# CURRENT & EMERGING TECHNOLOGIES CONFERENCE

# **Audit Innovation**

December 10, 2024

#### **Presenter**

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## Agenda

- Selecting Technology & Change Management
- Supervising Technology
- ASB Technology Survey
- ASB Risk Assessment Practice Aid & Examples
- Technology Tools for Use in the Audit

Selecting Technology & Change Management

#### Overall Change Management

Change fatigue is rampant

Employer flip-flopping is causing frustration

Companies could be doing more to help employees adapt to change

Constant change isn't just a COVID trend

#### Most Common Effects of Change Fatigue



71% of employees agree that they're overwhelmed with the amount of change at their job

#### Technology Change Management

Set and communicate clear goals

Build a team

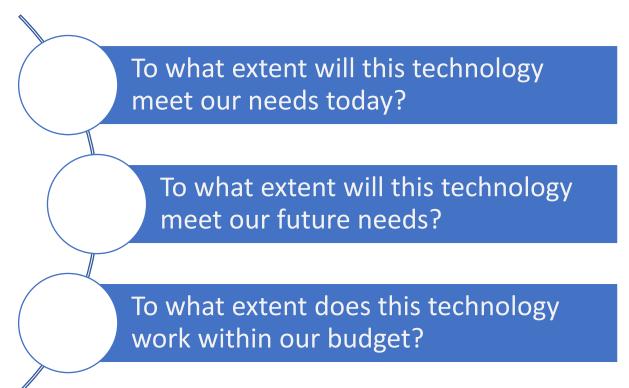
Define a strategy

Plan for resistance

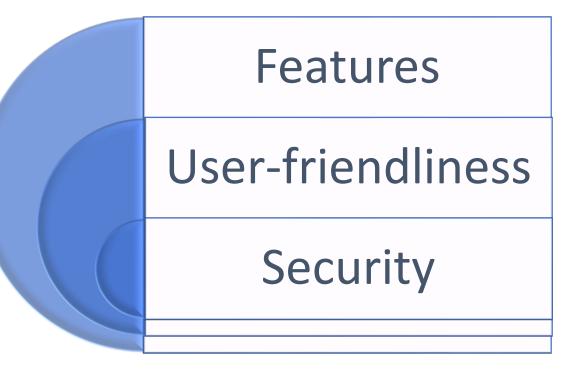
Ensure continuous improvement

Technology constantly changes, but the steps to successful technology change management remain static

#### Three Questions to Ask



Will It Meet Our Needs Today? | Consider These Criteria:



#### Will It Meet Our Future Needs? | Consider These Criteria:



#### Will It Work Within Our Budget? | Consider These Criteria:

Setup Costs

License Costs

Maintenance Costs

**Supervising Technology** 

#### ISQM/SQMS Considerations

**SOC Reports** 

Vendor Risk Assessments

Engagement Team Biases Detailed Reviewers

Title Date

#### **SQMS Vendor Assessments**

A105. The firm may consider the following matters in obtaining, developing, implementing, and maintaining an IT application:

- The data inputs are complete and appropriate.
- Confidentiality of the data is preserved.
- The IT application operates as designed and achieves the purpose for which it is intended.
- The outputs of the IT application achieve the purpose for which they will be used.
- The general IT controls necessary to support the IT application's continued operation as designed are appropriate.
- The need for specialized skills to use the IT application effectively, including the training of individuals who will use the IT application.
- The need to develop procedures that set out how the IT application operates.

A106. The firm may specifically prohibit the use of IT applications or features of IT applications until such time that it has been determined that they operate appropriately and have been approved for use by the firm. Alternatively, the firm may establish policies or procedures to address circumstances in which the engagement team uses an IT application that is not approved by the firm. Such policies or procedures may require the engagement team to determine that the IT application is appropriate for use prior to using it on the engagement ...

#### SQMS Vendor Assessments, Continued

#### Par. A113:

- The related quality objective and quality risks
- The nature and scope of resources, and the conditions of the service (e.g., in relation to an IT application, how often updates will be provided, limitations on the use of the IT application and how the service provider addresses the confidentiality of data)
- The extent to which the resource is used across the firm, how the resource will be used by the firm and whether it is suitable for that purpose
- The extent of customization of the resource for the firm
- The firm's previous use of service provider
- The firm's previous use of service provider



Additional SQMS Resources
Cross Walk from SQCS 8 to SQMS 1

ISQM Resources that could be analogized to SQMS

Getting Ready for New Risk-Based Approach
Early Lessons Learned and Next Steps
IFAC Small Firm Implementation Guide I
ICAEW Service Provider Guide

#### Biases Identified in Engagement Team Professional Judgments (¶A35)

- Availability bias, which is a tendency to place more weight on events or experiences that immediately come to mind or are readily available than on those that are not
- *Confirmation bias*, which is a tendency to place more weight on information that corroborates an existing belief than information that contradicts or casts doubt on that belief
- *Groupthink*, which is a tendency to think or make decisions as a group, discouraging creativity or individual responsibility
- *Overconfidence bias*, which is a tendency to overestimate one's own ability to make accurate assessments of risk or other judgments or decisions
- Anchoring bias, which is a tendency to use an initial piece of information as an anchor against which subsequent information is inadequately assessed
- Automation bias, which is a tendency to favor output generated from automated systems, even when human reasoning or contradictory information raises questions about whether such output is reliable or fit for purpose

# **ASB Technology Survey**

#### Auditing Standards Board (ASB) Survey



Conducted Fall 2022 to study auditors' use of IT

The Big Question: Is U.S. GAAS an impediment to firms using technology in the audit?



