

How Shift4 Increased Productive Alerts by 70% with Cognitive AI Transaction Monitoring

Case Study

Overview

Company: Shift4 Payments

Industry: Global Payments

Coverage: US, EU, UK, Canada, Hong Kong

Clients: 200,000+ businesses in retail, hospitality, e-commerce, and sports

The challenge

As Shift4 scaled globally—monitoring transactions across stadiums, restaurants, e-commerce, and more—their legacy AML systems couldn’t keep up.

Their compliance team was buried in noise:

- An overwhelming number of low-quality alerts
- **89% false positive rate**
- Difficulty meeting regulatory reporting deadlines (like same-day SARs in Malta)
- Inability to support new product launches due to data ingestion limitations

The solution: Cognitive AI at the core

In late 2023, Shift4 selected ThetaRay as their technology partner for AML transaction monitoring. By Q1 2024, ThetaRay’s Cognitive AI platform was fully deployed across their European operations.

ThetaRay replaced static, rule-based monitoring with a Cognitive AI system that delivers multidimensional analysis with **30+ weighted risk indicators** per alert to detect suspicious activity and patterns of suspicious behavior.

Each alert is holistic, contextual, and includes visual insights on key risk contributors—allowing analysts to visually investigate relationships between entities and transactions, uncovering hidden connections in transaction paths.



“We didn’t even realize how inefficient our old system was, until we saw what was possible with AI.”

Catalin Romeo Barbu
VP Compliance & MLRO
Shift4 Europe

Ready to scale AML compliance the smart way?

Talk to an expert

And discover how ThetaRay’s Cognitive AI can help your team reduce alert fatigue, improve compliance performance, and stay ahead of risk. Visit thetaray.com or email info@thetaray.com

SHIFT4™

The impact: Measurable improvements in 7 months

Less than a year after implementing ThetaRay Transaction Monitoring, Shift4 experienced outstanding results:

80% reduction in total alert volume

70% increase in productive alerts —those that led to productive investigations

86% reduction in false positive rate

- Investigation time slashed from hours to minutes
- Met strict regulatory standards, across jurisdictions, including same-day SAR submissions in Malta
- Scaled without expanding the compliance team

“AI didn’t replace our analysts. It freed them to do the job they were actually hired to do.”

Catalin Romeo Barbu
VP Compliance & MLRO
Shift4 Europe



A compliance culture shift: From a reactive to a proactive approach

With ThetaRay, Shift4’s compliance operations became:



Smarter: Every alert included context, weighted risk features, and rationale



Faster: Cognitive AI highlights key indicators instantly—no more manual BI deep-dives



Efficient: No more alert duplication; suppression mechanisms reduce alert fatigue



Agile: The system’s model quickly adjusted to monitor new payment products



Collaborative: Weekly syncs with ThetaRay ensured continuous optimization