City of Madison, Wisconsin
Information Technology

Report Tools Policies, Standards, and Guidelines

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Introduction

The City of Madison employs several reporting tools – Ad Hoc Reports, Business Intelligence and Reporting Tools (BIRT) Project, Crystal Reports, Power BI, and SQL Server Reporting Services (SSRS) – as the standard, preferred software for the creation and distribution of reports for all City agencies.

Purpose

The purpose of this document is to establish policies, standards, and guidelines for the City's reporting tools. By standardizing these tools, and having enforceable policies, the City can use its limited resources to more effectively manage development costs and maintain the City's reporting needs. Standards provide City employees with a complete tool set for creating and maintaining the City reports. These standards outline what is essential to maintain a consistent, professional, secure, and well-maintained system. Guidelines aid anyone who administers, creates, or modifies reports for the City. Users are highly recommended to follow these guidelines to enhance the experience of everyone involved with current and future report tools.

All policies, standards, and guidelines are periodically reviewed and updated as necessary by Information Technology (IT).

Scope

These policies, standards, and guidelines cover all City agencies, City employees, and any third-parties that use reporting tools on behalf of the City of Madison.

Exceptions

Any exceptions to these policies or standards require written approval of IT Director or their designated employee. Requests shall be in writing, will state the specific policy or standard that is being challenged, and the business reason for the exception. The decision of the IT Director shall be final.

Consequences for Noncompliance

Any agency, organization, group, or application that represents the City of Madison, or that is hosted by the City of Madison, that fails to comply with these policies and standards may be required to remove their reports until they are in compliance.

Staff Responsibilities

Agency Report Writers

The responsibilities of Agency Report Writers include:

- Agency assigned individual that has been trained on report writing and has a licensed copy of preferred report tool(s) on their workstation.
- Writes or compiles simple reports for their agency as directed by their Department/Division Head or supervisor.
- Works with IT Developer(s) on complex technical questions and test environment.
- Save and retain report data in accordance with the City's Retention Policy.
- Ensure appropriate measures are taken to protect confidential data. Any distribution of data outside of the agency must be approved by the records custodian from the agency that manages the data.
- Maintain report(s) in a personal folder as needed.
- Publish or promote report(s) as needed.

Authorized Contacts

The responsibilities of Authorized Contacts include:

- Review all requests for access to their data in a timely manner and specifically approve access by signing off on the employee's request for access to a specific report tool.
- Follow the Report Tools Policies, Standards, and Guidelines, and all City policies, APM's and City Ordinances.

Department/Division Heads

The responsibilities of Department/Division Heads include:

- Responsible for the authorization of employees who will have access to reporting tools.
- Enforce policies and procedures within their agency.
- Designating who will be their Agency Contact and ensure these individuals receive sufficient training and are sufficiently competent to do the work.

IT Database Administrators (DBAs)

The responsibilities of IT DBAs include:

- Grant rights and setup user ID's for Agency Report Writers and/or IT Developers to access tables, views, and databases.
- Setup and fine-tune existing database servers to enable report tools to run against servers without degrading normal services.

- Ensure Agency Report Writer and/or IT Developer workstations have the proper read-only Open Database Connectivity (ODBC) connection and drivers for report tools.

IT Developers

The responsibilities of IT Developers include:

- Provide time estimates for a request.
- Meet with the Project Manager/Team Leader and/or customer(s) on questions specific to requested report(s).
- Write and test reports where applicable.
- Work with IT DBAs to promote and publish reports as necessary.
- Assist others with technical issues related to the creation, design, implementation, and distribution of report(s).
- Maintain report(s) in a personal folder as needed.
- Publish or promote report(s) as needed.
- Design business views/datasets for users as necessary.
- Follow the Report Tools Policies, Standards, and Guidelines, and all City policies, APM's and City Ordinances.

IT Project Managers/Team Leaders

The responsibilities of an IT Project Managers or Team Leaders include:

- Meet with customer(s) and gather requirements, timelines, and other pertinent information.
- Assign IT Developer(s) and communicate with customer(s) and Developer(s) as necessary.

IT Reporting System Administrator

The IT Reporting System Administrator has the overall responsibility for the City's reporting environment. Responsibilities include, but are not limited to:

- Approval of all report workspaces.
- Maintaining the Report Tools Policies, Standards, and Guidelines.
- Maintaining license inventories and software levels.
- Assist others with technical issues related to the creation, design, implementation, and distribution of report(s).
- Setup data connections on appropriate servers.
- Monitor report tool server workloads.
- Work with DBA to setup access for required data connections.

Policies, Standards, and Guidelines

Contents of a Report

Before creating a report, a user needs to determine what information the report is going to include. Ask the following questions to determine the contents of the report:

1. What is the purpose of the report?
2. Who is going to use the report?
3. Is your report going to include a title?
    a. If so, what will that be?
4. What data will you use in the report?
5. What data will be included in the body of the report?
6. Does the data exist or does it need to be created?
7. What types of data will be included in the report?
8. Will the data need to be grouped?
9. Will the data need to be sorted?
    a. If so, how?
10. Will the data be limited to specific records or groups?
11. Will the data need to be summarized?
12. Will any of the data need to be highlighted?
    a. If so, why?
13. In what order will the data in the report need to be printed?
14. How often will the report be printed?
15. How often will the report be generated?
16. Who will need to get the report?
17. What format will the report be distributed?