Which technologies are used in the audit and in which audit areas?

AI, Blockchain, Cloud Computing, Data Analytics, RPA, Textual Analysis

Planning, Risk Assessment, Substantive Testing, Reporting



135 complete responses

Survey focus:

•Small to medium size firms Experience level:

Average: 23 YearsRange: 3 to 50 Years

## Consider Technology by Phase of the Audit



#### Key Takeaways

# Is U.S. GAAS an impediment to firms using technology in the audit?

Analysis from the Survey: No



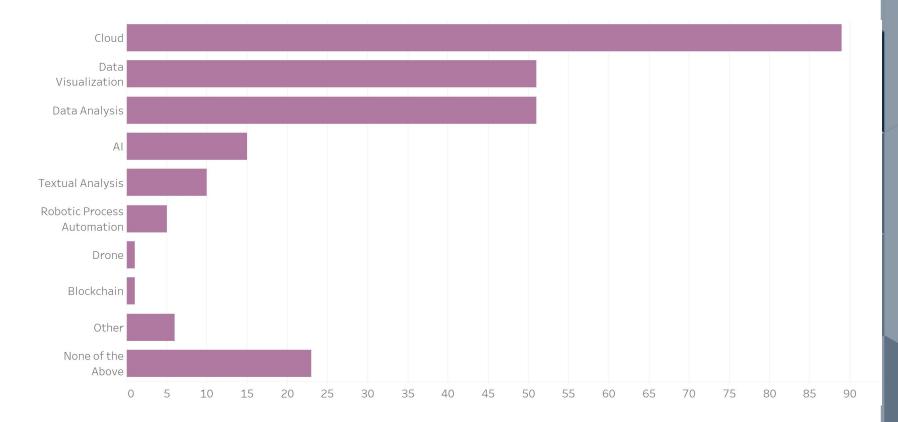
#### What are the top barriers to adoption?

Lack of training/infrastructure

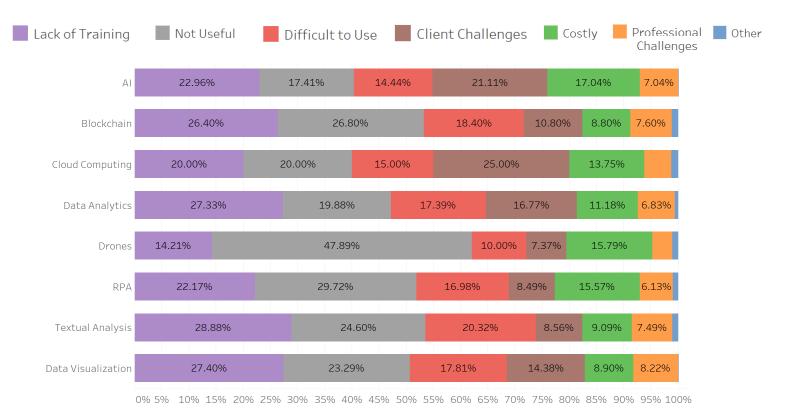
Isn't useful

Too expensive

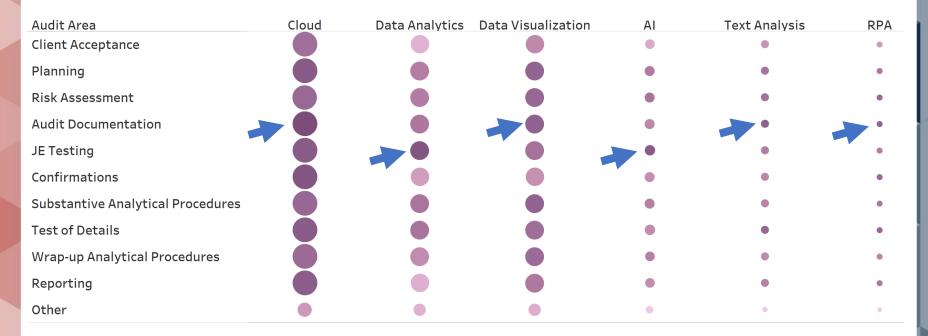
## Top Emerging Technologies Used



#### What limits technology use?



#### Prevalence and Relevance of Technology by Audit Area



Size of circle = how many respondents used the technology by area Color density = how important respondents felt the technology was to that area Arrows = highest relevance score

ASB Risk Assessment Practice Aid & Examples

Use of Technology in an Audit of Financial Statements | Part 01: The use of automated tools and techniques in the auditor's risk assessment

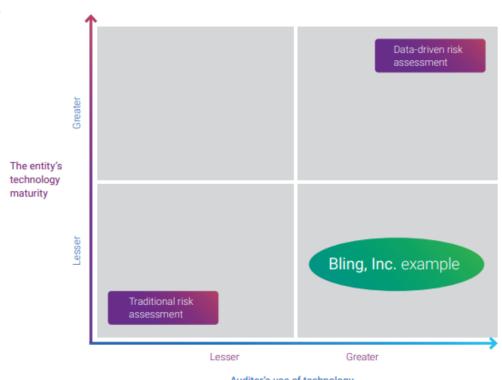


Example: Bling, Inc.

