

Achieving Holistic Fraud Management with SAS

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GLOBAL PRESSURE

Many contributing factors



Disruption

Digitalisation

Speed

Regulatory
compliance

INDUSTRY CHALLENGES



High level of transactional financial crime driven by high-volume/low-value fraud (e.g. card fraud)



Technology (such as mobile payments) present new financial crime challenges



Reduce view of customer as data becomes more fragmented



More transactions made via 3rd party makes fraud harder to identify



PSD2 will introduce new levels of consumer flexibility & competition



Limited resources & pressure to perform more efficiently effectively



Manual processes for gathering / preparing data for financial crime detection



False positives take the resources from relevant incidents



Efficient collation of information



Disparate / silo'd sources of internal & external data



Difficult to prioritise alerts



Complexity of rules

Estimates of funds moved through the global institutional system in illegal transactions range from **\$800 billion to \$2 trillion annually.**

Financial crime is estimated to cost the global economy **\$2.4 trillion**, while the global cost of financial crime compliance is over **\$180 billion.**

AI to triple for fraud detection by **2021.**

Do what matters.

Source: McKinsey

Source: LexisNexis Risk Solutions

Source: Association of Certified Fraud Examiners, (ACFE) in partnership with SAS

Market Trends

Fraud & Security Intelligence

Synthetic Identity Fraud



Escalating Risks

Attacks are increasing in sophistication and velocity.

SAS is embracing AI and ML to improve accuracy of fraud detection, detection rates, and reduce false positives.

Account Takeover



Increasing Costs

High cost of monitoring programs has become unsustainable.

SAS is improving operational efficiency for investigators, enhancing surveillance strategies, and reducing time to case detection.

Real-Time Payments



Siloed Processes

No holistic view of risks across products, programs, or organizational boundaries.

SAS is breaking down the silos across vendor technologies to offer an integrated analytic approach across a unified platform.

COVID-19 Scams



COVID-19 Scams

667% Increase of COVID-19 related scams*

GOV.UK

The government has taken urgent steps to list coronavirus as a notifiable disease in law

As a precaution measure against COVID-19 in cooperation with National Insurance and National Health Services the government established new tax refund programme for dealing with the coronavirus outbreak in its action plan.

You are eligible to get a *tax refund (rebate)* of 128.34 GBP.

[Access your funds now](#)

The funds can be used to protect yourself against COVID-19(<https://www.nhs.uk/conditions/coronavirus-covid-19/> precaution against corona)

At 6.1
adds
notifie

URGENT: The UKGOV has issued a payment of £258 to all residents as part of its promise to battle COVID 19. TAP here <https://uk-covid-19-relieve.com> to apply

vas made
SARS-CC

IMPORTANT MESSAGE FROM WESTPAC

For the safety of our customers due to the recent COVID-19 virus, all customers are required to review and update their personal details. You will be unable to use Westpac services until you have done so. Please go to <https://westpac-mobile.cc/?update> or call us on 132 032.

Setup

ZOOM Cloud Meetings

Welcome to the Download Manager

This will download and install the software on your computer. Click "Next" to continue.

Quick Specs

File Name: zoom-cloud-meetings.apk

File Size: 15 MB

Zoom is a free HD meeting app with video and screen sharing for up to 100 people

Step 1 of 4

FreeD.io
Privacy Policy



SAS Fraud and Security Intelligence

Cross Industry Fraud Analytics



AML Compliance

AML Transaction Monitoring
Customer Due Diligence
Financial Crimes Optimization
FCIU



Fraud in Banking

Cards/ACH/Wire Fraud
Online Fraud
Application Fraud
Insider Threat / Banker
Supervision



Healthcare Cost Containment

Medicaid Fraud
Application Fraud



Insurance Fraud

Claims
Application/Agent Fraud



Procurement Integrity



Government

Tax Compliance
Rx Drug and Opioid Abuse
Child Well Being
Law Enforcement
Intelligence Management
Benefits Fraud



Emerging Technologies

Cards/ACH/Wire Fraud
Online Fraud
Application Fraud
Insider Threat / Banker
Supervision

Themes

Machine Learning &
Artificial Intelligence

Analytic Impact
(Operationalizing
Analytics)

