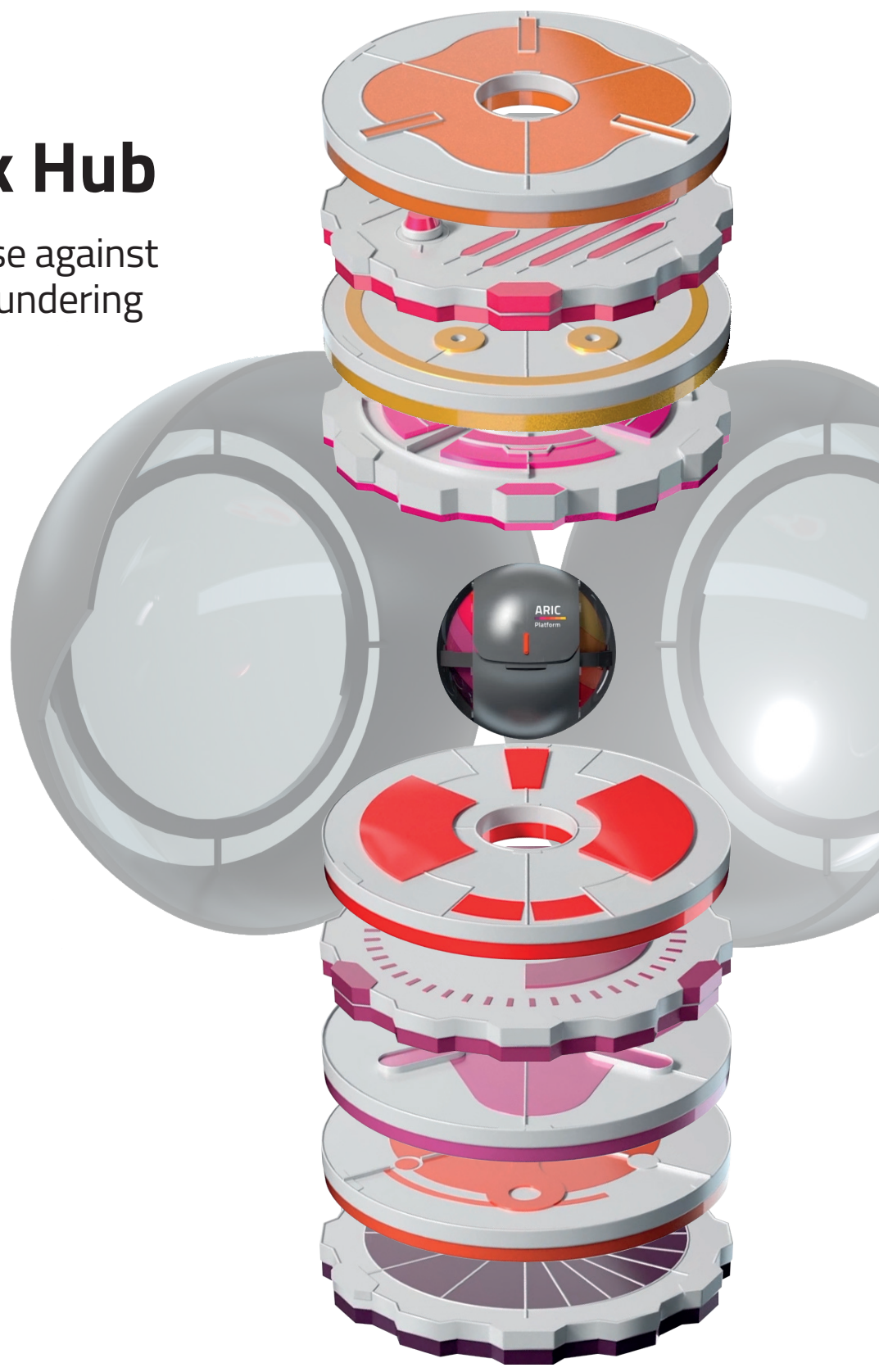


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ARIC™ Risk Hub

The ultimate defense against fraud and money laundering



FEATURE
SPACE

OUTSMART RISK

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Only the adaptive survive

In an increasingly digital world, sophisticated criminal activity is taking advantage of individual vulnerabilities, and exploiting weaknesses in our global financial infrastructure.

Providing the right level of protection and user experience for the customer is the constant tension for fraud and money laundering prevention leaders.

Featurespace's award-winning machine learning technology, ARIC Risk Hub enables financial institutions to find the right balance for their customers and remove the risks of fraud and money laundering from their business.