Other uses of technology

<u>Download</u> the free practice aid.

Exhibit 1C-1: Illustration of Bling, Inc.'s technology maturity and Member CPA Firm's use of technology



Auditor's use of technology (including ADAs)

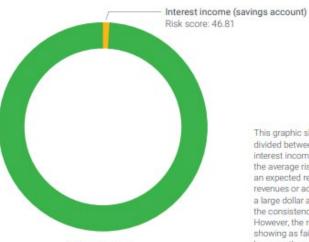
## Traditional approach

- Inquiries of management
- Analytical procedures
- Observation & inspection

# Technology-enabled approach

- Granular risk
   assessment on
   higher risk
   transactions
- Analysis of general ledger (100% population)

Figure 1C-1: Allocation of amounts compared to average risk by type of revenue<sup>4</sup>



Sales revenue Risk score: 7.22 This graphic shows the relative amount of revenue divided between operating sales revenue (green) and interest income from a savings account (yellow), with the average risk score annotated on the graphic. It is an expected result that large amounts of operational revenues or activities should be fairly similar and have a large dollar amount total but a low risk score due to the consistency and general similarity of transactions. However, the relatively small other revenue amount is showing as fairly high risk, likely due to its infrequency because there are not many transactions in the entire general ledger that are similar to it. This is because savings account interest transactions may only happen 12 times a year. The yellow component is likely immaterial and insignificant to the audit due the small dollar amount and the low-risk nature of savings account interest and may not warrant further audit considerations.

Note: The identification of interest income in the same account as sales revenue may indicate IT design or control issues; this anomaly may be further considered by Member CPA Firm in performing the audit and may be shared with management for their further consideration.

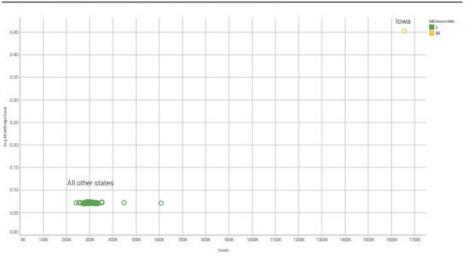


Figure 1C-2: Scatter plot of average revenue risk by amount per region<sup>5</sup>

The data analytic is looking at the characteristics of transactions so that homogenous transactions are grouped together, which results in a lower risk score. The technology then isolates transactions with different characteristics that may result in a higher risk score. Simply put, this helps the auditor isolate different transactions.

This graphic shows the total amount of revenue compared to the averaged risk score for each state of operations. The top right yellow circle represents the state with the greatest revenue as well as the highest average risk. This is an unusual finding because, typically, the largest center of operations that has the most transactions will also have the lowest risk scores. This is because by definition there are high volumes of similar transactions, which helps reduce the aggregate risk score. To be this different from the cluster of green circles representing other states implies that this state has very different operations than the others.

# Traditional approach – result

 All revenue transactions are higher risk

# Technology-enabled approach - result

- Interest income subset of revenue was higher risk but not material
- Sales revenue transactions from Iowa were higher risk
- Lower risk for all other sales revenue transactions

#### Other Uses of Technology

Some Access to Data (General Ledger)

More Access to Data (Subledger)

Most Access to Data (ERP)

Exhibit 1B-2: Examples of ADAs in risk assessment

#### Less access to data

#### Examples of ADAs in risk assessment

With access to an entity's current and prior-year data, general ledger accounts that may have unusual changes from previous years, including unexpected trends in liquidity. leverage, and margin ratios that may result in changes to the planned nature, timing, and procedures or further audit procedures to be performed in response to the assessed risk.

- Keyword search -"related party"
- Unusual posters
- Unusual dates

- Account posting timing

(See example 2-2, "Preliminary General Ledger Account Balance Analysis," of appendix A. "Examples of ADAs Used in Performing Risk Assessment Procedures," in AICPA Guide to Audit Data Analytics.)

With access to an entity's subledger transactional you may use an ADA to identify data, you may use an ADA to produce a visualization of transaction detail to assist you in identifying areas that might represent specific risks relevant to the audit, including the existence of unusual transactions and events, and extent of other risk assessment amounts, ratios, and trends that warrant investigation. Subledger ADAs may include the following:

· Many business

rule-based tests

· Outlier detection

Cluster analyses

· Benford's law

Regression

General ledger ADAs may include the following:

- · Journal entry gueries

- (See par. .A60 of AU-C · Posting pattern analysis
- section 500) - Debit/credit combinations

With access to an entity's enterprise resource planning (ERP) system11 event logs, you may use a processmining ADA to help obtain an understanding of the business process, the related transaction flows through the system, and the entity's application controls. This may aid you in your analysis, for example, of where and how employees might circumvent controls, or take advantage of gaps in controls that had not previously been identified, to perform unauthorized actions. Such actions could increase the assessed risk of material misstatement due to error or fraud and result in further audit procedures to be performed in response to the assessed risk.

