timing was presented to NCJI management on September 22, 2003.

5. Audit Results

Based on the results of our audit work, we conclude, with reasonable assurance, that the NCJI direct costs of \$4,211,460 for the period from April 1, 1999 to March 31, 2003 have been appropriately recorded as NCJI Project Costs in accordance with the *Financial Administration Act* and Treasury Board Secretariat policies with respect to direct costs of IM/IT Projects. However, as a result of NCJI having been established as a sub-component of CPIC-R, and as a result of the limited support for the cost allocation methodology used to allocate NCJI costs from CPIC-R, the indirect costs allocated to the project could not be substantiated to the level required to provide reasonable audit assurance.

The cost allocation methodology used for indirect costs is outlined in section 6.2. Further cost allocation options prepared by KPMG are also provided in Section 7 of this report.

6. Supporting Information

The following table summarizes the NCJI costs and related supporting information:

<i>Cost Type</i>	<i>Costs</i>	<i>Reference for Explanation</i>	<i>Summary of Findings</i>
<i>DIRECT COSTS:</i>			
<i>Original Direct Costs</i>	\$3,897,004	6.1 Direct	Costs related to NCJI and were accurately recorded
<i>Additional Direct Costs</i>	\$314,456	Costs	
<i>TOTAL DIRECT COSTS</i>	\$4,211,460		
<i>INDIRECT COSTS:</i>			
<i>Original Allocated Costs</i>	\$7,408,128	6.2.2 Allocation	Cost allocation methodology could not be substantiated to the extent necessary to provide reasonable assurance
<i>Additional Alloc. Costs</i>	\$37,804	of CPIC-R costs to NCJI	
<i>TOTAL INDIRECT COSTS</i>	\$7,445,932		
<i>TOTAL COSTS BEFORE CLIENT ADJUSTMENTS</i>	\$11,657,392		
<i>Independent Review</i>	(1,206,060)	6.2.3 Costs removed as per Independ. Review	Costs removed could not be substantiated to the extent necessary to provide reasonable assurance
<i>Other adjustments</i>	(1,569,349)	6.2.4 Other revisions to Mgmt. Estimates	Costs were reversed in error and/or costs could not be substantiated to the extent necessary to provide reasonable assurance
<i>Allocation Error</i>	(1,155,476)	6.2.5 Allocation Error	Allocation error made on the reallocation of costs identified above
<i>Rounding Differences</i>	25,927	6.2.6 Rounding Differences	Differences due to rounding of allocation percentages.
<i>TOTAL COSTS</i>	\$7,752,434		

6.1 DIRECT COSTS

Direct costs include professional fees, salary, travel and miscellaneous items. Professional fees for external consultants account for approximately 97% of NCJI direct costs. KPMG was able to ascertain that these fees and all other costs relate to, and were incurred for, the NCJI portion of CPIC-R. The description of the consultant work performed on the invoices and on the individual work packages specifically related to projects 3 and 4 (or NCJI).

Total NCJI Direct Costs are \$4,211,460 for the period April 1, 1999 to March 31, 2003. This amount consists of \$3,897,004 included on the original expenditure summary and \$314,456 of additional direct costs identified during the audit. The additional direct costs were originally booked to a separate Collator code in RCMP's accounting system. This code was not included when preparing the original expenditure summary.

6.2 INDIRECT COSTS

6.2.1 Inherent difficulty

The recommendation to separate NCJI costs from CPIC-R costs (David J. Archer Management Consulting Inc. report, version 1.5 dated April 11, 2002) was implemented by NCJI management. The allocation of these costs is inherently difficult when systems, accounts, contracts and other factors are not developed, at inception, to track costs and / or to develop cost drivers, at the required sub classification level. These difficulties occurred primarily as a result of the project costs not originally being recorded/coded in the accounting system to allow a split between CPIC-R and NCJI. In addition, cost drivers that could be used to retroactively attribute or allocate costs, such as, contracts or invoices were generally insufficiently detailed, between projects, to easily allocate these costs. To further exacerbate the problem, some allocations were made after significant time had passed and / or related support for the allocations were not documented at the time. As a result, CPIC-R management had to exercise a substantial amount of judgment to allocate the NCJI costs that were originally recorded to the CPIC-R project as a whole.

As a result of the above inherent difficulties, KPMG found that indirect cost allocations could not be substantiated to an audit level of assurance.

6.2.2 Allocation of CPIC-R costs to NCJI

CPIC-R management applied a variety cost allocation methodologies to a selection of CPIC-R costs to allocate a proportion of CPIC-R costs to NCJI.