TM

Welcome to ARIC Risk Hub

Harness the power of machine learning

Adaptive Behavioral Analytics and Automated Deep Behavioral Networks – Featurespace’s proprietary machine learning inventions – monitor real-time customer data and accurately spot suspicious activity, empowering risk teams to prioritize alerts and detect criminal activity in real-time.

ARIC™ Risk Hub profiles good behavior to detect, investigate and stop bad actors. This capability enables the immediate and precise recognition of good customers without blocking their activity, while also reducing customer friction.

Actions taken by investigators are automatically fed back into ARIC Risk Hub to continually update models with behavioral changes, improving future transaction monitoring.

500m

Consumers
protected from risk

50.4bn

Events processed
per year

75%

Reduction in false
positive rates

Real Time

Used to decision
authorizations in
leading global
payment platforms

75%

Fraud attacks
blocked as they
occur with a 5:1 false
positive ratio

100%

Suspicious Activity
Reports (SARs)
caught from working
top 5% of prioritized
alerts

Multiple solutions, one ARIC Risk Hub



ARIC for Financial Crime

Redefine transaction monitoring with machine learning. Prioritize high quality, worthwhile alerts and surface unknown threats.



ARIC for Application Fraud Prevention

Detect fraudulent applications early and accurately in the application process.



ARIC for Merchant Acquiring Fraud Prevention

Monitor and identify merchant risk. Proactively identify anomalous charge-backs, transactional laundering, scheme breaches and bust-outs.



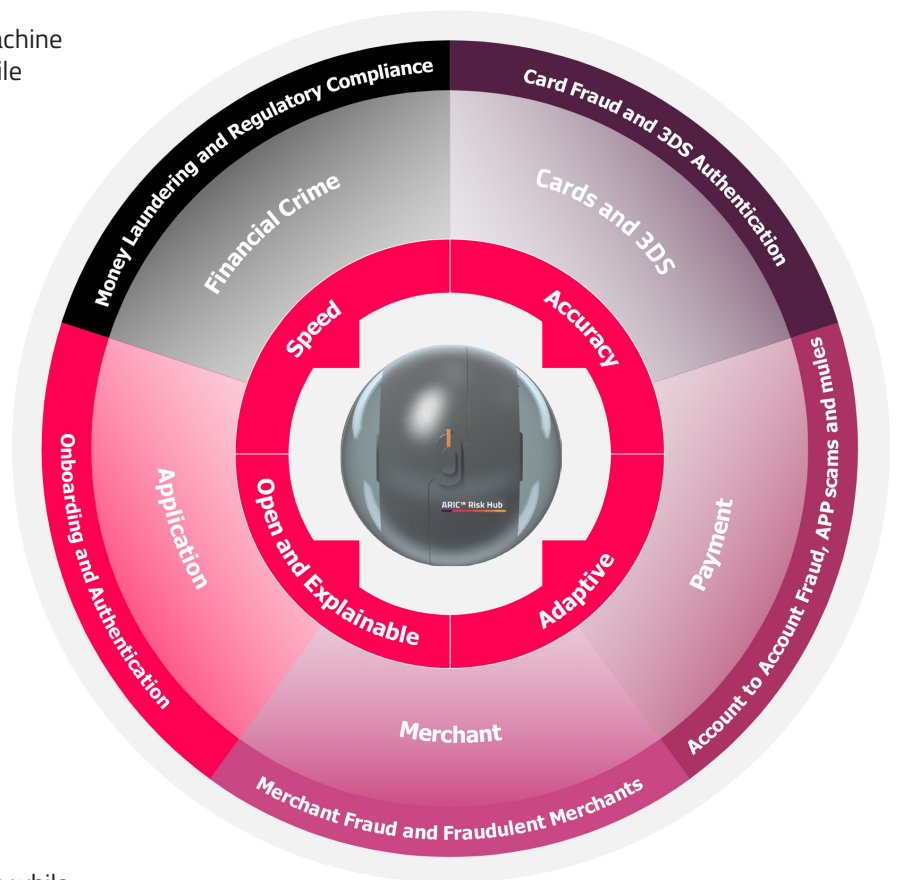
ARIC for Payment Fraud Prevention

Analyze and protect the entire payment journey with minimal manual intervention.



ARIC for Card Fraud Prevention

Detect and prevent card fraud in real-time while maintaining the highest levels of customer experience.



All ARIC Risk Hub Solutions are **White Label** enabled.