(Note: When you have this level of data [and potentially gain comfort over a complete population] your audit strategy may shift toward a controlsbased approach to support the reliance on the inputs used for analytics.)

(See example 2-5 of appendix A in AICPA Guide to Audit Data Analytics).

Technology Tools for Use in the Audit

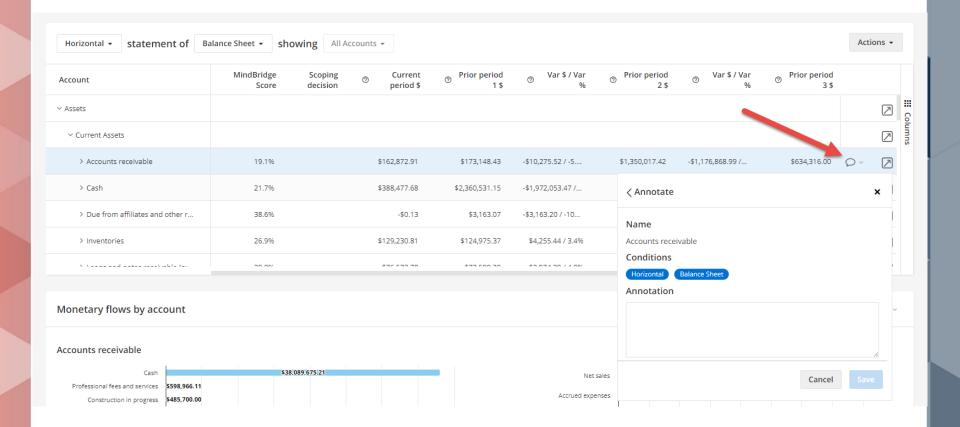
## Consider Technology by Phase of the Audit





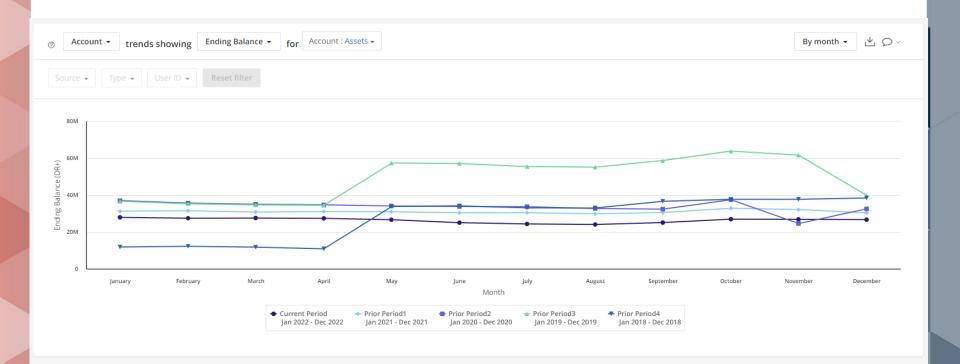
- Apply control points (risk attributes)
- Risk dashboard (high / medium / low risk entries)
- Predictive analytics and trend/ratio analysis
- AP / AR (vendor/customer) risk analysis
- Automated completeness testing
- Apply control points (risk attributes)
- Risk dashboard (high / medium / low risk entries)
- Select entries for testing
- Export for audit workpapers

Horizontal ▼ statement of Ba	alance Sheet • sho	owing All Acc	counts 🕶						Acti	ons 🕶
Account	MindBridge Score	Scoping decision	Ourrent period \$	Prior period 1 \$	⊙ Var\$/Var %	Prior period 2 \$	⊙ Var\$/Var %	Prior period 3 \$		
∨ Assets										<b></b>
✓ Current Assets										
> Accounts receivable	19.1%		\$162,872.91	\$173,148.43	-\$10,275.52 / -5	\$1,350,017.42	-\$1,176,868.99 /	\$634,316.00	Q v	<b></b>
> Cash	21.7%		\$388,477.68	\$2,360,531.15	-\$1,972,053.47 /	\$472,778.54	\$1,887,752.61 /	\$4,644,067.00	Q ~	<b></b>
> Due from affiliates and other r	38.6%		-\$0.13	\$3,163.07	-\$3,163.20 / -10	\$1,342,983.85	-\$1,339,820.78 /	-\$1,204,747.00	Q ~	<b></b>
> Inventories	26.9%		\$129,230.81	\$124,975.37	\$4,255.44 / 3.4%	\$90,017.02	\$34,958.35 / 38	\$209,529.00	Q ~	<b></b>
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Horizontal • statement of Ba	alance Sheet • show	ving All Acco	ounts 🕶						Actio	ons 🕶
Account	MindBridge Score	Scoping decision	② Current period \$	Prior period 1 \$	⊙ Var\$/Var %	Prior period 2 \$	⊘ Var \$ / Var %	Prior period 3 \$		
∨ Assets							•			
∨ Current Assets										
> Accounts receivable	19.1%		\$162,872.91	\$173,148.43	-\$10,275.52 / -5	\$1,350,017.42	-\$1,176,868.99 /	\$634,316.00	<b>9</b> ~	<b></b>
> Cash	21.7%		\$388,477.68	\$2,360,531.15	-\$1,972,053.47 /	\$472,778.54	\$1,887,752.61 /	\$4,644,067.00	Q ~	<b></b>
> Due from affiliates and other r	38.6%		-\$0.13	\$3,163.07	-\$3,163.20 / -10	\$1,342,983.85	-\$1,339,820.78 /	-\$1,204,747.00	Q ~	<b></b>
> Inventories	26.9%		\$129,230.81	\$124,975.37	\$4,255.44 / 3.4%	\$90,017.02	\$34,958.35 / 38	\$209,529.00	Q ~	$\square$
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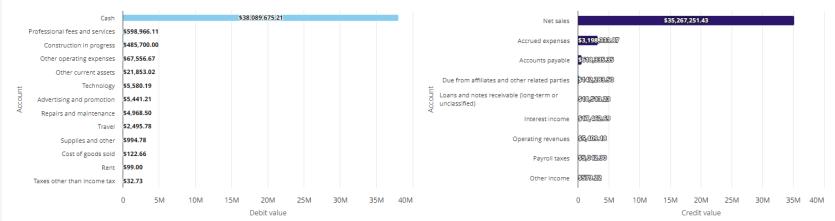
# Annotations for Financial Statements • Added by Last updated Name Annotation description Account Status Active > Accounts receivable New annotation Sara Watson Accounts receivable May 31, 2024 100 v of 1 item « < 1 > »