Intelligent Case
Management

Decision Latency &
Real-time

Enterprise Fraud Platform Capabilities



Data

- Structured & unstructured data sources
- Batch or real time processing
- Data cleansing
- Data integration
- Variable extraction & sentiment analysis with text mining
- Entity resolution



Prevention

- Business rules
- **Profiling**
- Anomaly detection
- Advanced predictive models
- Watch lists
- Network Analytics



Investigation

- Automated alert generation
- Advanced ranking technology
- Custom alert queues
- Alert qualification and triage
- Powerful user interface with single and holistic views
- Documentation & traceability



Reporting

- Dedicated dashboards, easy to use web-based interface
- Workflow analysis
- Full business intelligence reporting capability
- System and case management integration



- Pro-active dynamic data exploration
- Advanced query of integrated data
- Self-administered
- Detection performance analysis
- New modus operandi discovery



Discovery

- Accelerated design and constant improvement of the detection logic
- Alert suppression & routing rules
- Simulation and testing of new risk assessment methodologies



An Intelligent-Driven Approach to Financial Crimes Management

- Proactive protection through advanced network analytics, AI and machine learning.
- SAS' approach includes the latest advances in graph analytics, social network analysis, anomaly detection and text analytics.
- Backed by domain expertise and the world's best analytics.

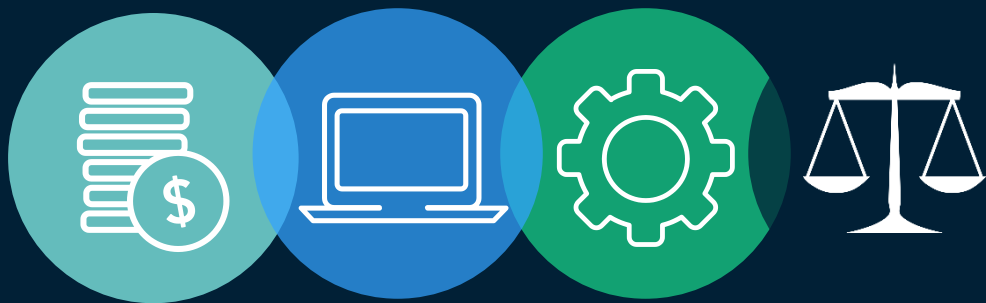
**Contextualize
Customer and
Entity Activities to
More Accurately
Identify Threats**

Revenue Assurance

What is it?

Revenue Assurance is the process of increasing organization's income by identifying areas where revenue gets lost & minimizing these losses by fixing the source of the leakage.

Pillars of SAS Revenue Assurance Framework



01 Fraud Detection

Through analytical rules for irregularities, advanced filtering, load profile deviation identification, machine learning models

02 Billing Error Detection

Through data quality enrichment, data integration, consumption irregularity, process control point automation, customer detail enhancement

03 Credit Risk Analysis

Through customer usage, payment patterns and arrear data segmentation with other categorical customer type data and theft propensity

04 Deposit / Collections Optimization

Through customer usage, payment patterns and arrear data segmentation with other categorical customer type data and theft propensity

Collections Optimization - Key Questions



1. How collectible is a debt?
2. What action (or series of actions) is best for each debtor?
3. How can we collect the most amount of receivables, given our limited resources?
4. What if circumstances (e.g. staffing, cost to collect, outsourcing) change?

Credit and Collection Optimization

Solution overview

An end to end environment to access and prepare data,
Develop demand forecasts, customer segments, payment risk, delinquency models, developing collection strategy, recovery workflow and recovery process with dynamic data exchange

Capabilities

- 1 Credit and Collection Datamart
- 2 Data Management
- 3 Demand Forecasting
- 4 Delinquency Models
- 5 Model Monitoring
- 6 Collection cycle and workflow
- 7 Dynamic data exchange

“But I have great employees. They would never do that.”

