

› Solution Overview



The SAS® Fraud Framework for Government

The SAS Fraud Framework for Government is an end-to-end framework for detecting, preventing and managing fraud, waste and abuse.

The framework includes components for detection, alert management and case management, along with a category-specific workflow, content management and advanced analytics.

These components are fully integrated with SAS Social Network Analysis, a solution that offers both top-down and bottom-up functionality for making hidden and risky networks visible to investigators.

The SAS approach provides enhanced fraud detection and improved operational efficiency while decreasing fraud spending from a total cost of ownership perspective.

The SAS® Fraud Framework for Government

Prevent, detect and manage fraud across your organization

Overview

Governments, like all organizations, are vulnerable to fraudsters who attempt to cheat and abuse the system. Each year, billions of tax dollars paid by hardworking citizens are lost due to improper payments, fraud, waste and abuse.

These payments cause a real impact. In fiscal year 2014, US government officials reported approximately \$125 billion in improper payments. The federal government reported that improper payments were 4.02 percent of payments. In the UK, the most recent fraud indicator from the National Fraud Authority pegged public sector fraud costs at £20.6 billion.

Directives aimed at increasing the transparency of improper payments in the US government state that when the government makes payments, it must make every effort to confirm that the right recipient is receiving the right payment for the right reason at the right time. Unfortunately, the methodologies typically employed by government agencies to detect fraud and reduce improper payments are not keeping pace with fraudsters' tactics. The SAS® Fraud Framework for Government can help.

How SAS can help

The nature of government programs requires collecting and processing enormous amounts of information. One of the biggest challenges for these systems is the integrity of the data itself. Data authentication, verification, standardization, integration and matching are required first steps to implementing an effective analytical fraud, waste and abuse solution; without a trustworthy, single version of the truth, auditors and analysts can't adequately protect government funds from improper payments.

The SAS Fraud Framework for Government was designed to help government entities detect and prevent opportunistic and professional fraud through improved data effectiveness. With SAS, you can standardize, integrate and authenticate the data and consolidate program integrity activities. By harnessing your qualitative and quantitative data, you can better identify fraudulent activity and stop payments before they are made.

The use of analytics can help government investigators identify abnormalities and patterns that may indicate fraudulent activity. They can also discern visual patterns and aberrations using visualization and analysis techniques. The SAS Fraud Framework for Government calculates the propensity for fraud at each stage of a process with a fraud analytical engine that uses multiple techniques, including:

- Automated business rules.
- Predictive modeling.
- Text mining.
- Database searches.
- Exception reporting.
- Network link analysis.

With SAS, an online dashboard of key indicators and statistics provides access to information on improper payments, such as payment error rates by agency and program, and listings of the most egregious offenders. Alerts for potentially fraudulent activities are routed to special investigation units where investigators are provided with case management tools that help them rapidly investigate. Once an activity is scored and prioritized based on severity, an investigator may perform a more in-depth review of the characteristics to determine if the activity, or any associated historical activities, are fraudulent.

Capabilities

Data Integration and Business Rule Deployment

The SAS Fraud Framework for Government can extract relevant data from different systems, external data sources, unstructured text and other disparate data sources, as well as import business rules for known fraud, waste and abuse schemes from existing rules engines.

With SAS Data Integration, you can process transactions against known fraud business rules. The solution uses an iterative, closed-loop process to capture and maintain changes to the business rules engine as new schemes are uncovered.

Advanced Analytics and Model Deployment

SAS® Analytics enhance the value of existing business rules by enabling the discovery of emerging suspicious activity that would otherwise go undetected.

Activities identified as suspicious are scored using advanced predictive modeling techniques. The resulting scores are then used to prioritize the order in which suspicious transactions should be investigated. In addition, customized fraud and abuse detection models can be used to identify fraud, waste and abuse not uncovered by existing business rules.

By deploying review capabilities as early in the adjudication process as possible, you can maximize your ability to stop fraudulent or abusive transactions at the prepayment stage.

Detection and Alert Generation

These components enable the systematic detection of suspicious activity using a fraud scoring engine that employs a combination of analytic techniques to determine the likelihood of the presence of fraudulent activity. The detection and alert components:

- **Score transactions in real time** with an online scoring engine that lets you detect fraudulent activity using a combination of business rules, anomaly detection and advanced analytical techniques.
- **Calculate the propensity for fraud** at first notice of loss and re-score transactions at each stage of the process as new data is captured.

