

MindBridge Analytics, Inc. submission – via email

Dear Brydon Review,

**This letter contains a response to Q45: How far is new technology actually used in audits today?
Does the use of technology enable a higher level of assurance to be given?**

MindBridge Analytics Inc. (“MindBridge”) is a software provider that provides anomaly detection and business intelligence solutions to audit markets across the globe, primarily through its flagship product Ai Auditor. Established in 2016, MindBridge has grown to hundreds of active customers, including public accounting firms, internal audit departments, and government organizations. In addition, MindBridge is working with over 70 universities globally to introduce students to the concept of AI and help them understand the impact AI has on audit functions and methodologies.

We feel that technological approaches, such as the one that Ai Auditor offers, provide a great opportunity for the audit industry to increase the effectiveness of their work, and by extension the quality of the audit offering as a whole. MindBridge Ai Auditor uses a combination of rules based, statistical and machine learning risk indicators, which allows auditors to risk rate 100% of their clients transactional data. To do so, Ai Auditor looks at multiple fields in the General Ledger, and matches transactions from subledgers to other relevant data sets such as purchase orders and goods received notes.

From our experiences working with the entire breadth of the market, the take up of data driven approaches has been mixed. There are many hurdles to implementation that we consistently face in the market. We have summarized the two most significant themes below, namely difficulties in extracting data, and a lack of established best practice.

Difficulties in data extraction

In order to perform the depth of analysis that MindBridge Ai Auditor performs, access to the underlying financial data must be provided to the auditor. This currently includes the general ledger, select subledgers, and trial balances. Ai Auditor can be presented with a single year of general ledger information, but can include up to five years of general ledger activity. The quality of the analysis is improved as additional years are included, in particular the risk scoring and trend analysis features.

The information required for analysis will increase in volume and detail in the coming years as the end users will increasingly include the use of data analytics, and will request additional features that are currently not feasible. Examples of this would be using natural language processing on non-financial information found through social media.

There are routinely issues in getting raw bookkeeping and finance data from the auditee, as detailed below;

1. Poor data literacy on the part of the in house finance team at the auditee, or a poor understanding of the internal bookkeeping software, means that the finance team lack the ability to utilise the appropriate features of the bookkeeping software in order to post transactions appropriately or to extract the data in a sensible format.
2. Finance team at the auditee is unwilling to provide data in a timely manner, or obstructs the provision of data in a sensible, structured format. The market’s normative position is that an audit can be completed without this data, and so many finance teams are of the belief that

they have the right to refuse access to this data, or to delay providing until it suits the auditee's purposes.

3. There is still widespread use of old and obsolete bookkeeping systems and ERPs, particularly from vendors that are aiming at niche industries. Many of these older systems do not apply best practices from a data perspective, and can cause issues due to malformed data, or by lacking appropriate data reporting capabilities. From our experience, these obsolete systems are more prevalent in the mid market and not for profit sectors. There is often little incentive to upgrade these systems.
4. In the larger end of the market, the ERP systems are incentivised to block access to the data so that users are restricted to buying services within their ecosystem. This might be a conscious strategy, or it might be neglect of the capabilities necessary to extract the volumes of data that these larger organisations produce.

In order to remedy these issues, we propose the introduction of a broadly applicable common data model, similar to the Data Standard as detailed by the AICPA. We also propose that all ERPs must provide a Data Standard method of data extraction, written in primary legislation. We propose that this data model covers both structured and unstructured data.

Data Science in Audit: Knowledge, Understanding and Best Practices

Firms have been slow to adopt new technology in audits due to the fear that they will not meet the requirements of the standards. The lack of authoritative guidance on the application of data science methodologies into the audit space has caused hesitation.

As there are only few individuals who have an understanding of both the data science methodologies as well as audit theory, there is little established best practices for the application of these techniques into the audit process has developed. Many practices are unwilling to invest in these techniques until it appears that the regulator requires their application and releases guidance into their usage.

At the same time, the regulator is unwilling to invest in the skills necessary to write guidance until a significant proportion of firms are utilising the technology. As neither party is willing to move before the other, this situation blocks the adoption of innovative technologies. In order to remedy this, we propose a separate arm of the regulator whose responsibility is solely to write best practice and guidance notes for emerging technologies in order to promote their usage.

All the best,
Stuart