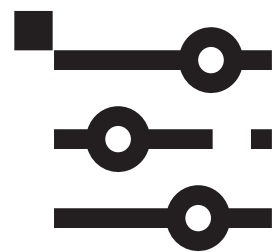
Offer your customers the most advanced fraud and money laundering protection available

ARIC White Label






Multi-tenant enabled

Open new revenue streams for your business. Powered by the multi-award winning ARIC Risk Hub, ARIC White Label protects your clients from suspect transactions across all payment types and channels.

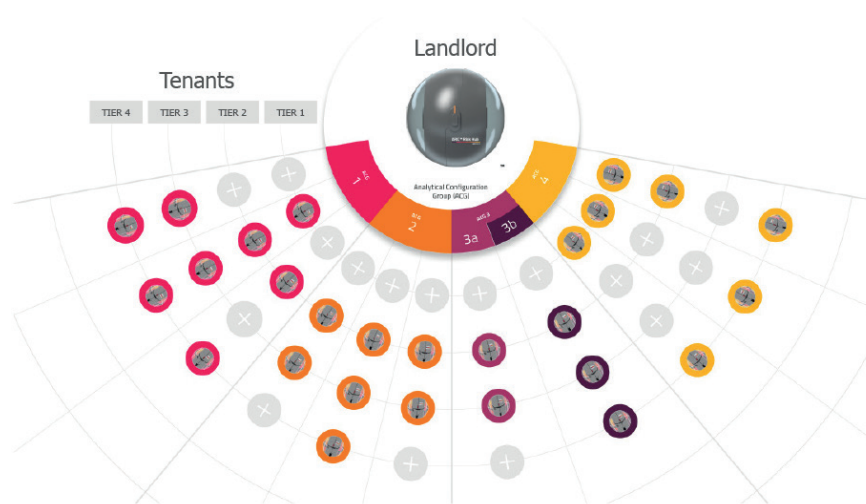
A customizable user interface to match your brand, configurable analyst dashboard, and tiered user access are some of the embedded functionality immediately available to best support your customers.



A complete ARIC Risk Hub experience to your customers

-  Scores all types of transactions
-  Zero model degradation – no retuning required
-  Best performing models in the industry
-  Automatically detects new types of fraud
-  Dramatically reduces number of false positives

Unlock new business opportunities with mega Multi-tenancy



High volume, low latency event processing

**30 milli
seconds**

Average
response time

**3800
txn/s**

Real-time
processing for
multi-tenancy

40 billion

Events per
year sized
for multiple
customers

Provision several individual customer instances from one multi-tenant configuration, offering immediate access to cutting-edge fraud and financial crime prevention technology. All while maintaining access control and accessibility to various combinations of functionality. In addition, with a multi-tenant architecture, a provider only has to run updates once to distribute upgrades across all tenants.

ARIC Risk Hub functionality

ARIC Risk Hub can be cloud or on-premise deployed

ARIC Adaptive Machine Learning Models and Automated Deep Behavioral Networks

Featurespace's proprietary machine learning technologies are proven to be the best in the world. Both off-the-shelf and custom-built models are deployed by leading financial institutions to proactively prevent and detect fraud and money laundering, without the need to retrain models or to write new rules.

Off-the-shelf fraud models available include; Instant Payments, Bill Payments, ACH, Check, Wire, Person to Person (P2P), Debit Card, Commercial Card and Credit Card payments (inclusive of Card Present and Card-not-Present), ATM transactions, and other online banking initiated payment types.

ARIC Open Modeling Environment

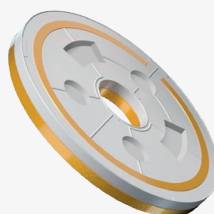
A world-class platform for developing and deploying your own models using a suite of User Interface based and Command Line tools. First class performance reporting for third-party model formats (PMML, H2O or TensorFlow) within the platform, enables data science teams to evaluate model performance, make adjustments of the most competitive algorithms and deploy the most accurate model possible with zero downtime.

Adaptive Rules Engine

Utilize Adaptive Behavioral Analytics technology for adaptive rules which can be authored and configured by your risk analysts.

Sandbox

Author new rules, models and thresholds - and test the impact of these changes against production data.

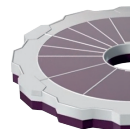


Adaptive

Ana



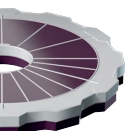
D



Behavioral Analytics



Data



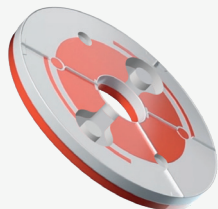
Customer Data

Ingest, process and analyze customer data in real-time or batch across thousands of events per second, according to your business needs.