Insider Threat Monitoring



- ❑ Financial strain or personal difficulty
- ❑ Often recruited by outsiders (including organized crime and foreign organizations)
- ❑ Increased use of business partners (your organization is no longer your own)
- ❑ Insiders have significant advantage over outsiders – they know all of your processes...and VULNERABILITIES (e.g. policies enforced loosely, exploitable technical flaws)
- ❑ Insider events tend to be managed “in-house” – unintended result of hiding the insider threat problem from public and peers

PUBLIC RECORDS

- Associations
- Asset Ownership
- Legal suits
- Credit Issues
- Historical Information

HUMAN RESOURCES

- Employment Information
- Performance
- Adverse Actions
- Validation of Benefits (salary)
- Baseline job function

Physical Security Logs

- Dates & Times of Work Schedule
- Common Access Areas
- Typical Patterns of Daily Duties
- Trending from Norm

System Access Logs

- Baseline access of network activity
- Common visits to sites
- Common Printing pattern
- Unusual patterns of access
- Variations in access per job function
- Policy violations (USB Drive, etc)

Investigations

- Unreported Overseas Travel
- Unreported foreign contact
- Adverse Financial Issues
- Personal Problems
- Workplace Issues

Insider Threat Risk Profile

Aggregate risk score based on numerous attributes (also risk scored)

SECURITY

- Submitted security application
- Background investigation results
- Additional screening methods
- Historical Information
- Self-reported baseline

Communications

- Common themes in emails and instant messaging/wiki postings
- "Dirty word" identification
- Change in sentiment/ideology
- Shift in individuals normally communicating with

SOCIAL MEDIA

- Associations
- Sentiment on public & private issues
- Influence
- Trends via activity
- Trends via ideology

Incident, Case and Investigation Management

Surfacing and managing alerts, insights through common interface

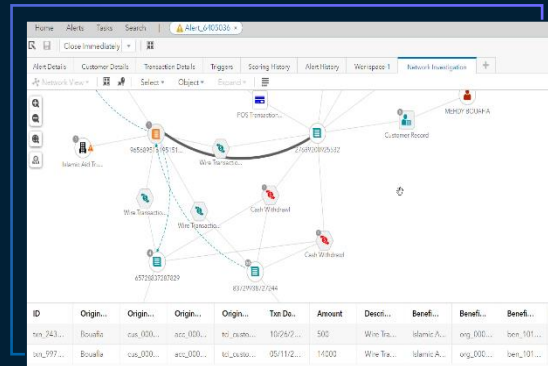
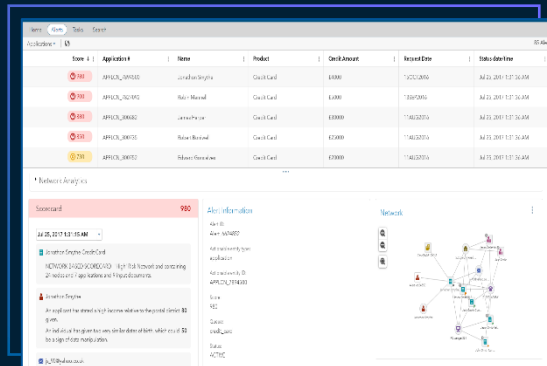
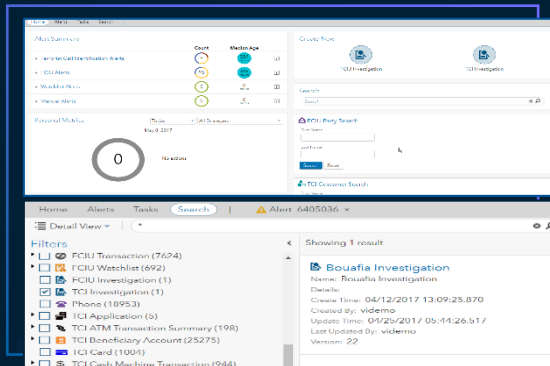
Persona/Use
Case Based User
Interfaces

Advanced Search
and Discovery

Alert Display,
Triage,
Prioritisation

Alert & Incident
Aggregation

Workflow and
Case
Management



Link, Network
Relationship
Identification &
Visualisation

Ad-hoc &
Structured
Surveillance

Temporal &
Geospatial
Visualisation

Data Visualisation

Workspaces and
Insights

What we can do for Banks and Financial Institutions?

Key Areas

Online Payments Fraud

Non-card, account to account payments, cross-border payments, mobile & peer-to-peer. PSD2.



Card Fraud

Card Not Present fraud, Common points of compromise



Application Fraud / Identity Theft

First Line of defense in keeping fraudsters off the books



Internal Fraud

Internal fraud are schemes where insiders within the organisation are involved. This encompass credit abuse, money theft and process breaks



Fraud Assessment

Targeted fraud landscape review with focus on identification of current sources of fraud losses, process leaks and other pains.

