Disaster Recovery Plan Test

Audit Report

February 2005
TABLE OF CONTENTS

Section                      Page No.

1.0  MANAGEMENT SUMMARY  ..............................................................................................................2

2.0  INTRODUCTION ..........................................................................................................................2

3.0  OBJECTIVES AND SCOPE ...........................................................................................................3

4.0  METHODOLOGY ............................................................................................................................3

5.0  DETAILED OBSERVATIONS AND RECOMMENDATIONS ..............................................................4
   5.1  ENSURING KNOWLEDGE TRANSFER FROM THE CONSULTANTS TO THE FINANCE IT BRANCH ........4
   5.2  KEEPING THE DISASTER RECOVERY PLAN UP-TO-DATE .........................................................5
   5.3  RESULTS OF DISASTER RECOVERY PLAN TESTING ...............................................................5
   5.4  BUSINESS IMPACT ASSESSMENT ............................................................................................7
1.0 Management Summary

The Audit Services Branch has completed work relating to the first of the on-going periodic tests of the York Region (the Region) disaster recovery plan. As part of its oversight role, the Branch participated in the disaster recovery plan and test as a member of the steering committee. Audit Services was present during the testing phase of the disaster recovery plan, which was executed from May 31 to June 4, 2004.

The testing of the Region’s disaster recovery plan was successful. Briefly:

- A total of 114 applications were tested in the five day period.
- A total of 109 applications, which included all priority one applications, tested and performed without problems.
- Relatively minor problems were experienced with five applications which resulted in ‘partially passed’ or ‘failed’ conditions.

This success places the Region ahead of all Municipalities in terms of our ability to recover from a major Information Technology disaster. The Branch and project team are commended for their efforts and the results. Audit Services had raised this as a significant risk for a number of years. It is now Audit Services’ opinion that the risk has been mitigated to an appropriate level.

Based on the work performed, opportunities were noted for consideration by the Region’s Information Technology (IT) Branch:

- knowledge transfer
- maintenance of the disaster recovery plan
- follow-up of 5 applications
- update of the business impact assessment.

This report has been discussed with Finance Information Technology management, who have provided their comments and agreed to take the necessary action to implement the noted opportunities.

Should the reader have any questions or require a more detailed understanding of the risk assessment and sampling decisions made during this audit, please contact the Director, Audit Services.

We wish to thank the Commissioner of Finance, IT Director, and their staff for their co-operation during the course of the audit, and for their assistance in providing Audit Services with timely responses.

2.0 Introduction

As part of our 2004 Audit Plan, which accommodates various types of audit projects, consulting engagements, and follow up requests from the Audit Committee and Management, the Audit Services Branch was present during the Region’s disaster recovery plan initial test from May 31 to June 4, 2004.

The Audit Services Branch uses a Risk Assessment Methodology to develop the Audit Plan annually. This methodology helps to define the level of risks associated with the various strategic
projects and processes at the Region, and is a tool that Audit Services uses in assessing where best to allocate audit resources. The York Region Audit Committee approves the Plan.

3.0 Objectives and Scope

The objective of this engagement was to determine if the Region’s Disaster Recovery Plan could be relied upon to recover from a major disruption of services in the Information Technology area.

The audit objectives were accomplished through observation and discussion during a controlled test of the Disaster Recovery Plan and testing at a sufficient detail.

4.0 Methodology

Audit Services was present at the disaster recovery plan test site and observed the process involved in recovering Region IT systems and reviewed output from both production and test environments to ensure the results were successful.
5.0 Detailed Observations and Recommendations

5.1 Ensuring Knowledge Transfer from the Consultants to the Finance IT Branch

**Observation**

The Region relied on the use of consultants to recover the back-up site for the test. The Region needs to ensure there is appropriate knowledge transfer to Regional staff so the Disaster Recovery Plan can be self sustaining using Regional staff on a go forward basis once all phases of the Disaster Recovery Plan have been completed.

**Recommendation**

It is recommended that the Finance IT Branch ensure that the technical expertise, provided by the consultants, to execute the disaster recovery plan is captured and transferred to the IT Branch.

