

9% more fraud recovered. Every decision matched analysts' judgement.

Autonomous Fraud Operations. Judged by the bank's analysts.

A Tier 1 European retail bank wanted evidence, not promises.

It selected a set of fraud cases its senior analysts had already investigated and closed, removed every analyst note, verdict and case history, and handed them to **Cleafy's Autonomous Fraud Operations platform, Nyx**.

The objective was straightforward: determine whether an autonomous system could **investigate fraud** with the same rigour as an **experienced fraud team**.

It did more than that.

NYX reached the correct verdict on every case, matching the senior team's fraud findings and overturning 9% of their closed verdicts as real fraud that had been missed.

NYX also generated a new detection rule that has since been promoted into production.



100% independent agreement
with senior analyst verdicts



9% additional confirmed fraud
recovered from closed investigations



Zero analyst
notes, hints or prior case information



New production detection rule
generated



Three to four minute
forensic investigations

The bank

The bank is one of Europe's largest retail financial institutions, serving millions of digital customers through a mature fraud operation.

Like most banks, it has invested heavily in **detection**. Rules, machine learning models and orchestration systems generate a constant flow of alerts. **Detection has advanced rapidly; fraud operations have not kept pace.**

Every investigation still depends on skilled analysts working through cases individually.

Alert volumes continue to rise faster than investigation capacity, stretching queues, increasing operational costs and making experienced investigators harder to replace. The bank wanted to know whether a **different operating model** could remove that constraint.

It chose Nyx because the platform **investigates** cases, **reasons** across connected entities, **produces** evidence-backed decisions and continuously **learns** from every investigation it completes.



Rising alerts
outpace capacity



Costs & delays
experts scarce



Nyx

The evaluation

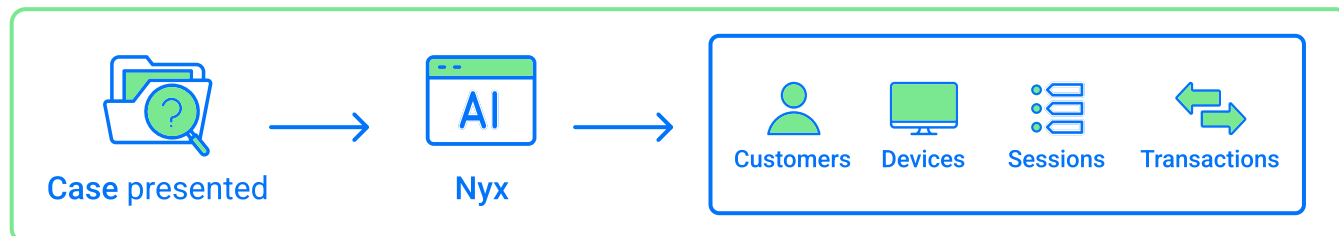
The bank assembled a set of production fraud cases that had already been investigated and closed by its senior team.

Most were confirmed fraud. Others had been closed as legitimate activity.

Every case was presented to Nyx blind, without analyst notes, prior decisions, or hints about the correct outcome.

Nyx reconstructed each investigation independently. It built relationships between customers, accounts, devices, sessions, transactions and counterparties, tested competing hypotheses, gathered supporting evidence and produced a complete investigation with a **structured evidence trail**.

Each investigation took three to four minutes.



The outcome

NYX independently confirmed every fraud verdict the bank's senior team had already reached.

It also overturned 9% of the team's closed verdicts, correctly identifying real fraud in investigations that had been closed as false positives. The bank reviewed Nyx's evidence, reopened the affected investigations and confirmed the findings.

The evaluation showed that investigation no longer has to be constrained by analyst capacity.

Nyx investigated production fraud cases with senior analyst-level depth, uncovering evidence that conventional investigation workflows had missed.

"Nyx runs the same investigation my senior team runs. It matched them on every case and caught what they had missed."

Head of Fraud, Tier 1 European Retail Bank

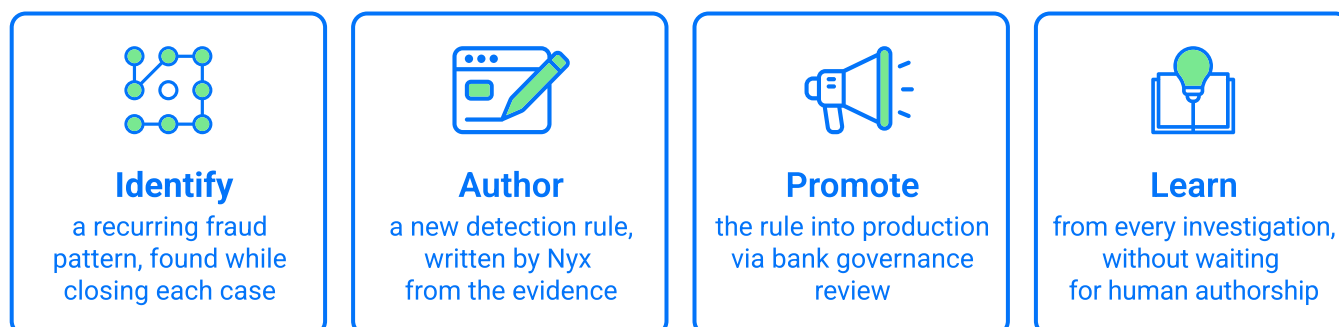
Nyx authored a new production detection rule

The investigations produced a second result.

As Nyx completed each case, it identified a **recurring fraud pattern** that the bank's existing rule library did not directly capture. From that evidence, Nyx authored a **new detection rule**. Following review through the bank's governance process, the rule was promoted into production.

For most fraud teams, rule creation remains a specialist activity that depends on manual investigation, analysis, and implementation.

Nyx continuously contributes to that process, learning from every investigation it performs and strengthening detection without waiting for human authorship.



A different operating model

Most AI deployed in fraud operations helps analysts work **faster**. Nyx **executes** fraud assessment, intelligence generation, decisioning, and continuous optimisation inside a single autonomous operating loop. Every investigation contributes to the system's learning.

Patterns identified during one case improve the outcome of the next.

Over time, the fraud operation compounds into a **continuous learning system**. Banks are no longer constrained by the number of analysts available to review alerts.

Autonomous Fraud Operations for banking environments



Cleafy pioneered **Autonomous Fraud Operations**, bringing the model into production in December 2025. Nyx gives financial institutions an autonomous system that **investigates fraud at senior analyst depth**, continuously **improves detection**, and enables fraud teams to **scale without expanding** investigation capacity.

Ready to transform fraud operations?

See how leading European banks are using **Autonomous Fraud Operations** to investigate fraud at production scale.

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