Third-Party Orchestration

Integrate ARIC Risk Hub with a wide range of third-party enterprise systems.



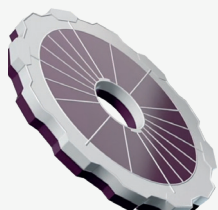
Reporting

Multiple levels of reporting to meet your business needs such as integrating with your existing Business Intelligence tools or reporting software.



User Interface

Easy, intuitive access to investigate tools, incident and alert management and network analysis.



Multi-tenancy

Unlock new business opportunities with mega Multi-tenancy. On-board and manage multiple tenants in a single instance of ARIC.

Reducing market share of fraud and bringing down business risk and cost are critical issues smart fraud fighters battle every day, as criminals become bolder and more clever. Of equal – if not more – importance is the need to protect the customer and make sure their payment journey is not interrupted, or that their trust levels are eroded through a painful, time-consuming, financial loss.

TSYS Foresight ScoreSM, a groundbreaking technology partnership between TSYS, a Global Payments Company, and Featurespace, the world leader in Adaptive Behavioral Analytics.

Its success was grounded in TSYS’s mission to put people first and help them unlock endless payment opportunities, and Featurespace’s technology that quickly analyzes the entire payment journey and accurately predicts behavior in real time, even as underlying behavior changes.

Since then, leading global financial institutions have put their trust in the TSYS Foresight Score, benefitting from transactions being scored by the best machine learning technology in the world. With 4.3 billion processed transactions to date in 2021, these financial institutions have benefitted on average from 15% increases in overall fraud protection and 34% decreases in false positives, generating as much as a 70% decrease in net fraud.

4.3bn

transactions to date

70%

decrease in net fraud

Friction in payments leads to a higher likelihood that a cardholder will switch to a different card or even an alternative payment solution altogether, creating even greater risks to any given card issuer. This has never been more acute than today, given the increases in card-not-present (CNP) spending and the ongoing evolution of the payments journey.

Four years ago, this seemingly endless conflict was disrupted through the creation of the

Out with the old, in with the new – a true story

pre-Foresight Score

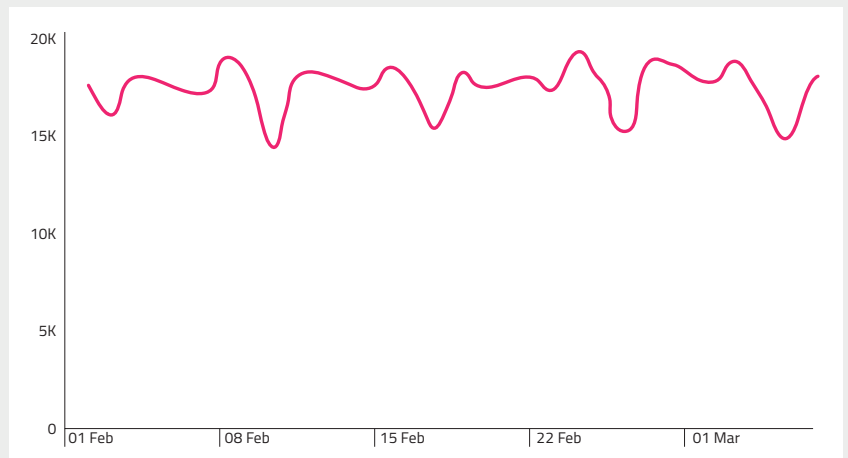
The complex problem

A global card issuer had to improve its fraud detection accuracy, as it was significantly impacting customer happiness and business performance.

False positive ratios

10:1 For every card present (CP) fraud attack stopped by the card issuer, the incumbent system blocked 10 genuine transactions.

23:1 And, for every CNP fraud attack stopped, the incumbent system blocked 23 genuine transactions.



10:1 False Positive Ratio Overall

23:1 False Positive Ratio (CNP)



Existing System



Adaptive Behavioral Profiling

The business impact



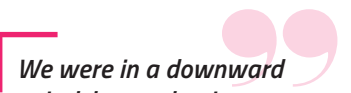
Fraud investigators were dealing with well over 20,000 false positive transactions per week.



A large team of analysts constantly worked to manually rewrite detection system rules, once new fraud vectors had been identified.



New, tighter rules increased the number of false positives, and call-centers were overloaded with unhappy customers.



We were in a downward spiral, hemorrhaging money, constantly behind the criminal and never able to please the customer. It was a nightmare.