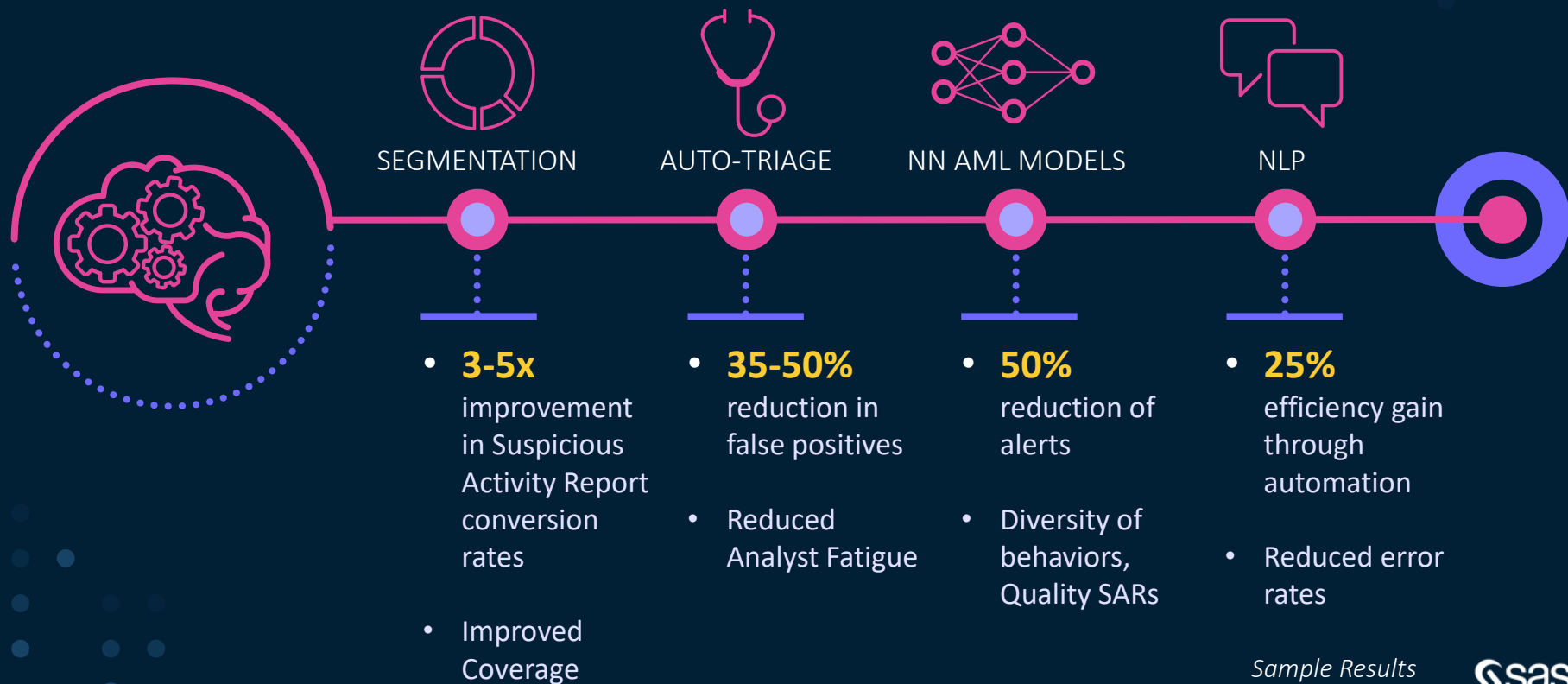


Fraud Analytics

Machine Learning models and Network Analytics to optimize fraud detection



Next Gen AML Immediate Wins



Supporting the Customer Journey with Enterprise Decisioning



Governed



Automated



Decision Focused



Continuous Updates



Cloud Native



Developer Friendly



Application
Fraud



KYC
On-boarding



Sanctions
Screening



Payment
Fraud



Transaction
Monitoring



Customer
Risk Rating

What is Fraud Maturity Assessment

Targeted fraud landscape review with focus on identification of current sources of fraud losses, process leaks and other pains.