Development vs. Test vs. Production Folders

Only reports that are currently being tested should be kept in test folders. Once a report is approved, they are to be copied to the appropriate production folder. This ensures that there is only one copy of the report. Nothing should be changed directly in production folders. When a change needs to be made, the production report should be copied to the lowest level. Once the changes are made and approved, they should be promoted up to production.

Language

The default language of report tools shall be English. Providing reports and information in other languages, while it may be desirable, is not required unless there is a specific APM, Ordinance, State or Federal Law, or City policy that mandates it. If reports and information is required in another language, a separate established plan will decide who maintains that report and how.

The City of Madison Language Access Plan defines the goals and expectations for providing information in multiple languages.

Licensing

IT will serve as the central administrator of all report tool licenses used by City agencies or outside organizations, regardless of where the funding comes from. Purchasing, upgrading, and renewal of all software licenses must be coordinated with, and receive approval of, IT management.

Naming Conventions

Having standard naming conventions reduces the opportunity for error by eliminating inconsistencies in file names and possible errors when creating reports. To avoid compatibility problems when naming reports, folders, and components, follow these standards:

- Follow industry best practices for case sensitivity (e.g., camel case, all lower case, etc.).
- Use only alphanumeric characters (i.e., a-z and 0-9 in file names).
- Never use spaces or special characters (except the underscore "_") in files. Do not use underscores in folder names.
- Use descriptive names; avoid creating unreadable file names.

Folder names

Report tools often allow for a flexible alphanumeric structure for folder names. It is recommended to create folder names that are the most informative to the user. Short and/or cryptic names should be avoided. Categorize folders into logical work groups such as departments or divisions. The folder name is usually the name of an agency or function of a report.

Report names

Report tools often allow for a flexible alphanumeric structure for report names. It is recommended to create report names that are the most informative to the user. Short and/or cryptic names should be avoided. Report names commonly include the function of the report, what its purpose is, and optionally the name of the agency.

Procedures

Procedures for requests related to report tools are as follows:

Requesting rights to a report tool

The following is the procedure for requesting rights to a report tool:

1. A requestor submits a request for access to a report tool to the Help Desk with approval from an Authorized Contact.
2. The IT Reporting System Administrator determines whether the requested access showcases sufficient business need.
3. If request is approved, the IT Reporting System Administrator coordinates with Network Operations to add their user ID to the appropriate Active Directory group (if applicable); notifies IT DBA to set permissions for the new account.
4. The IT DBA sets permissions to specific database tables and notifies IT Reporting System Administrator when this task is completed.
5. The IT Reporting System Administrator notifies the requestor of the login information for the report tool account.

Requesting a new report

The following is the procedure for requesting a new report:

1. A requestor submits a request for a new report to Help Desk with approval from an Authorized Contact.

Requesting a change to an existing report

The following is the procedure for requesting change(s) to an existing report:

1. A requestor submits a request for a change to a report to Help Desk with approval from an Authorized Contact.

Report Documentation

Always follow best practices when creating documentation for new reports. Documentation should include the appropriate request process for report modifications or creating new reports. The decision-making process and results should also be captured in documentation.

Repository

The repository is the central location where IT stores and manages report objects. Data definitions such as custom functions and custom SQL commands are also stored and maintained here. These objects are accessible to users and report developers for use in new reports for distribution throughout the City.

The repository is a database that stores the following supported object types: text objects, bitmaps, custom functions, commands (queries).

Having a central repository maintained by IT allows for easier modifications on a particular object, and updating to all reports that contain that object.

Security

All reports on any City workstation and servers – regardless of where they are hosted – shall follow secure coding practices. Standard security practices include, but are not limited to:

- Protecting database queries from SQL injections.
- Using SSL to protect secure transmissions of logins and secure data.
- Integrating any objects requiring authentication with Active Directory services.
- Documents should not contain a login ID in the headers, footers, or elsewhere. For example: a document footer with F:\users\itabc\ should not be allowed.
- Document properties should not contain initials or the login ID of the document author.
- Compliance with the City of Madison Network Security Policies and Procedures (APM 3-9 Attachment B).

For access to a report tool license, an Agency Report Writer must receive permission from an Authorized Contact, and receive approval and appropriate training from IT.

Templates

Template report files should be used to ensure consistent formatting of report fields and objects to increase development efficiency. These templates should be stored in the report tools to multiple users can access them. Templates can be setup by groups (or agencies) to address unique requirements. IT will create a template to be used by all IT Developers and Agency Report Writers that will include the following: report name (can include the folder and the report name, but not the full location); page numbers (e.g., n of nn); date/time run.

This will be applied to all reports written in the future.

Training

Users must receive appropriate training before being allowed access to a report tool. The level of training will be determined by IT.

Versions

The City has a variety of report tool versions in use. Unless required to support a specific vendor application, all licenses should be upgraded to the current version within one (1) year of any upgrade or change to the report tool. Report tools must at least be vendor supported versions with all security patches.