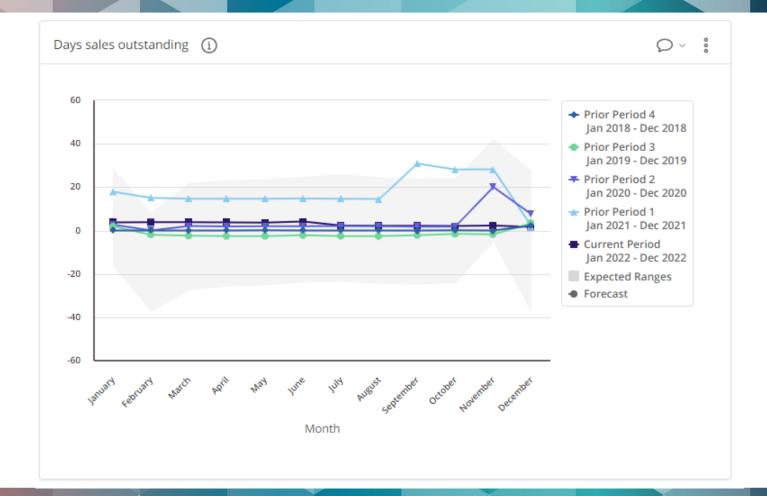


#### Monetary flows by account



#### Accounts receivable





High Risk

\$3.28M

9 transactions (0.2%) of the ledger

Medium Risk

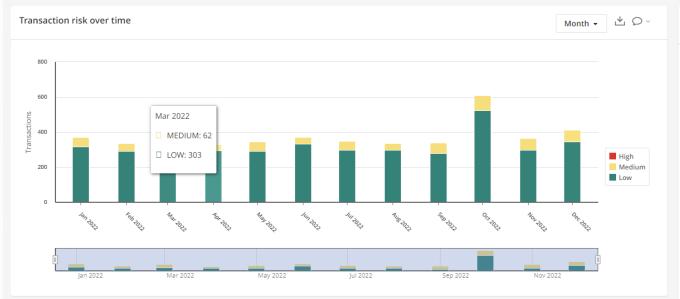
\$97.82M

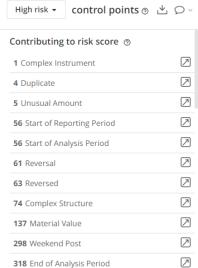
657 transactions (14.4%) of the ledger

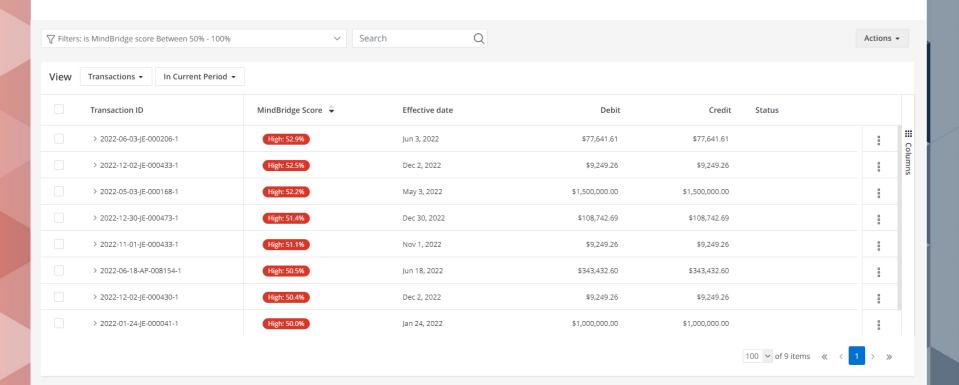
Low Risk

\$106.96M

3,881 transactions (85.4%) of the ledger







# Balance checks

#### Unbalanced transactions check

All 4547 transactions in this ledger balance

Export

## Completeness check

This report represents the last run analysis and compares the opening balances and general ledger

Export

1,334 accounts were not included in the closing balance

Balanced: 125

Tolerance Amount \$1.00

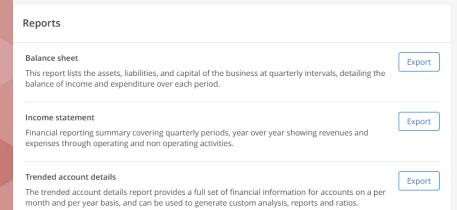
activity against the provided closing balances.

