

## Best Practices Series



# Optimizing Fraud Detection with Business Analytics

Polaris™ is an inherent business analytics solution that reduces cost by improving the speed and accuracy of identifying insurance fraud.

The solution embeds G4S Compliance & Investigations fraud abatement expertise with inherent and IBM advanced analytics technologies to analyze both text and structured data in claims. Using text analysis combined with weighted fraud indicators, configurable scoring algorithms and funnel visualizations, Polaris™ analyzes all claim information then identifies, scores and categorizes each claim based on the likelihood of fraud.

Polaris™ finds fraudulent claims more accurately, consistently and earlier in the claim process to reduce cost, improve claim administration and retain business knowledge.

### The Problem

According to the National Insurance Crime Bureau, 10 percent of all property and casualty (P&C) insurance claims are fraudulent, costing the industry more than \$30 billion every year. Today, most companies find fraud in only one percent of claims.

In addition, industry analysts estimate that more than 80 percent of all business intelligence is contained in text or un-structured data. Likewise, most of the insight associated with detecting fraud resides in text - examiner notes, medical reports, police reports, emails, web-based

content, etc. To date, most fraud detection solutions are not optimal since they have focused on structured data rather than text.

Finally, with more than 70 percent of the claim adjustor workforce average age over 45, insurance knowledge and experience is quickly leaving the industry.

Fraud costs the P&C industry more than \$30 billion each year

### The Solution

Polaris™ uses text analysis to move beyond the limitations of predictive analytics by combining insights from traditional forms of structured data with the insight from text. Today, claim examiners utilize experience and training to recognize red flags and identify suspicious claims. With Polaris™, experience and knowledge is captured by fraud indicators and consistently applied to each claim. Polaris™ comprises four major components:

- The 360° claim view
- Parameter development and predictive modeling
- Analysis and workflow
- Reporting and performance management

### 360° View of Claim Data

Effective fraud detection requires the rapid analysis of structured data and text contained in multiple sources from claim systems to the wide variety

of notes and documents associated with an insurance claim. Polaris™ can access both text and structured data from more than 50 different data sources and create a “fused claim record” providing a 360° view of all relevant claim data for analysis.

### Parameter Development and Predictive Modeling

Using inherent starter dictionaries developed with G4S fraud analyst and investigation experts, indicators are quickly created and refined accelerating Polaris™ deployment. The Scoring Module Workbench allows individual indicators to be combined and weighted based on their ability to identify fraud. The weighted fraud indicators are then applied and a total fraud score is calculated for each claim. A funnel metaphor is used to visualize scored claims that are categorized based on increasing levels of suspicion. A large number of scored claims enter the top of the funnel, categorized into four suspicion tiers, and a small set of highly actionable claims exits the bottom.

Polaris™ features the ability to modify the fraud parameters to expand or contract the size of the claim funnel. A small funnel limits the flow through of suspicious claims and enables the organization to adjust the number of claims to resource levels for further analysis and investigation.

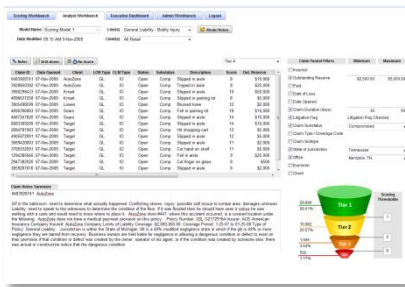
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# POLARIS™

Predictive modeling and data mining capabilities identify additional fraud characteristics that are used to increase the accuracy of fraud parameters.

### Analysis and Workflow

The output of the Polaris™ scoring models is reviewed and acted upon using the Analyst Workbench. Examiners and fraud analysts can quickly review highly suspicious claims based on the fraud funnel, easily navigate through claims with user-adjustable filters and take action via pre-defined workflows.



### Reporting and Performance Management

Standard reports and dashboards provide drill-down capabilities into claim data and the models to support performance analysis and deliver better insights for decision making.

### Advanced Analytics Technology

Polaris™ leverages the enterprise risk management expertise of G4S Compliance & Investigations with inherent's innovative advanced analytics capabilities and solution integration expertise. Using IBM's world-class information management technology, Polaris™ creates actionable

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insight from both text and structured forms of data. Data acquisition, text analysis and indicators are powered by IBM Cognos Content Analytics, an advanced content analytics and mining platform. Multi-dimensional analysis, reporting and dashboards are powered by IBM Cognos 8, the industry leader in OLAP (online analytical processing) and analysis. Predictive modeling capabilities are provided by IBM SPSS Modeler which combines an intuitive, visual interface with automated data preparation.

Polaris™ also includes inherent's scoring module and workbenches as well as starter fraud dictionaries developed in partnership with G4S.

### Solution Benefits

In a pilot deployment, more than \$2 million in loss prevention opportunities were found in an actionable set of claims. These were highly suspicious claims missed by examiners that should have been referred for investigation. In addition, several other benefits were demonstrated including:

- **Improved loss ratios** - loss prevention and compromise opportunities are identified early in the claim process
- **Improved expense ratios** - claim decisions are made earlier in the process by getting the right claims to the right people
- **Retained claims knowledge** and mitigated risk of knowledge drain
- **Process improvements** - streamline claim administration and increase customer satisfaction

- **Consistent application of fraud expertise** across all claims by automating the application of fraud indicators
- **Training opportunities** - a focus on text uncovers inconsistent use of red flags across claim examiners and identifies training opportunities
- **Regulatory compliance** - analysis of text identifies suspicious claims not reported to state agencies

### About inherent

inherent, an IBM Premier Business Partner for more than 20 years, is an IT consulting services firm delivering business analytics, enterprise content management and infrastructure solutions to enterprise and mid-market organizations. Our solutions enable clients to gain better business insight, improve decision making and optimize performance to achieve better business outcomes.

### About G4S Compliance & Investigations

G4S Compliance & Investigations is a global leader of fraud abatement & corporate compliance solutions. Our value added Solutions include: Insurance & Investigation Solutions, Human Resources & Employment Solutions, Corporate Security Solutions and Compliance & Training Solutions. G4S Compliance & Investigations has revolutionized the insurance industry as a "OneSource" solution to help combat fraud. G4S has operations in over 110 countries with over 570,000 employees. [www.cni.g4s.com](http://www.cni.g4s.com)