IDENTIFY

Identify pains and gaps in current business process for fraud detection and prevention



PRIORITIZE

Prioritize gaps, prepare business case to focus on the most critical priorities and areas with the most potential



GUIDE

Provide a clear roadmap from the current state to the recommended state with a focus on ROI to support an internal business case



BENCHMARK

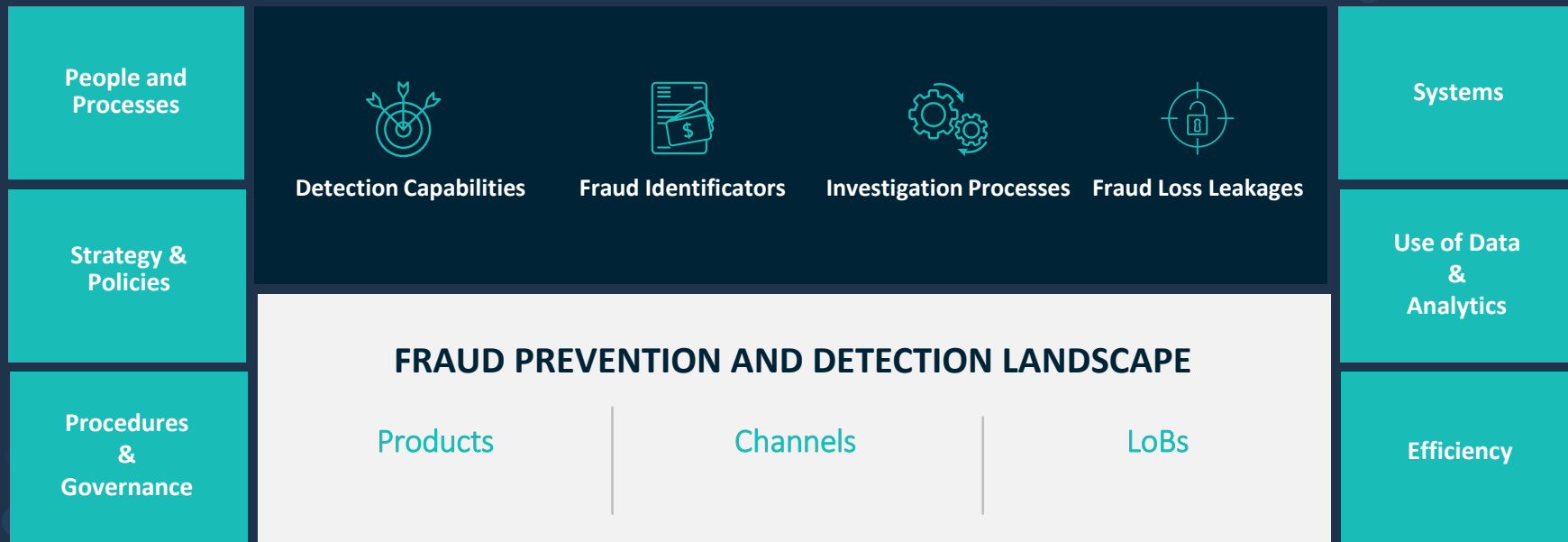
Provide an experience-based benchmark of current state to other customers within the same industry and to best-in-class FP standards.



Aimed to provide customer a clear path to success – result is a business case with a prioritized roadmap to improve the current state.

SCOPE

Targeted review



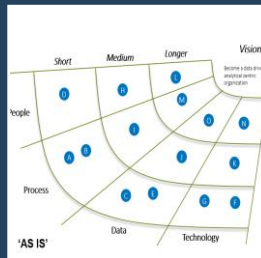
KEY DELIVERABLES

BUSINESS CASE



A summary of key findings, fraud status benchmarking and gap analysis

ROADMAP



List of short and long term recommendations to cover identified gaps

RECOMMENDATIONS



Best Practice recommendations based on the best in class industry standards

The deliverables can be used to present the business case with the clear demonstration of ROI and roadmap to the Executive Board.

Customer Success

PKO Bank Polski



Holistic detection across all channels



N° 1 - Highest number
of customers in Poland



Over **20 mln**
accounts



Over **10 m** customers
in digital channel



Over **9 mln** cards

Online
Payments
Fraud

Loan
Applications

Mule Accounts

Card Fraud

Branch
Transaction
Fraud

Internal Fraud

SAS Fraud
Detection
solutions



benefits

25-50% improvement of Alert-False –Positive Ratio (AFPR) at settled fraud detection rate

10-25% improved fraud detection rates at settled false positives level

10% increase in efficiency by agents investigating potentially fraudulent cases when compared to the prior proprietary alert management system.