The estimated NCJI project cost was established at \$11,657,392 which includes the \$4,211,460 of direct costs (discussed under "Direct Costs") and an allocation of indirect costs of \$7,445,932 from CPIC-R detailed in the following table. The allocated indirect cost amount of \$7,445,932 consists of \$7,408,128 included on the original expenditure summary and \$37,804 of additional allocated indirect costs identified during the audit. The additional costs were originally booked to

a separate Collator code in RCMP's accounting system. This code was not included when preparing the original expenditure summary.

	<i>Total CPIC-R Costs</i>	<i>Allocation Driver</i>	<i>Amount Allocated</i>
<i>Start up Costs</i>	\$ 4,556,724 ¹	²	\$ 0
<i>Project Office Costs</i>	26,421,736	12% - 99/00; 20% - 00/01; 11% - 01/02; 14% - 02/03 ³	3,137,331
<i>Development & Implementation Support</i>	6,507,897	12% - 99/00; 20% - 00/01; 11% - 01/02; 14% - 02/03 ⁴	1,333,353
<i>Implementation Management</i>	5,414,240	12% - 99/00; 20% - 00/01; 11% - 01/02; 14% - 02/03 ⁵	162,364
<i>PPA Definition Costs</i>	19,116,119	40% - 99/00; 20% - 00/01; 0% - 01/02; 0% - 02/03 ⁶	2,812,884
<i>Total Costs to Allocate</i>	\$62,016,716		\$ 7,445,932

Subsequent to reporting \$11,657,392, CPIC-R management made a few key decisions, which resulted in additional adjustments and allocations to reduce the total costs to \$7,752,434 from the previously reported \$11,657,392. All of the adjustments noted above related entirely to indirect costs.

¹ Excludes start-up costs of \$2,497,900 incurred over the period from 1996 to 1998.

² Start-up costs of CPIC-R considered to be unrelated to NCJI based on discussion with management

³ Based on proportion of previously allocated Direct and PPA Def'n NCJI costs to CPIC-R costs

⁴ Based on proportion of previously allocated Direct and PPA Def'n NCJI costs to CPIC-R costs

⁵ Based on proportion of previously allocated Direct and PPA Def'n NCJI costs to CPIC-R costs

⁶ Driver based on management judgment, no further documentation available or provided

The following summary level details were provided with respect to the Allocation drivers:

1. The cost driver used to allocate PPA Definition Costs (see footnote 6 above) was based on management estimate and could not be substantiated or supported by documentation.
2. Although, many organizations apply general overhead using proportion of previously allocated amounts (see footnotes 3 ,4 and 5 above), this cost driver is used if no other driver, that has a more causal link to the cost being allocated, is available. In addition, this driver is significantly affected by the allocation of PPA Definition Costs referred to above. Because PPA Definition Costs are allocated using proportions that could not be substantiated to an audit level of assurance; the inherent vulnerability of this allocation increases the vulnerability of all other cost allocations.
3. In addition, start-up costs were originally allocated 100% to Phase 1 (non NCJI related), however, this allocation was never revised to reflect the portion of start-up that related to NCJI. As a result, no start-up costs were allocated to NCJI.
4. Implementation Management costs were not allocated to NCJI over the fiscal years ended 2000 to 2002. Our review of work packages relating to Implementation Management costs (WBS O) leads us to believe some of the work should be allocated to NCJI.

As a result of the limited documentation and support that was provided to substantiate the cost allocations and as a result of the other costs which may have been appropriately allocated and were not, no reasonable assurance can be provided on the NCJI costs (Indirect Costs) resulting from the allocations of CPIC-R costs.

6.2.3 Cost Removed as per Independent Review

Management received a CPIC-R Independent Review of Cost Estimates report, dated April 11, 2002 from David J. Archer, which identified certain costs that, in the opinion of Mr. Archer, should not have been paid for by NCJI.

The Independent Review of Cost Estimate Report (David J. Archer) recommended that approximately \$14,000,000 of indirect costs be removed from CPIC-R. NCJI's allocated portion of these costs removed was \$1,206,060. In the Archer Report these cost are identified as Network Management Software, Mainframe Upgrade, Disaster Recovery Site, Training of second level trainers and Business Resumption Planning. Management could not identify the specific invoice or costs that were removed, or how the related amounts were calculated. In addition management could not identify the specific related amounts that were included in CPIC-R. As a result of the limited substantiation available KPMG was unable to obtain sufficient audit evidence to substantiate the amount shown as indirect costs to be removed from NCJI.

6.2.4 Other Revisions to Management estimates

Management removed another \$8,456,483 of indirect costs from CPIC-R based on a variety of revisions to management estimates. These costs include the C-Wing leasehold improvements (\$1,864,477) paid by the project, Informatics and CPIC Services Backfill (\$3,276,337), Project Definition Extension (\$3,315,669). NCJI's allocated portion of these costs was \$1,569,349 as detailed below.

