

## Internal Fraud can erode organisations - Predictive

### Analytics to the Rescue!

Fraud in organizations can be epidemic if not curbed at the inception. According to a survey of Certified Fraud Examiners (CFEs), organizations around the world lose an estimated 5% of their annual revenues to fraud. Applied to an estimated yearly Gross World Product, this figure translates to a total potential fraud loss of more than \$3.5 trillion. (Source: [ACFE Report](#)). The main struggle that spans all industries is the prevalence of fraudulent activity which goes undetected and costs companies large amounts of money, beleaguering their financial situation and putting a question mark on their integrity by risking their reputation. As an employer, it is incumbent on you to foster a culture of trust and facilitate the all-round development of the organization, instead of merely wasting energy on tackling fraud. Undetected fraud is a cause of concern among Line of Business staff and the management people whose bread and butter is to increase Return on Investment to meet the company targets and report to the board.

If fraud occurs in an organization, salvaging the situation is paramount. How can this be done? The answer is Predictive Analytics!

### What is Predictive Analytics?

Predictive analytics is the use of data, statistical algorithms and machine-learning techniques to identify the likelihood of future outcomes based on historical data.

This technique is optimal for answering questions like:

- How can I predict that an expense claim is likely to be fraudulent?
- How can I predict the revenue potential of my customers by City, Geography and Zip Code?
- How can I predict unusual customer usage and behavioural patterns that may indicate attrition, up-sell, cross-sell or fraud?

These are important questions which the stakeholders need answered, in order to vouch for the credibility of the business and the organization.

On a recent fraud detection project for a financial institution, we organized the consolidation of data resources by enabling fluid communication between departments, and thereby accomplishing a smooth business process which eliminated any possibility of fraud. In order to achieve this collaboration, organizations cannot rely on non-durable “stick and sellotape” methods. They vehemently need a structured and iterative approach. This is where predictive analytics comes in.

Below are some key benefits of using predictive analytics for detecting internal fraud, reinforced by our experience of working with the financial institution.

#### 1. Make faster decisions in real-time

Fraud detection cannot always rely on historical data due to small sample sizes and activities in real-time. For example, if an employee makes an expense claim today, the company might not possess his prior claim information immediately, which can make it difficult for the system to detect fraud.

Predictive modelling employs analytics that uses business rules to score models in the system, which react to new information and instantly notify the analyst about any fraudulent activity or red flags to be aware of. The use of such systematised analytics helps identify fraudulent claims and rewards good employees by the speedy disposition of genuine claims.

## 2. Identify risk-prone company personnel

Predictive Analytics can help you identify people who are more prone to risk. For instance, according to a KPMG report, CFOs are the fastest growing group of fraudsters today with 40% of fraud cases being churned out from the finance department and 72% of cases involving men only. (Source: [KPMG Study](#)). Personal gain and external pressures were the most likely reasons for committing fraud.



We found that predictive analytics efficiently forecasted the likelihood of fraud vis-à-vis different personnel within the financial organisation. This was achieved by a model created for that purpose, and did not require a review of the yearly costs incurred by each individual by eyeballing the data, a technique which is unfortunately still used by many organisations and can be monetarily taxing.

ACFE reported that 40% of internal fraud was identified because of a tip, which mostly came from employees of the organization. (Source: [ACFE Report](#)). Since employees are hesitant to report incidents to their employers, it is worthwhile to set up an anonymous reporting system where text analytics is used to derive insights from unstructured data and tap into any anomalous behaviour.

## 3. Deliver insights across the organisation

Predictive analytics adopts a structured approach involving the creation of a data warehouse (if one does not already exist) to use for model building and storing predictive models into a secure, stable production environment which can be iteratively deployed. This helps in creating auditable systems which establish credibility within organizations and can be used by the business and analyst teams to disseminate insights internally and externally across organizations. If internal fraud is detected, the prediction and centralised insight can be leveraged across the business to deal with contingencies and threats.

## 4. Reduce dependence on staff

If fraud is imminent, channelling resources on prevention rather than detection is the wise course. Using predictive analytics to detect fraud within an organization results in the creation of a system which runs iteratively, by feeding data into its models from a single data source, and improves model accuracy as more data is fed into it.

This eliminates the old school way where organizations are reliant on one or two people for data gathering and manual analysis. Optimizing employee resource helps in reducing dependency on domain experts, as knowledge is not lost and the organization does not need to invest further resources in training.

The above key benefits lead to the below returns:

### A. Prevent Revenue Leakage

Embracing predictive analytics significantly aids organizations in mitigating losses and preventing cascading damages. You can create risk-assessment models to predict fraudulent activities, raising red flags way in advance for the organization to take action and save money. This improves profitability and business performance.

### B. Protect Reputation of the Organization

Retaining existing customers & maintaining relationships and loyalty is vastly preferable to finding new ones. Good word of mouth and increased Net Promoter Score bolsters retention and effectively improves customer satisfaction.

Fraud can occur in insurance companies, too. For example, in the context of claim investigations, where claims scoring is the norm, business rules need to be built to route the claim to the right handler skilled for the task. Building customer-centric business rules makes claims processing seamless, and aids in catching the fraudulent claimer. Predictive Analytics achieves this efficiency!

We inferred that predictive analytics is a valuable tool in the financial industry for a plethora of reasons. It not only helps develop efficient processes by using intuitive technology, but also helps management drive strategic decision making. The financial institution we worked with was able to accurately detect the names and expense claim history of internal fraudsters after every model refresh, using Predictive Analytics.



## About Presidion

Presidion have operated for over 20 years and have been the pioneers in implementing cutting edge predictive analytics solutions with top UK and Irish organisations. We specialise in helping organisations leverage their data to deliver tangible practical returns on investment, aligned with their strategies.

Presidion works with both government and commercial clients, currently partnering with hundreds of organisations enabling them to understand what has happened in the past, anticipate what may happen next to take appropriate and timely strategic decisions for their organisation.