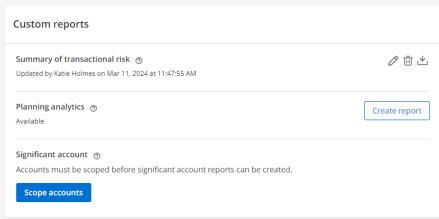
- Within Tolerance: 165
- Out of Balance: 10

# Interim roll forward check

Export

- O back dated journal entries detected between the interim and full ledger loads.
- O journal entries appeared in the interim ledger load and were removed in the full ledger load.
- O journal entries have changed from the interim and full ledger loads.

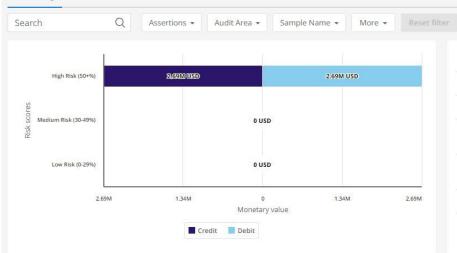




## **Audit Plan**

ABC Building Ltd. - TEST / 2022 ABC Audit

#### General ledger

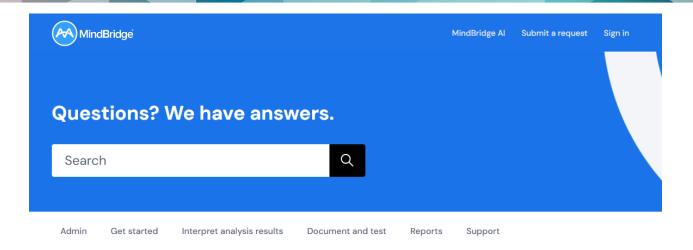


	USD (\$)
Debit	2,686,384.30
Credit	2,686,384.30
Net Value (Dr - Cr)	0.00
Number of Samples	2
Audit areas	Asset, Liability
Assertions	

Transaction	Туре	MindBridge Score	Sample Name	Audit Areas	Assertions	Analysis Name	Currency	Credit	
2022-06-03-JE-0	Transaction	High: 53.0%	Misc Deposits	Asset		General ledger anal	USD (\$)	77,641.61	Co
2022-12-30-JE-0	Transaction	(High: 51.4%)	Misc Deposits	Asset		General ledger anal	USD (\$)	108,742.69	•••
2022-01-24-JE-0	Transaction	(High: 50.1%)	Shareholder loan	Liability		General ledger anal	USD (\$)	1,000,000.00	0 0 0
2022-05-03-JE-0	Transaction	High: 52.3%	Shareholder loan	Liability		General ledger anal	USD (\$)	1,500,000.00	0 0 0

Export

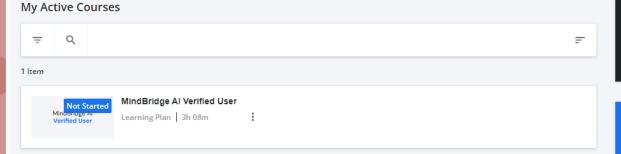
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1/10/2019	88,603.27	0.00	24.08	24%	1%	0%	33%	30%	45%	21%	7%	✓	✓	✓
<b>4</b> /10/2019	0.00	134,285.04	<b>√</b> 31.49	31%	2%	0%	33%	37%	57%	28%	1%	×	✓	✓



# MindBridge Knowledge Base

A self-service portal with 500+ articles, guides, and answers to frequently asked questions about using MindBridge.

