

Part: **Financial Management and Administration**  
 Section: **Treasury Board's Risk Management Policies**  
 Subsection: **Financial Systems**  
 Policy: **Development of Financial Systems**

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## Development of Financial Systems

### Objective

*The objective is to outline the requirements for the development of financial systems.*

### Authority

*The Financial Administration Act, 1993, clauses 5(a), 5(c), and 5(e), subsection 10(2), and sections 22 and 28*

### Applicability

This policy applies to the General Revenue Fund (GRF), and special purpose funds and trust money that are administered by ministries. See [Appendix C Public Money](#).

### Treasury Board Policy

- .01 Ministries are to establish a management structure for the development of a new financial system to ensure the development undertaken is effectively managed.
- .02 Ministries are to ensure financial systems comply with requirements of relevant legislation and regulations, as well as the relevant financial control requirements of *The Financial Administration Act, 1993* and the requirements of the Provincial Comptroller.
- .03 Ministries are to ensure the design of a new financial system meets the needs of the system's users.
- .04 Ministries are to conduct sufficient testing of a new financial system prior to implementation to ensure that the system will function effectively once implemented.
- .05 Ministries are to ensure there is no loss or alteration of data in the process of converting to a new system.
- .06 Ministries are to avoid disruption of critical financial processing during the implementation of a new system.

### Provincial Comptroller Directives

- .07 Ministries with information technology (IT) development investments follow the Information Technology Division (ITD) requirements.

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**Management Structure**

.08

Ministries are to establish an appropriate and effective management structure to control the development of new financial systems. The following techniques are recommended:

- Establish a Steering Committee that reports to senior management. The Steering Committee is responsible for the successful design, development and implementation of the system and includes representatives from the users, the financial administration unit and the system development team.
- Appoint a project coordinator with responsibility for the timely and orderly development of the new system which must include:
  - ensuring the needs of the ultimate users are met; and
  - being the liaison with the Provincial Comptroller's representatives reviewing the system for the adequacy of the controls, when necessary.
- Adopt a system life cycle methodology which defines the project in distinct phases such as the following:
  - problem identification
  - system design
  - system development
  - system testing
  - data conversion
  - system implementation
- Establish a system development plan for use by the Steering Committee to monitor progress and identify where corrective action is required. This plan should include milestone dates for system development and a resource budget.

**Problem Identification**

.09

Ministries are to ensure the system proposal addresses the needs of, and resolves the issues raised by, the users. Problem identification techniques include requiring users to actively participate in identification of possible solutions and selection of the best alternative.

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**System Design** .10 Ministries are to ensure the system design addresses the needs of system users. System design techniques include:

- requiring users to participate in the design and planning process; and
- obtaining end user 'sign off' on the system design before system development commences.

**System Development** .11 Ministries are to ensure that system development proceeds in accordance with the approved system design and development plan. System development techniques include:

- imposing a "design freeze" prior to commencement of development;
- requiring design changes during development to be approved only on an exception basis, by the Steering Committee; and
- monitoring the conformance of the development to the system plan.

**System Testing** .12 Ministries are to:

- perform sufficient testing to ensure all system specifications are met before a new system or modifications to an existing system are implemented;
- retain an adequate record of test results to document the situations tested, results obtained and the disposition of errors detected during the testing process; and
- test the manual portions of systems to ensure all required procedures and records are established.

.13 The following techniques may be used to ensure the accuracy of the system in processing data:

- a test plan;
- assigning and training appropriate staff to test;
- test procedures and methods such as:
  - use of predetermined results with which to compare actual output;
  - use of parallel runs;
  - use of intentionally invalid data;
  - use of expected types of transactions;
  - testing of all system checks and controls;

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- testing to determine the system's calculations and accumulative totaling are correct;
- testing to ensure the system can accept and process corrections;
- testing to ensure all files are updated when transactions are processed;
- testing to ensure the system accumulates cumulative totals from several consecutive runs correctly;
- testing to ensure all system-generated control logs and reports are accurate;
- testing to ensure the system is capable of processing expected volumes of transactions without unacceptable delays; and
- retesting to ensure problems encountered in the testing phase that resulted in system modifications have been corrected;
- documentation of the test results; and
- control of testing to ensure:
  - supervision of staff during testing;
  - completeness of testing;
  - supervision and review of test results;
  - control of change requests; and
  - submission of changes that have been reviewed and approved to the system designer.

**Data Conversion** .14 Ministries are to ensure data conversion from the old system to the new system is planned, complete, accurate and valid. Data conversion techniques include:

- comparing all data in new master files or data bases to existing records in detail;
- comparing transaction counts and control totals for data in critical fields to detect instances where data has been converted to the new system in error;
- scrutinizing the effective date of data conversion to ensure transactions have been converted in a consistent manner; and
- implementing appropriate authorization procedures to ensure no unauthorized data has been added or legitimate data deleted.

**System Implementation** .15 Ministries are to ensure a new system is fully functional prior to placing complete reliance on the system. Ministries may use

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the following techniques to ensure the system is successfully implemented:

- involving users in the decision to cut off the parallel operation of the new and existing system;
- providing training to users in the operation of both the manual and automated procedures of the system;
- completing system documentation before implementation; and
- developing procedures for file backup when the system is operational.

## References

[4000 Financial Systems](#)

[4005 Acquisition of Financial Systems](#)

[4015 Implementing Financial Systems](#)

[4020 System Processing Controls](#)

[4025 System Security](#)

[4130 Internal Audit Guideline](#)

[IT Governance and Portfolio Management \(ITD\)](#)

[IT Security Services \(ITD\)](#)