Alert Management

The alert management component assembles alerts from multiple monitoring systems, associates them with common individuals and provides investigators with a more complete perspective on the risk of a particular individual. Additional functionality includes:

Challenges

- **Poor data integrity.** The inability to integrate and validate data from various agency data sources means data is often incomplete and unreliable.
- **Siloed, disparate systems.** Different agencies and departments operate in silos and use disparate legacy systems that are not integrated, making it impossible to spot suspicious activity throughout the entire organization.
- **Limited analytic capabilities.** The inability to analyze transactions to identify suspicious patterns and behaviors makes agencies susceptible to organized crime and illegal or unethical practices.
- **Manual processes.** Manually gathering and preparing data for fraud detection is tedious, time-consuming and highly error-prone; even traditional tools require a long time to process.
- **Limited resources.** Government human resources dedicated to prevent, detect, investigate, and prosecute fraud and abuse cases are subject to attrition and are very limited.

- **Risk score calculation.** Each alert is assigned a risk score based on the specific characteristics of the activity, with transparent reason codes.
- **Alert prioritization.** Prioritizes and routes potentially fraudulent transactions to appropriate team members, resulting in greater efficiency, increased detection rates and reduced losses.
- **Work assignment.** Auditors can appoint automated alert assignments to various investigators or analysts based on rules and requirements set by the user.

Social Network Analysis

SAS Social Network Analysis helps investigators detect and prevent organized fraud by going beyond individual transaction and account views to analyze all related activities and relationships at a network dimension. In addition, the solution:

- **Improves investigator efficiency.** The solution lets you produce complete dossiers of networks surrounding a case using an intuitive interface that provides fast access to all details, related parties and networks.
- **Uncovers previously unknown relationships.** Using a unique network visualization interface, the solution gives investigators the ability to identify linkages among seemingly unrelated claims.
- **Produces independent and combined fraud scores.** The solution enables you to assess overall risk on an individual, claim or network basis.

Case Management

Once an alert has been triaged and requires further investigation, the case management functionality provides a systematic means for facilitating the investigation and capturing and displaying all information pertinent to that case. In addition, you can:

- **Store fraudulent activity information,** including interview notes and evidence needed for criminal or civil prosecution, restitution and collections.
- **Assess your overall fraud exposure,** including losses due to fraud as well as fraud detected or prevented.
- **Use a configurable workflow** for the management and resolution of cases.

Hosting and Analytical Services

SAS offers complete hosting services, with the SAS Fraud Framework for Government being installed and administered at the SAS hosting site, which eliminates the need for staff to oversee the system. This deployment method typically has a faster implementation period, translating into faster and more significant ROI. If you prefer to install and host the solution on-site, SAS Professional Services staff will assist with the implementation and provide industry leading knowledge transfer.

SAS offers fraud proof-of-value as well as complete fraud system implementation. Services include all the steps from initial fraud formulation to ongoing support for model monitoring and recalibration.

Benefits

Detect more fraudulent activity

The SAS Fraud Framework for Government enables you to detect more fraudulent activity than ever before. With SAS, you can:

- Insert analytical models into the process, in addition to rules engines.
- Process *all transactions* (not just a sample) through rules and analytical models.
- Use customized models to detect previously unknown schemes.
- Spot linked entities and crime rings, which can help stem larger losses.

Decrease fraud losses

The SAS Fraud Framework for Government enables you to decrease your fraud losses by:

- Preventing fraud *before* payments are made using online real-time scoring.
- Detecting repeat offenders and more accurately scoring fraudulent activity by searching databases of known fraudsters and by capturing all fraud outcomes, referrals and suspects within the system for reuse.
- Detecting insider or collusive fraud by integrating staff data and audit records that show who handled which transactions.

Reduce costs to detect and investigate fraud

The SAS Fraud Framework for Government enables you to lower your expenses by:

- Greatly reducing false positives.
- Improving investigation efficiency with advanced case management tools.
- Increasing ROI per investigator by prioritizing higher-value networks and conducting more efficient and accurate investigations.
- Capturing the disposition of fraud investigations to fine-tune the detection analytics over time.

A consolidated view of fraud risk

The SAS Fraud Framework for Government gives you a consolidated view of fraud risk, enabling you to:

- Improve models on an ongoing basis and adapt the system continuously to address changes in fraud trends.
- Better understand new threats and prevent substantial losses early using social network diagrams and sophisticated data mining capabilities.

Improved transparency and increase accountability

The SAS Fraud Framework for Government can also help you improve your transparency and accountability:

- Fewer false positives mean higher efficiency.
- Fraudsters are discouraged from trying to commit fraud in the first place.
- Enhanced fraud management satisfies regulatory pressures.
- Improved data integration allows for the creation of a 360-degree view of the citizen, thereby reducing fraud and error, as error represents significant revenue losses of its own.

About SAS

SAS is the leader in **business analytics** software and services, and the largest independent vendor in the business intelligence market. Through innovative solutions delivered within an integrated framework, SAS helps customers at more than 80,000 sites improve performance and deliver value by making better decisions faster. Since 1976 SAS has been giving customers around the world THE POWER TO KNOW®.

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