**Management Response**

The consultant’s report on the Disaster Recovery Plan Testing recommended a full time coordinator to maintain operational procedures manuals and to develop and maintain a regular refresh cycle that keeps the computing applications in step with the disaster recovery applications. IT management is implementing this function with existing staff to understand the workload requirement of this role. An assessment of the impact on existing staff complement will be done approximately mid year 2005 and appropriate recommendations developed for potential staffing in 2006.
5.2 Keeping the Disaster Recovery Plan Up-to-Date

Observation

The Region must ensure that there is a process in place to maintain the disaster recovery plan. This will ensure that any new or upgraded applications are captured in the Disaster Recovery Plan, so that in the event of a real disaster, the production environment can be recovered in a timely manner.

Recommendation

It is recommended that Finance IT develop a process by which the disaster recovery plan is kept current and incorporates upgraded and new applications as they are rolled out to the Region.

Management Response

The DRP hardware and operating systems environment uses a software product know as VMWare. There is a new release of this product that needs to be installed in the DRP environment. A RFQ for technical professional services has been issued for installation services for this new release. When this work is completed, the DRP environment can be brought into sync with the computing environment. We have received a SOW for this work and expect to issue a P.O. shortly. The target completion date is end of June 2005.

5.3 Results of Disaster Recovery Plan Testing

Observation

The following applications experienced a ‘partially passed’ or ‘failed’ scoring during the Region’s testing:

<table>
<thead>
<tr>
<th>Application</th>
<th>Priority</th>
<th>Status</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>T&amp;W Trapeze FX</td>
<td>3</td>
<td>Partially passed</td>
<td>Reports not available.</td>
</tr>
<tr>
<td>T&amp;W Fleet Management</td>
<td>2</td>
<td>Partially passed</td>
<td>Report formats not available</td>
</tr>
<tr>
<td>Finance Salary Management System</td>
<td>5</td>
<td>Failed</td>
<td>Application errors</td>
</tr>
<tr>
<td>Corporate Services Deltaview</td>
<td>5</td>
<td>Failed</td>
<td>Application would not start</td>
</tr>
<tr>
<td>Corporate Services Versatile</td>
<td>3</td>
<td>Failed</td>
<td>Application accessing production</td>
</tr>
</tbody>
</table>
Recommendation

It is recommended that Finance IT ensures that the causes of the errors are fully investigated, and their resolutions documented for future reference should the disaster recovery plan need to be executed.

Management Response

Status: Relatively minor problems were experienced with five applications which resulted in ‘partially passed’ or ‘failed’ conditions during the testing. Current status is as below:

2 - Applications Partially Passed

T&W - Trapeze FX  Reports are not available.  Reports are stored on the user’s desktop computer not on the network.

T&W – Fleet Mgmnt  Report formats are not available  Report formats are stored on the user’s desktop computer not on the network.

3 - Applications Failed

Finance Salary Mgmnt Sys  Application errors.  This application has been modified, re-tested by the user and passed.

Corp Services – Deltaview  Application would not start.  This application has been modified, re-tested by the user and passed.

Corp Services – Versatile -  Application accessing production  This will be resolved before DRP Phase III testing.  An additional server is required in the DRP environment to point the Versatile database to DRP.  Out target to implement this device is June 2005.
5.4 Business Impact Assessment

Observation

The business impact assessment which was used to prioritize the applications was based on the original work performed by SunGuard in 1999, with an update from the Disaster Recovery coordinators in the business units. In order to ensure the Disaster Recovery Plan is recovering the right applications at the right time, the business impact assessment should be updated on a periodic basis.

Recommendation

It is recommended that Finance IT conduct a more formal business impact assessment in the near future with a view to updating it on a periodic basis. This will ensure that the appropriate resources are assigned to the disaster recovery planning process and that the plan is recovering the higher priority applications first and the lower priority applications over a longer period of time.

Management Response

Status: A business impact assessment phase of the Disaster Recovery project is currently underway. Assessment information has been gathered and analysis is in progress. Target completion for this item is March 1st, 2005.

original signed

Sandra Cartwright
Commissioner Finance

original signed

Louis Shallal
Director Information Technology Systems