# MindBridge Academy



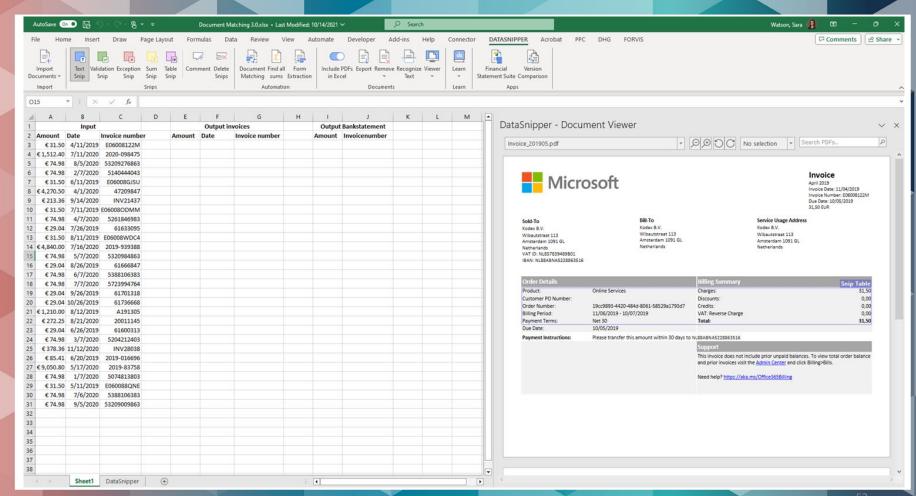
Login to your MindBridge tenant

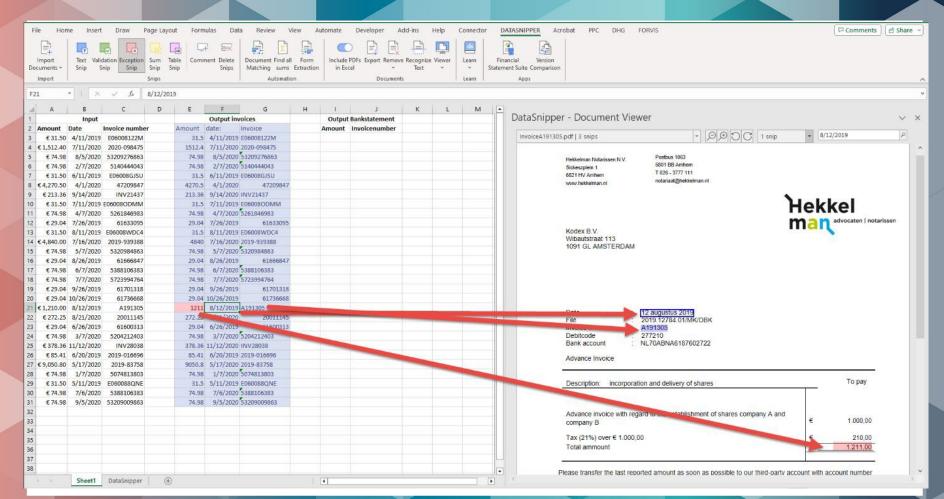
Q4 2023 Release

See what's new in our latest product release

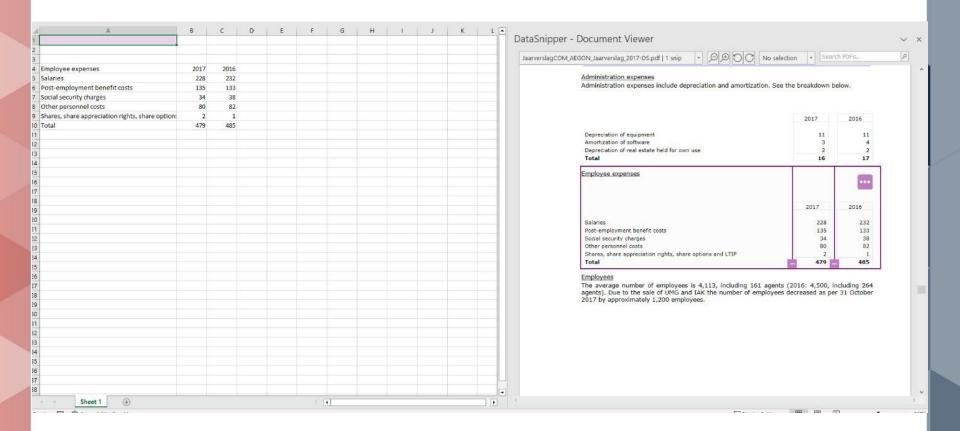
# datasnipper 🚉

- Excel add-in (no separate program/login
- Document matching (match excel to source data)
- Table Snip
- Form Extraction
- Financial Statement Suite (FSS)

