



HRDC Year 2000 Project

Risk Assessment of Mission Critical National Applications; Infrastructure and Operations

National Report Update No. 3

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Internal Audit Bureau

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1.0 EXECUTIVE SUMMARY

Background

The Department of Human Resources Development Canada (HRDC) is committed to a strategy for achieving Y2000 compliance of all Mission Critical (MC) applications by a departmental deadline of December 31, 1998. These applications have linkages and underlying software products, all of which have to be Y2000 compliant. To deliver these applications, a compliant infrastructure is required.

Process Overview

The Year 2000 risk assessment process began in fiscal year 1997/98 with the first risk assessment report published, January 1998. A second update of the risk assessment process was published in May 1998.

This third update of the risk assessment was initiated in October 1998 and is divided into the following assessment areas:

- Mission Critical Applications - includes planning, code conversion, unit testing, systems' testing, Y2000 testing and implementation;
- Infrastructure Compliance - includes hardware, software and network infrastructure;
- Operations - includes mainframe and LAN/WAN;
- Linkages - includes internal and external applications linkages;
- Products - includes underlying software products that enable the hardware and applications to work;
- Embedded Systems - includes assets and services potentially affected by the Y2000 issue;
- Contingency Planning – includes the process for Programs and Functions to develop backup plans for possible Y2000 failures.

The risk assessment process is part of the overall Systems Under Development Audit (SUD) of Year 2000 activities currently under review by the Internal Audit Bureau (IAB).

This report covers the entire department. Similar reports for the organizations affected have been issued. All major product and applications' managers were interviewed as part of this update. The IAB Risk Assessment Team created specific Year 2000 questionnaires to assist with these interviews.

Answers were subsequently quantified according to their risk factor on a scale of 1 (low) to 10 (high) and entered into a risk calculation model to obtain a final overall risk rating as at December 1998.

Overall Findings

- **Mission Critical Applications** – all mission critical applications, with the exception of the Corporate Management System (CMS) have been rated Y2000 Ready at December 31, 1998.
- **IT Infrastructure** – all mission critical infrastructure has been rated Y2000 Ready at December 31, 1998, with the exception of several items, the most notable of which is Banyan Vines, HRDC's national operating system. The compliant version of this system is scheduled to be deployed by March 31, 1999.
- **IT Operations** – all mission critical hardware and operating software has been declared Y2000 Ready at December 31, 1998. HRDC is still negotiating with PWGSC for compliancy information on its infrastructure, as that department supplies all non-EI payment processing.
- **Mission Critical Applications Linkages** – 70% of all mission critical linkages have been identified and tested for Y2000 compliancy at December 31, 1998.
- **IT Products** – 80% of all mission critical products have been tested and declared Y2000 compliant at December 31, 1998.
- **Non-IT Embedded Systems** – all mission critical HRDC facilities and non-IT assets have been identified and will be tested for Y2000 compliancy by March 31, 1999.
- **Contingency Planning** – the process for business functions to develop backup plans for possible Y2000 failures has been initiated, and therefore cannot be rated for risk at this time. A risk assessment of contingency planning will be conducted in time for the next update. The IAB has been actively participating in consultations with FAS throughout this process.

<p>Overall Conclusion: The department has achieved its Y2000 internal deadline for Government Wide Mission Critical (GWMC) applications systems. A departmental mission critical system, CMS, will be Y2000 compliant by June 1, 1999.</p>

2.0 THE YEAR 2000 RISK MATRIX

This section documents the summary of risk results:

- a list of the key Year 2000 risks; and
- a summary of risk ratings – for all key mission critical applications, operations, infrastructure, and other aspects of Y2000.

YEAR 2000 RISK ASSESSMENT RESULTS -- OVERVIEW

A matrix on the next page presents an overview of HRDC Mission Critical Applications, Infrastructure, Operations and Other with their associated risk ratings.

How to read the chart:

The matrix provides an easy way to gain an appreciation of all risks that may impact upon the Year 2000 success of a given Mission Critical Application, application linkages, and mission critical products that support or underlie the MC application. Finally, risks have been quantified for Implementation of hardware and software. While overall application ratings were assigned and displayed in previous risk assessments, this is the first time that ratings have been applied to linkages, products and implementation.

	Mission Critical Applications													Infrastructure							Operations			Other																
	HRDB							HRDB	HI	LABOUR	ESF		Other																											
Overall Risk Ratings:	[Table with columns for National Employment Services System (NESS), Canadian Job Strategy (CJS), Jobbank Black, Spirit Telebits, Tele-messaging Insurance, CONNECT, CMS/DBS, Employment Insurance, Support System for Agrow 88A, Premium Reduction System, ICS, LOIS, Labour MLAD, CPP Exchange Benefits-Payroll, OIA App Security & International Agreements, Annuities, Social Insurance Registry, Departmental Payment System, Northern Civil Early Retirement/Job Corps, CMS/IBSE/ESB, Application Support, Intranet/Internet, Software Services, Server Operating Systems Support, Micro/LAN Support, Database Support, IT Communication/teleshopping, Architecture, Security, Data Administration, BSSDN, NCR Lan/Wan Coordination, Operations and Reengineering, PWGSC/CTIS, Vendor Compliance, Non IT Access Embedded Systems, Contingency Planning, Office Automation]																																							
Risk Rating in December, 1998	①	①	①	①	①	①	①	①	①	①	①	①	①	①	①	①	①	①	①	①	①	①	①	①	①	①	①	①	①	①	①	①								
Risk Rating in May 98	2	2	3	n/r	n/r	n/r	n/r	n/r	2	n/r	0	n/r	3	2	2	n/r	2	2	n/r	5	n/r	4	2	n/r	4	3	4	2	2	n/r	n/r	3	n/r	4	4	n/r	n/r	3		
Risk Rating in Dec 97	3	3	2	n/r	n/r	n/r	n/r	3	2	n/r	3	n/r	3	3	4	3	2	3	6	5	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r		
APPLICATION LINGAGES	[Table with columns for various application languages]																																							
Risk Rating in December 1998	n/r	3	n/r	n/r	n/r	n/r	n/r	2	2	2	3	2	2	①	①	①	①	①	2	n/r	2	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r	3	3	n/r	n/r	n/r	n/r
PRODUCTS	[Table with columns for various products]																																							
Risk Rating in December 1998	n/r	n/r	3	3	n/r	2	n/r	n/r	2	n/r	n/r	2	2	2	n/r	n/r	n/r	n/r	n/r	2	①	①	①	3	①	①	3	2	①	①	2	①	3	n/r	n/r	n/r	n/r	①		
IMPLEMENTATION (Hardware and Software) Risk Ratings at December 31, 1998:	[Table with columns for implementation risk ratings]																																							
Main Frame:	[Table with columns for main frame risk ratings]																																							
A-Series	①	①	①	①	①			①																①	①	①											5			
IBM/MS															①	①																								
Mid Range Servers:	[Table with columns for mid range servers risk ratings]																																							
UNICONT			①								①	①	3		2																									
MICRO	①		4			①						2														2												5		
Peripherals/Computertalk:				4																																				
Legend for Risk Ratings:	[Legend for risk ratings: 1 to 2 (Low risk), 3 to 4 (Medium risk), 5 and Over (High risk), n/r (Not Applicable), ① (Y2000 Ready and in Production), May 1998 (Year 2000 Activities in Progress), December 1997 (Year 2000 Activities just Underway)]																																							