Analytics Suite

General Ledger Module

Prepared for: City Auditor's Office, City of Tulsa
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Project Overview

Why this project was completed:

The General Ledger (GL) represents the complete record of all transactions at the City of Tulsa and contains the information needed to prepare financial statements. 9b Corp completed this project to gain a better understanding of how information from sub-ledgers, such as Payroll and Accounts Payable, feed into the GL—and when and to what extent that information can be changed in the process. Additionally, analysis of GL helps our team validate the results of the previous (Payroll, P-Card) and future (Accounts Payable, Purchasing, etc.) modules included in the Analytics Suite being developed by 9b Corp for the City.

What this project accomplishes:

•Visualizes the GL workflow in Tableau for straightforward oversight.

•Employs data analytics to flags risks as they occur in the GL workflow.

•Provides details of flagged journal entries created and posted in the GL.

Scope

Develop data analytics and interactive Tableau visualizations for oversight of the City of Tulsa's General Ledger (GL).

Objectives

•Identify risks associated with the GL, including potential workflow inefficiencies, journal entry discrepancies, and MUNIS user access and activity.

•Empower auditors with MUNIS data to monitor the GL and provide answers to questions.

Methodology

•Researched internal literature and gained access to MUNIS data tables.

•Interviewed staff regarding internal procedures and priorities.

•Documented workflow and assigned risks and analytics by step.

Outputs

•**30+ data analytics** monitor risks related to steps in the GL workflow as they occur. The GL workflow visualization in Tableau includes a tooltip that shows the monthly total of instances a particular analytic was flagged and compares that total to previous months.

•**Additional GL views** were created to show in-depth general ledger detail, risk scores by journal entry header, outliers among manual journal entries, and more.

•**Tableau dashboards** capture all data analytics and additional views in one accessible location.

Background

The GL is a complete record of all the transactions of an organization. Most transactions are first recorded in a sub-ledger, such as Purchasing, Accounts Payable and Accounts Receivable. Sub-ledger transactions are managed by employees who are directly engaged in carrying out the City's business activities. All sub-ledgers are summarized and posted in the GL. The GL contains the information needed to prepare financial statements and other reports.

The new MUNIS ERP financial system provides a basic framework for coding transactions in a sequence that includes numbers indicating the fund, sub-fund, function, department, division, section and object. (In the previous INFOR financial system, the sequence used was fund, account, center.) Every transaction is tagged with a source code that identifies the MUNIS module and program used to create the entry.

In addition to the automated sub-ledger postings, accountants post on-going entries to the GL. Much of the information for these entries is provided to GL accountants via email and spreadsheets. While GL does not carry as much significant risk as the financial modules where transactions originate, any undetected discrepancies could affect the integrity of the City's financial records. For that reason, we focused the majority of our analytics on the "Journal Entry Input" workflow step.

Glossary

The following terms are related to the GL and MUNIS system at the City.

- General Ledger (GL) – A record of all accounts used to sort, store and summarize an organization's transactions.
- Journal Entry – A transaction log entered into an accounting journal that records a change to the organization's debit and credit balances and is then posted to the appropriate accounts in the GL.
- Chart of Accounts – The listing of available accounts in which to record transactions.
- Fund – Fiscal entity with a self-balancing set of accounts for the purpose of carrying on specific activities or attaining certain objectives in accordance with special regulations, restrictions or limitations.
- Organization (Org) - The first component of GL coding. The numbers in this string include fund + section (or sub-fund + section), which indicates "who" is making the transaction or accounting record.
- Object – The object code defines the account type, which indicates "what" is being transacted, purchased, received or adjusted.
- Project – This coding is included when a transaction relates to a particular project (i.e. grant) and contributes to accurate financial reporting for that project.

Exhibit: Tableau Dashboard

The main Tableau dashboard developed in this project illustrates key GL process steps in three interactive sheets.

- The **Process Sheet** breaks down the transaction approval process by workflow step.
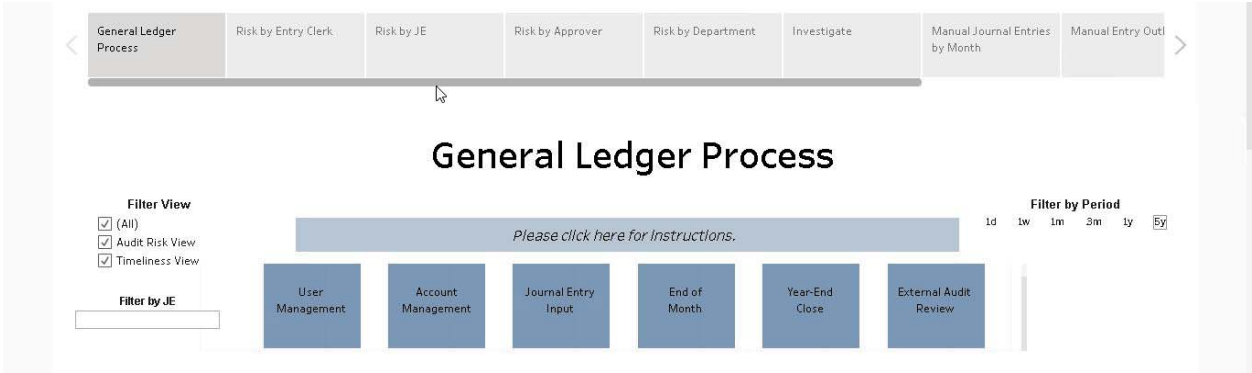
- The **Analytics Sheet** shows each analytic directly below its related process step. Shading indicates each analytic's weighted risk score (weight times number of flagged occurrences).

- **Filters**: Analytics can be filtered by **Audit Risk** to isolate audit risk analytics, by **Timeliness** to locate bottlenecks, and by **Period** to see how analytics are performing over time.

- The **Details Sheet** provides transaction details, which allow the user to understand what conditions triggered the analytic's risk score. Details are hidden until an analytic is selected.

Exhibit: Analytics Suite

GL is the third Module in an Analytics Suite being developed by 9b for the City of Tulsa.