87% increase in transaction volume processed while seeing **12%** decrease in use of CPU

"SAS is committed to ensuring that we continue to have a leading-edge anti-fraud solution. We are very pleased with the results."

Derek Wylde
Head of Group Fraud Risk

**Alm
Brand**

“We always presume that our customers are honest. But at the same time, we uncover fraud to the tune of more than 5.3 million euros annually.”

Brian Wahl Olsen, Claims Director, [ALM Brand](#), Denmark



“We have been able to uncover cases of insurance fraud totalling 20 million Czech crowns annually that would have otherwise gone undetected.”

Zdeněk Dragoon, Fraud Analyst, [Česká Pojišťovna](#), Czech Republic



“We more than doubled our fraud savings by identifying fraudsters before claims payments were made.”

Heracles Daskalopoulos, Deputy General Manager, [Ethniki](#), Greece

AKSigorta

“It used to take our investigators 6 months to expose cases of organized fraud. SAS allows us to do it in 30 seconds.”

Yalcin Terlemez, IT Division Manager, [Aksigorta](#), Turkey



“We were able to investigate 26% more case and submitted 40% more proven fraud cases for criminal prosecution”

Maya Maskova, Head of Internal Audit Department, [Allianz](#), Czech Republic



Why SAS?

Expertise

- Industry leading fraud solutions
- Dedicated domain expertise
- Leaders in analytics

Market presence

- 175+ fraud/financial crime clients globally

Fraud Solution Roadmap

- Fraud considered a top strategic priority for SAS
- ~25% of SAS revenue invested in R&D

Optimized

The SAS Platform

... foundation that's engineered specifically to generate insights from data, in any computing environment.

The diagram illustrates the Audit Trail process, showing the flow of data and information from collection to reporting. It includes components like 'Data Collection', 'Data Processing', 'Data Storage', 'Data Analysis', and 'Data Reporting', along with a central 'Audit Trail' box and a 'Reporting' box.

Behavioral Assessment & Assistance
Going Beyond Individual Assistance

SAS is using

[illegible]

*Enterprise analysis,
visualization and
statistical analysis
used to analyze
macro level social
data*

```

graph TD
    In[In] --> Find[Find all]
    Find --> Assign[Assign]
    Assign --> IsEmpty{Is it empty?}
    IsEmpty -- Yes --> PrintResult[Print the result]
    IsEmpty -- No --> SelectMin[Select the minimum element]
    SelectMin --> DeleteMin[Delete the minimum element]
    DeleteMin --> PrintElement[Print the element]
    PrintElement --> IsEmpty
  
```

SAS will support
DWP with an
intelligent
decisioning
engine

*SAS provides DWP
with an E2E platform
to support the
analytical needs of
the enterprise for
now and the future*

Office of the General Prosecutor – EU country

Single View



Information is all consolidated in a single view for risk manager and investigators. This includes external data from other agencies.

Automation



Targeting rules are automatically run and work can be allocated automatically to inspection officers

Efficiency



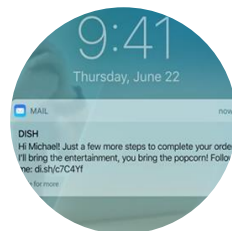
Huge amounts of time saved on by significantly reducing operation effort such as data collection, manual review etc.

Case Selection



Targeting alerts can be triaged by management and reviewed before assigning to investigation/ case officers

Consolidation



Data, Case notes and history are all stored, analyzed and logged for feedback loops and internal auditing

Analytics



The solution can cover all strategies required and apply various analytical and reporting capabilities

Our Vision of Analytical Fraud Detection

OBJECTIVES



Improve loss & combined ratios



Complete fraud solution

VALUE LEVERS



Higher fraud detection & lower false positives



Increased investigator productivity



Higher customer Satisfaction



Faster time-to-market



Lower risk investment protection

SAS ENABLERS



Future proof



Strong partnerships & local presence



Flexibility



Analytics & data management leaderships



THANK
YOU



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