Analytics Suite

Treasury Module

Prepared for: City of Tulsa
Prepared by: 9b Corp
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About 9b

9b is a data analytics and information technology consulting company based in Tulsa, OK, and founded in 2018. We help purpose-driven organizations with any and all aspects of their data. Our wheelhouse includes data analytics, architecture, engineering, programming, science, storytelling, and visualization. 9b is a Certified B Corporation.

Overview

Why we did this project

The Treasury division uses several financial modules in the Munis enterprise resource planning system to manage the City of Tulsa's liquidity, including Cash Management, General Revenue, and General Ledger. The Treasury division's processes, however, had not been audited since the implementation of Munis in 2018. In partnership with the City Auditor's Office, the 9b team automated Munis data to identify various sources of financial risk and inefficiency in Treasury processes on a continuous basis.

How we did this project

Treasury is the 11th module in an audit analytics solution for the City of Tulsa.
Similar to previous modules, the 9b team began with Discovery work—researching common Treasury risks and controls, exploring and mapping the City's Munis environment, and interviewing Treasury staff to document processes and priorities for analysis. After Discovery, 9b had the required framework for writing data analytics.
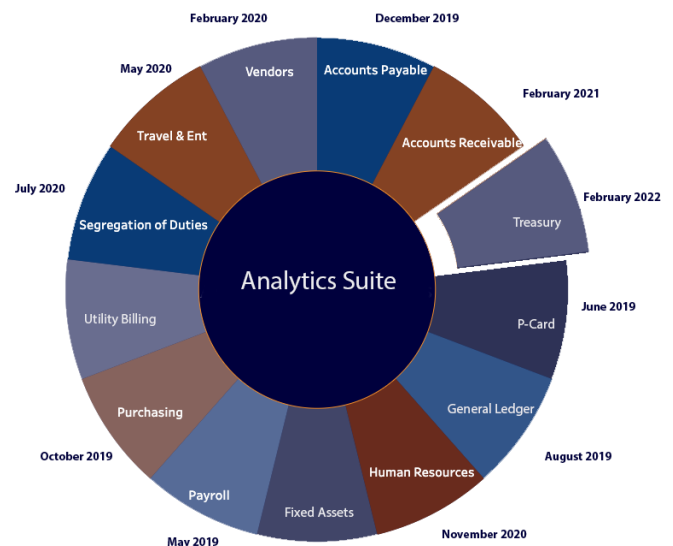
Project Deliverables

- 25+ data analytics seamlessly integrate with Munis and run continuously to monitor and pinpoint risks, inefficiencies, and training opportunities in Treasury processes. *See Page 3.*

- Tabular file for visualization in Microsoft Power BI, the City's new business intelligence platform of choice. *See Page 4*.

Next Steps

The City is changing its business intelligence platform from Tableau to Microsoft Power BI. 9b will provide support to the Internal Audit team with visualization of Treasury data analytics in Power BI. Meanwhile, 9b will begin Discovery for the Utility Billing module.

Analytics

Data analytics track transactions (also referred to as "batches" in Treasury) in Munis as they move through workflow.

The table below lists a few of the 25+ Treasury data analytics. Each analytic tests transactions. If the transaction meets the criteria, the analytic flags the transaction for action.
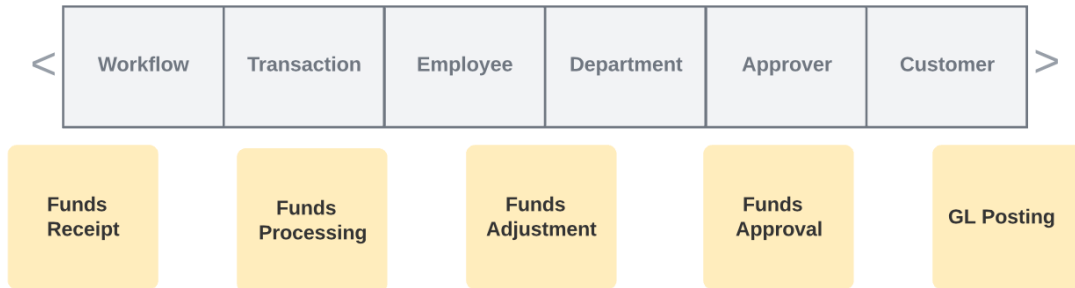
A single transaction could collect a flag for each of the data analytics.

Process Step	Analytic Name	Analytic Description	Action
Funds Receipt	Cash Amount Outliers by Cashier	Flags if a cashier has a daily cash amount greater than 2X the daily average.	Review audit history of cashier
Funds Processing	AR Code Outliers	Flags if a transaction is the only one assigned to an AR code in the system.	Review transaction details
Funds Adjustment	Batch Adjustments	Flags if the batch type is an adjustment.	Review batch details
Funds Approval	Batch Quick Approval	Flags if a batch is approved within 45 seconds of the previous batch approval.	Strengthen controls; target training
GL Posting	Posting Time Outliers	Flags if the length of time to post a batch to the GL is longer than 75% of all other batches.	Audit on process efficiency

Dashboards

Below is a wireframe of the Treasury process dashboard, which will be built in Power BI. As in previous modules, the dashboard visualizes the process in three dynamic sections.

- The **Process section** shows a simplified Treasury process (yellow); only steps that capture Munis data can be analyzed. The user can navigate to supplementary dashboards (gray) that show analytic results by transaction, employee, and more.

<	Workflow	Transaction	Employee	Department	Approver	Customer	>

Funds Receipt	Funds Processing	Funds Adjustment	Funds Approval	GL Posting

- The **Analytics section** shows each analytic directly below its related process step. Shading indicates the risk level, which updates when Munis data refreshes.

Cash Amount Outliers by Cashier	A/R Code Outliers	Batch Adjustments	Batch Quick Approval	GL Posting Time Outliers

- The **Details section** shows transaction details, which are hidden until a user clicks an analytic box. Transaction details include the date, employee name, and more.

Transaction Details

A Power BI dashboard will be available to view transaction details
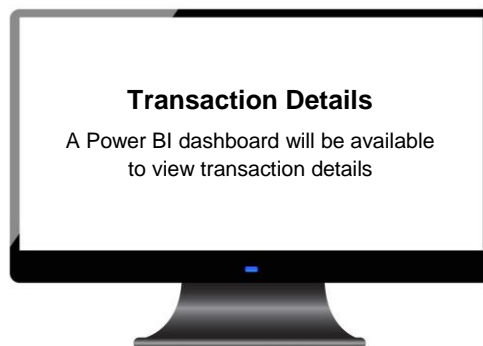
All dashboards include instructions for ease of use and filters for targeted data analysis.