Chief Risk Officer from the issuing bank

Smart answer

- TSYS Foresight Score, powered by Featurespace, was deployed into TSYS CardGuard.
- TSYS Foresight Score rapidly ingested and processed eight months of existing customer transaction data and built a model.
- TSYS Foresight Score’s model learning produced cardholder profiles and scores that were used to enhance the customer’s ability to mitigate risk through integration in TSYS’s fraud prevention and detection solutions.

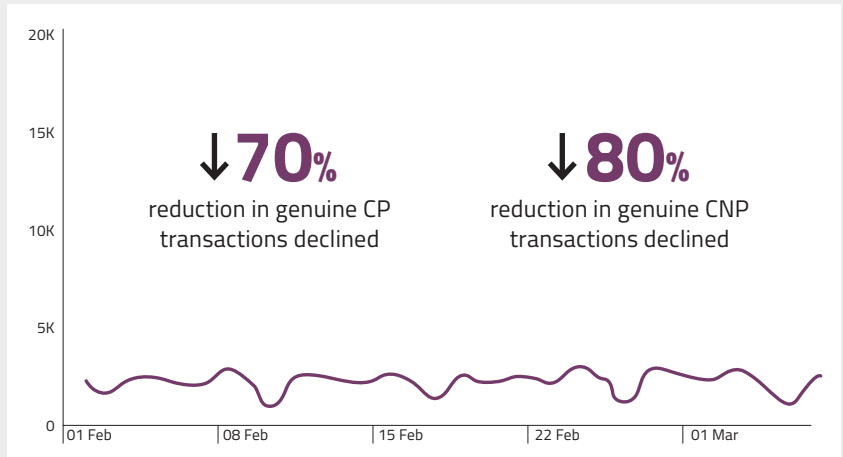
Industry game changing results

post-Foresight Score

3:1 For every genuine fraud attack, only 3 customer transactions were interrupted.

6:1 And for every genuine fraud attack identified in a digital transaction, only 6 customer transactions were interrupted.

Featurespace’s Adaptive Behavioral Analytics enabled simultaneous false positive reduction and increased accurate fraud detection.



↓39% reduction in fraud losses

10:1 **3:1** False Positive Ratio Overall
 23:1 **6:1** False Positive Ratio (CNP)

Existing System
 Adaptive Behavioral Profiling

The business impact

- More fraud blocked and losses reduced.
- More transactions processed and customer friction reduced.
- Greater operational efficiencies in call centers.
- Fraud analysts could work on higher value cases.
- Fraud management costs reduced.
- The issuer received a higher Net Promoter Score, resulting in happier cardholders.

Foresight Score was a game changer for us – truly transformational. We reduced our market share of fraud and could finally get our heads up and begin innovating again.

Chief Operating Officer

A risk-free future

Well, we know a ‘risk-free’ future doesn’t exist, but a vastly reduced one does. With TSYS Foresight Score you get:

- >30% increase in fraud catch rates.
- Zero model impact of card reissuing – historical data follows the customer.
- Unrivalled model stability proven through behavioral shock of pandemic-driven spending changes.

The latest version of Foresight’s performance is even better! Foresight Score outperforms on all metrics. The technology is in a constant challenger environment and wins every time.

Paul Daffin,
 EVP Product Strategy and Transformation,
 TSYS, a Global Payments Company

Global Retail Bank

Surfacing unknown threats and prioritizing high risk financial crime for a top 10 global retail bank

Retail banking's global accessibility, high velocity and high volume of transactions provide an attractive opportunity to criminals to hide their illicit funds. Identifying these transactions, hidden behind complex layers within the banking system, is challenging.

False positives present a compliance challenge for retail banks in jurisdictions around the world.

For many banks, a false positive rate of around 95% in AML is considered standard.

Lowering their sensitivity to money laundering risk is not an option for banks. Doing so risks failing to meet regulatory obligations, resulting in fines, huge financial and societal losses, and reputational damage for organizations.

At the same time, high volumes of false positive are a significant cost and efficiency drain with analysts having to manually review millions of alerts to find evidence of criminal behavior.

A complex challenge

A top 10 global retail bank, with 40 million customers across 64 countries, had inefficient transaction monitoring systems and manual processes which posed a serious regulatory compliance risk with dire financial and reputational consequences.

It was looking for innovative approaches to uplift its existing capabilities as effectively as possible.