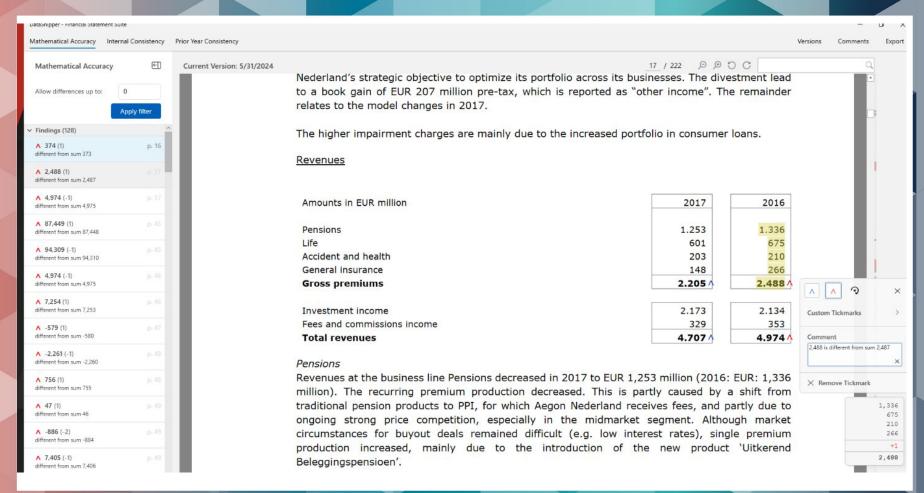


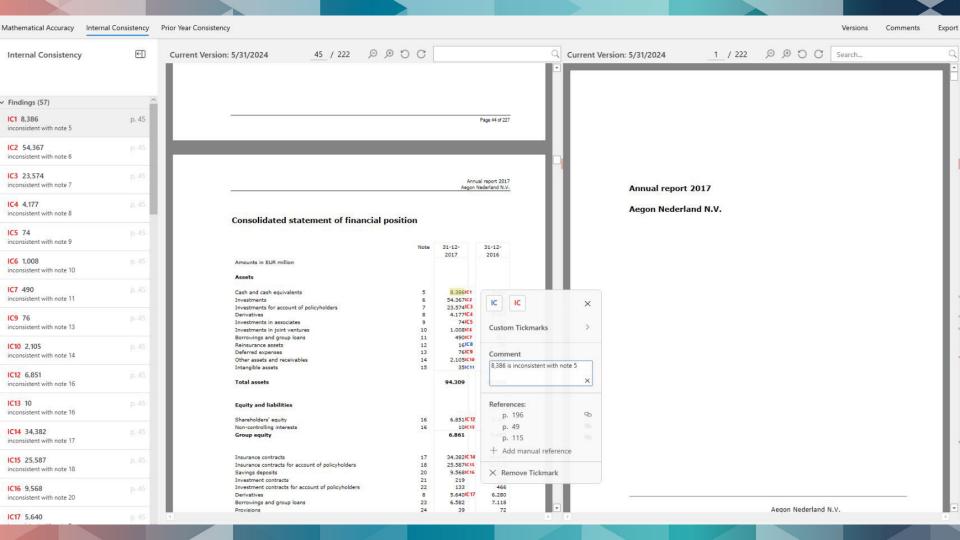


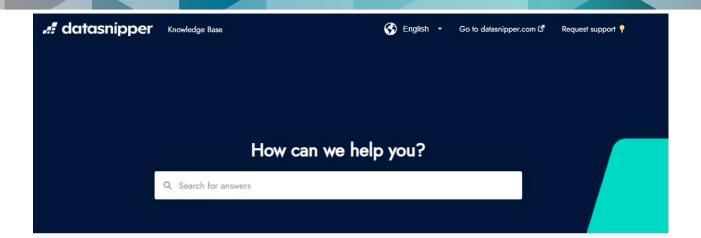
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← DataSnipper - Form Extraction		- o
Extractions		Preview of extractions
Extract per document		Document Extraction 1 Extraction 2
		form1.pdf 249279572 Mary J.
Extraction 1	E 4 0 4 0 Decement of the Treasury—Informal Bovenue Service (99)	form2.pdf 253333345 Polly M.P.
Extraction 2	E1040 Department of the Treasury-Internal Povernue Service (99) U.S. Individual Income Tax Return  2019   OMB No. 1545-0074   IFIS Use Only-Do not write or staple in this sp	form3.pdf 948495654 Isabella L.
Extraction 2	Filing Status Single Married filing jointly Married filing separately (MFS) Head of household (HOH) Qualifying wildow(er) (QW)  Check only If you checked the MFS have enter the name of snoves if you checked the HOH or QW have enter the child's name if the qualifying nerson is	form4.pdf 830385560 Leonardo
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	Standard Someone can claim: 🗸 You as a dependent 🔲 Your spouse as a dependent	form11.pdf 253547657 Alice
	Spouse itemizes on a separate return or you were a dual-status alien    Age/Blindness   You:   Were born before January 2, 1955   Are blind   Spouse:   Was born before January 2, 1955   Is blind	form12.pdf 482774848 Kimberly
	Dependents (see instructions): (2) Social security number (3) Relationship to you (4) / if qualifies for (see instructions): (1) First name Last name	









# Getting Started with DataSnipper

Welcome to Datasnipper. Let's guide you through our most important features.



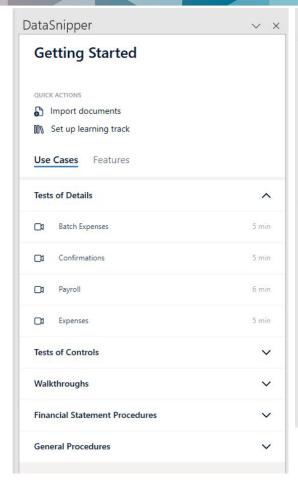
#### Use cases for External Audit

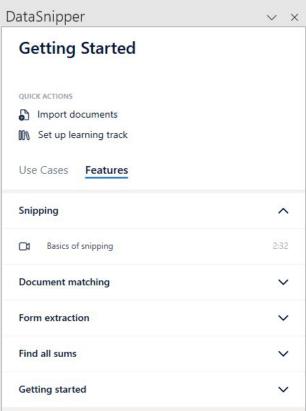
Learn how to use DataSnipper for your external audit procedures with these use cases.



#### Use cases for Internal Audit

Learn how to use DataSnipper for your internal audit procedures with these use cases.







- Integrated platform
- UEE (Understanding the entity and it's environment) generates risk indicators
- Risk assessment directly linked to system generated audit program
- Library of procedures to address specific risks

Questions?