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AI Overlay

Shaping the Future of Financial Crime Prevention

European Banking Trend Radar
28. November 2024

MAKING AN IMPACT THAT MATTERS since 1845

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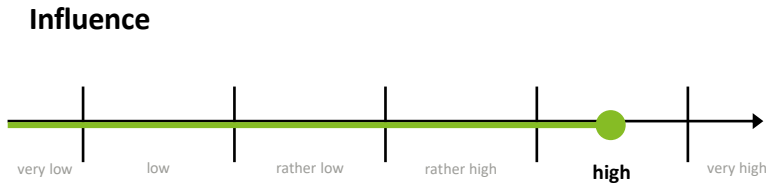
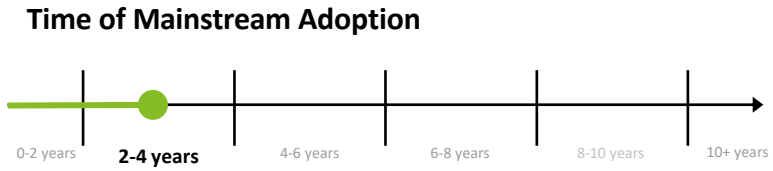
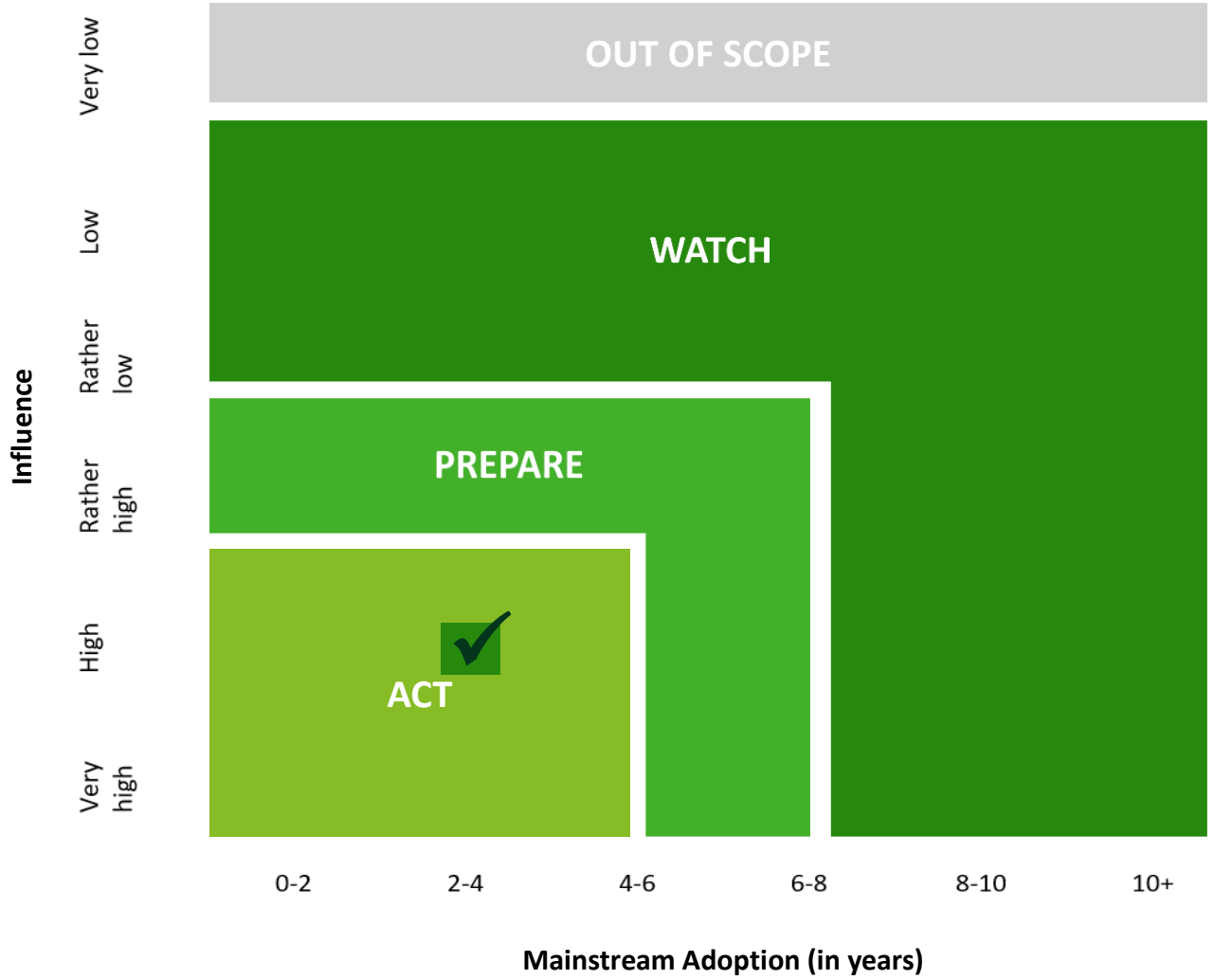
Trend Assessment for AI Overlay in Financial Crime Prevention