40m

customers
across

64

countries and
territories

The impact on the business:



Slow, inefficient processes

As a result of high volumes of false positives



High resource cost

Manually processing a high volume of alerts



New threats missed

Rules-based system was arduous to maintain and update as transactional behavior changed



Siloed customer view

Disparate data sources required cross referencing cases

Smart solution:

Featurespace's machine learning approach to transaction monitoring reduces false positives, prioritizes alerts, improves alert quality, and identifies new risk scenarios, mitigating money laundering risk.

Meeting a tight deadline of sixteen weeks with limited, masked transaction data, Featurespace presented the bank two solutions that would be powered by Adaptive Behavioral Analytics to solve the bank's transaction monitoring challenges:

The bank was presented a **choice of two solutions**, utilizing Featurespace's Adaptive Behavioral Analytics, to solve the bank's transaction monitoring challenges:

1. ARIC Risk Hub for Anti-Money Laundering solution to replace existing transaction monitoring.

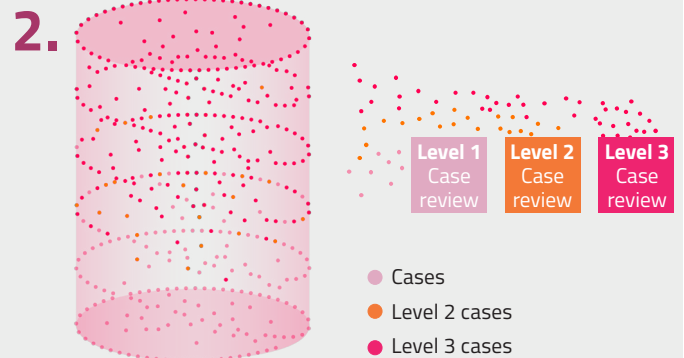
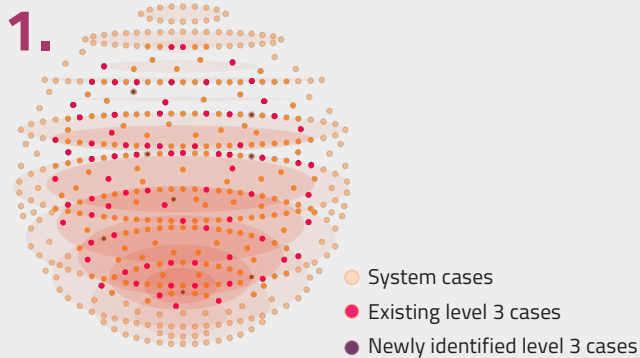
- To generate prioritized alerts
- Uncover known risks
- To expose new threats

2. Adding augmented analytics to their existing system to provide alert risk scoring.

- Supplement and enhance monitoring systems
- To prioritize existing alerts
- To expose new threats
- Minimal implementation effort

Game changing results

Both approaches were able to produce exceptional results in the early stages. Allowing the bank to consider which best fit with its digital transformation strategy.



↑ 109%

increase in level 3 (high risk) and potential financial crime risk cases

↓ 30%

reduction in the total case volume to investigate



Level 3 (high risk) alerts prioritized, saving the time previously spent on non productive alerts

82%

Featurespace was able to identify 82% as level 3 (high risk) alerts **within half of alerts raised**

↑ 87

new threats found previously undetected by the bank's system



Successfully uplifted performance without rip and replace of incumbent system

worldpay
from FIS

“We are delighted to be partnering with Featurespace, a business with world-class machine learning technology. We are always looking to work with innovative companies and are confident that this partnership will deliver superior outcomes for our customers by preventing more fraudulent transactions whilst reducing the number of genuine transactions that are declined.”

About Featurespace



**World leaders in
machine learning for
solving risk challenges**



**Born out of 30 years of research
at Cambridge University**



**Trusted by the most
respected banks and payments
companies in the world**

“HSBC’s transaction monitoring processes were already compliant and effective; with the implementation of Featurespace’s ARIC solution, the bank prioritizes AML alerts to increase efficiency and it enables the bank to adapt to emerging behaviors and position it to confidently deal with future AML challenges”



Unique real-time machine learning methodology



Multi-award winning platform and best machine learning models



Inventors of Adaptive Behavioral Analytics and Automated Deep Behavioral Networks

Find out more

Book your demo of ARIC Risk Hub.

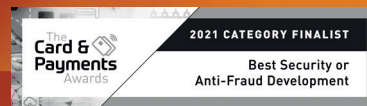
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"AIM Evaluation: Fraud and AML Machine Learning Platform Vendors.", AITE, 2021



FStech
awards 2019
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