An adjustment to the allocation to the C-Wing leasehold improvements was identified by the RCMP's Internal Audit department (IA) in its final audit report of the CPIC-R Project. IA noted that management had determined that 60% of these costs be attributed to the project and the other 40% be attributed to the CIO. This allocation was made to approximate the usage since each occupy a portion of the C-Wing at Headquarter offices. In the adjustments referred to above, CPIC-R management removes all C-Wing leasehold costs. NCJI's portion of the adjustment was \$210,579.

Informatics and CPIC Services Backfill represent cost paid by CPIC-R to compensate various RCMP departments for Informatics and CPIC Services employees working on CPIC-R. Since no formal compensation arrangement existed between CPIC-R and these departments, CPIC-R agreed to pay for temporary employees hired by Informatics and CPIC Services while those employees were assigned to CPIC-R since the RCMP employees salaries were not charged to CPIC-R. The costs related to backfills were removed from CPIC-R. NCJI's portion of the adjustment was \$506,390.

Project Definition Extension costs were removed from CPIC-R. A lump sum was removed but did not specifically relate to any Project Definition invoices. In 2001-2002, Definition Extension costs removed exceeded the total Definition costs originally recorded that year. NCJI's portion of the adjustment was \$852,381.

6.2.5 Allocation Error

A significant calculation error was made within the 2000-01 yearly summary of costs. In that year, a percentage that was inconsistent with other years was used to allocate NCJI costs. Using management's own assumptions, the total 2000-01 costs should have been \$2,599,821, however the calculation error resulted in total 2000-01 costs of \$1,444,345 being reported. As a result, \$1,155,476 of 2000-01 costs was erroneously removed during the management adjustments.

6.2.6 Rounding Differences

The rounding differences of \$25,927 result from the rounding of the cost allocation percentages to the nearest percentage point instead of using the actual calculated percentages.

In summary, due to the lack of documentation to support the allocation of indirect costs, in conjunction with the issues noted above regarding the adjustments, we cannot provide

reasonable assurance that the indirect costs are appropriately recorded as NCJI Project Costs.

7. Potential Cost Drivers for the Allocation of CPIC-R Indirect costs

In order to assess the reasonableness of the allocation of indirect costs, KPMG has identified a number of potential allocation methods, which are quantifiable and may provide for a reasonable basis for the allocation of CPIC-R Indirect costs. An assessment of the reasonableness of the allocation basis can generally be made based on the degree to which a causal link exists between the costs and the cost driver selected. The following cost drivers were considered:

- Professional Fee Dollars;
- Professional Fee Hours;
- Project to Date Budget;
- Total Budget; and
- Direct Costs.

The options have been developed based on the assumption that the NCJI project has progressed consistent with the overall CPIC-R project. Discussions with management indicate that this is not an accurate assumption. This assumption and the related results were used to assess the reasonableness of the allocation methods used to date and to provide NCJI management with some considerations for use in NCJI in the future.

The cost allocations, based on the above cost drivers, would have resulted in NCJI costs between \$13,526,371 and \$22,314,140. This analysis is provided for information purposes only and is based on the assumptions outlined above. Further analysis is required to establish an appropriate methodology and allocation basis for the allocation of retroactive costs from CPIC-R to NCJI. Additional information regarding the five allocation methods is provided in a management letter provided to the project management.

8. Recommendation

The information contained in the report is provided for the consideration of CPIC-R and NCJI management. It is suggested that, while NCJI remains as a separate project, an appropriate allocation methodology be identified and applied which represents an appropriate, reasonable and fair basis of allocation of Indirect Costs.

9. Management Response

Response from Chief Information Officer and Director, Information and Identification Services:

The Joint Services unit of the CIO Secretariat Project Management Office will work with CPIC-Renewal and NCJI to establish a standard methodology for the identification and allocation of project indirect costs. This methodology will guide the costing of these projects moving forward, and will be incorporated into the project management plans of future IT projects within the sector.

With respect to the reporting of historical CPIC-Renewal and NCJI costs, Joint Services will correct for the mathematical and data entry errors identified during the audit, including:

1. Additional costs of \$314,456, representing Projects 3 and 4 direct costs between January 1, 2003 and March 31, 2003, will be added to Projects 3 and 4 costs for 2002/03.
2. A data entry error in removing the Canadian Police Information (CPI) - Centre backfill costs from the total project cost will be corrected, changing the amount removed from \$906,300 to \$90,630 for 1999/00.
3. A data entry error in removing the training costs from the total project cost will be corrected, changing the amount removed from \$809,070 to \$80,907 for 2002/03.
4. A cost for licenses in the amount of \$1,753 will be correctly coded from a Project Office cost to a Project 2, Phase 1 cost, resulting in a decrease in indirect costs to be allocated.

