

# TSYS Hero Story

## The Fraud Fighting Dilemma – and its Answer

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.

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 TSYS Foresight Score<sup>SM</sup>, 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.

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

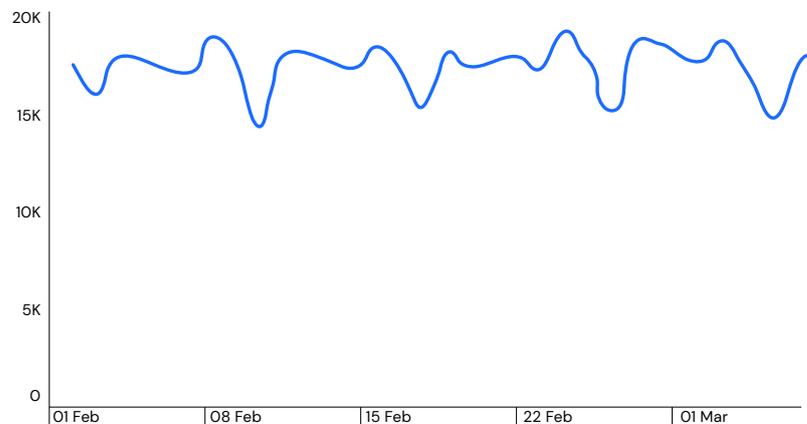
### The complex problem

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.

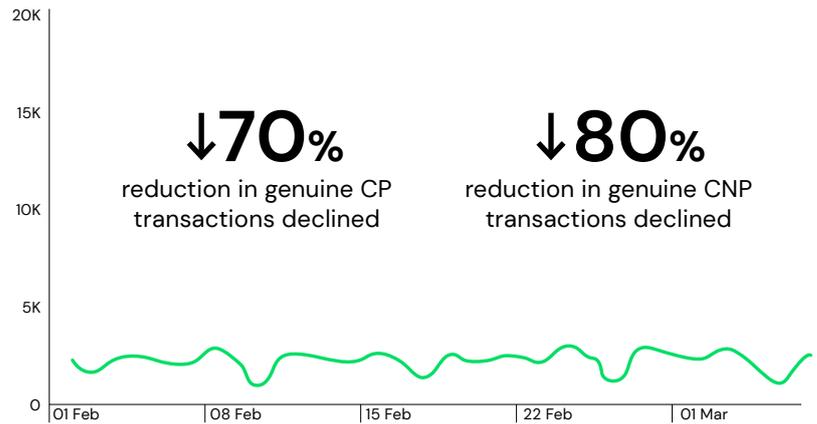
## Industry game changing results

**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.

post-Foresight Score



**↓39%** reduction in fraud losses

10:1	<span style="background-color: #008000; color: white; padding: 2px;">3:1</span>	False Positive Ratio Overall	<span style="border: 1px solid #008000; border-radius: 50%; padding: 2px;">Existing System</span>
23:1	<span style="background-color: #008000; color: white; padding: 2px;">6:1</span>	False Positive Ratio (CNP)	<span style="border: 1px solid #008000; border-radius: 50%; padding: 2px;">Adaptive Behavioral Profiling</span>

## 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