APPENDIX A

CPIC RENEWAL PROJECT
 PROJECT 3 - NATIONAL CRIMINAL JUSTICE INDEX
 PROJECT 4 - NEW CLIENTS, NEW SERVICES
 ORIGINAL EXPENDITURE SUMMARY (Provided by RCMP)

WBS	DESCRIPTION	NOTES	FISCAL YEAR						TOTAL		
			%	1999/2000	%	2000/2001	%	2001/2002		%	2002/2003
	Direct Costs								As Submitted to TB		
DD001	Project 3 - National Criminal Justice Index			218,490		283,226				501,716	
DE001	Project 4 - New Partners and New Services			72,920		18,248				91,168	
K	Project 3 - National Criminal Justice Index Capital Portion - Environmental Support for NCJI					437,383		1,331,161	1,266,015	3,034,558	
OD003									43,018	43,018	
N	Project 3 - National Criminal Justice Index								226,543	226,543	
	Total :	1		291,410		738,857		1,331,161	1,535,576	3,897,004	
	Other Direct Costs										
D	Percentage of Definition Costs (all other D's)	2	40%	1,234,283	20%	1,578,601				2,812,884	
BF001	Liaison Services	3	12%	76,449	20%	186,536	11%	120,231	144,796	528,012	
BH001	Backfill of Informatics Resources	3	12%	1,682						1,682	
BH002	Backfill of CPIC Services	3	12%	10,544						10,544	
BI001	Privacy Advisement	3	12%	9,824					7,004	16,827	
E	Percentage of Engineering & Tech. Environment	3					11%	434,796	341,570	776,367	
	Total :			1,332,782		1,765,137		555,027	493,370	4,146,316	
Total Direct & Other Direct Costs				1,624,192		2,503,994		1,886,188	2,028,946	8,043,319	0.71
	Indirect Costs (Overhead)	4									
B	Percentage of Project Office Costs (WBS B)(Note 5)	3	12%	688,579	20%	1,123,253	11%	587,580	14%	738,276	3,137,689
O	Percentage of Implementation Mgmt (Excluding Capital)								5%	124,124	124,124
	Total Indirect Costs:			688,579		1,123,253		587,580	862,400	3,261,812	0.29
Total Costs Project 3 & 4: (Note 8)				2,312,772		3,627,246		2,473,768	2,891,346	11,305,132	
11,305,132											
CPIC Renewal Project Definition											
Project 2 - CPIC Modernization (PPA/Definition)				9	2,806,541	9,883,200		8,000,701			
Total Project Definition - All Projects					5,119,313	13,510,446		10,474,469			
Removal Of Non-Project Costs:											
Defn Portion of 'Other' Costs & Training 2nd Level Trainers					-331,753	-419,127		-3,924,066			
Defn Portion of 'C-wing Fit-up'; CPIC Services Backfill; & Informatics Backfill					-692,694	-1,195,402		-741,892			
Project Definition Extension						-900,000		-1,600,000			
					-1,024,447	-2,514,528		-6,265,958			
Total Project Definition - All Projects - Adjusted for Non-Project Costs					4,094,866	10,995,918		4,208,511			
Project 3 & Project 4 Portion of Total Project Definition Cost - ADJUSTED				7	1,842,690	1,649,388		1,010,043	2,891,346	7,393,466	

NOTES:

1. Total Direct Costs as reported in the Monthly Status Report. All costs are presented according to the WBS.
2. Allocation of 40% and 20% of WBS D to Projects 3 and 4: The percent was an educated guess based on the Project Definition work done by the CPIC R. architects, analysts and planners. During the period of 1999-2000, the project technical team was assuming a UNIX platform solution for all Projects of CPIC R. It is only during the Spring 2000 that the first Manicom review recommended to move to a main frame solution for CPIC. Projects 3 and 4 were getting the support and benefits from the rest the technical team.
3. Allocation is based on the percentage of the Projects 3 & 4 Direct Costs over the total direct costs of all projects.
4. Indirect Costs are defined as "the costs necessary for operations, but not directly associated with developing a product or service.
5. The Project Office provides services such as: Project Management, Administrative Services, Financial Control, Procurement and Contract Management, Assessment & Risk Management, Quality Assurance, Management of Change, LAN Support and facilities Management
6. Total Costs as presented at the Project Summary level.
7. The portion of Total Project Definition costs assigned to Projects 3 & 4 is calculated based on management's previously agreed to rate.
8. Previous total costs indicated at \$11.4 were estimated January 2003. Above total cost before adjustments of \$11.3 is as per FMIS System Actuals May 2003.
9. Figures taken from FSR 202-12-31 AfterAudit Spreadsheet