Anti-Financial Crime World Of Today

$206bln

Global Financial Crime Compliance Costs in 2023*

$189bln

Global Investment in Artificial Intelligence in 2023 **

„Why isn‘t there yet a more widespread adoption of AI in Financial Crime Prevention?“

High risks in Rip & Replace

Lack of know-how

Missing trust

Reluctance to change

Data quality

Lack of resources

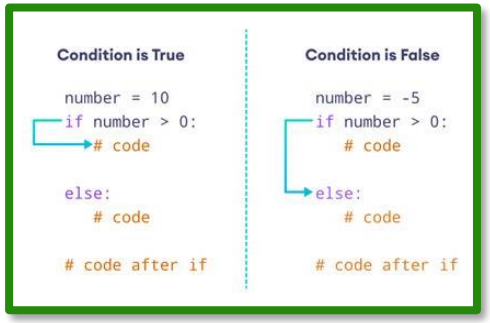
Regulatory uncertainty

…

* AML Intelligence
** Artificial Intelligence Index Report 2024

AI as Enabler to Reduce Cost Coming from Repetitive Manual Work

Millions of customer and transactional data points are analysed on a daily basis.



Rather simplistic if-then rule-based logics produce huge amount of alerts each day.

Regulatory framework requires to manually review each of those alerts.

Up to 99% of those alerts are false alarms and the remaining 1% often only suspicions on small scale.

Type of Problem AI is designed for

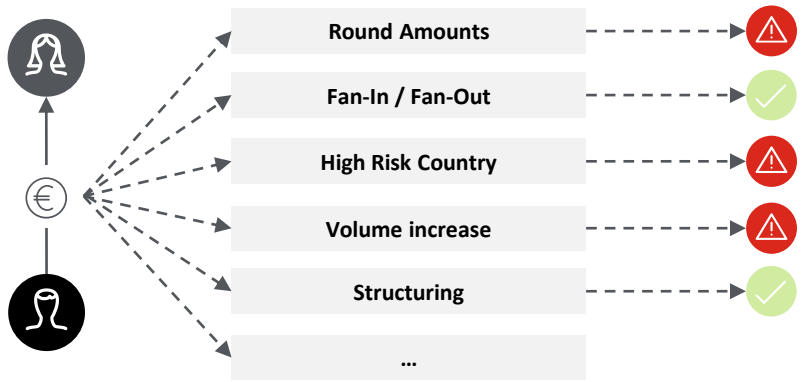
Processing big data to identify outliers (e.g. criminal activity) based on multiple search parameters and contextual factors is a key use-case for AI

Area where AI can have a substantial impact

AI helps to reduce the amount of alerts and thus safe time for analysts to focus on financial crime intelligence work

AI‘s Contribution to More Efficient and Effective Risk Detection

Rule-Based Transaction Monitoring

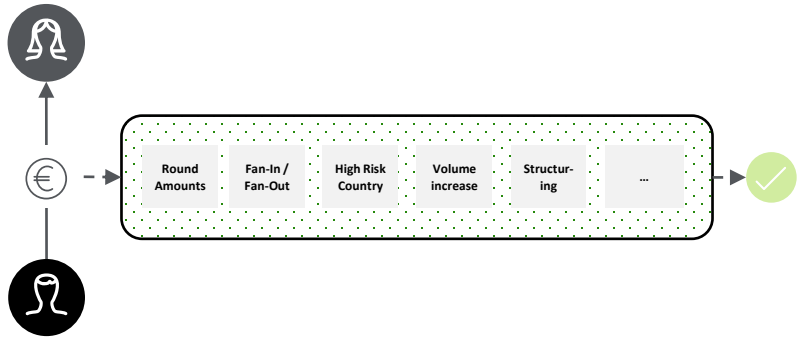


Three alerts generated based on rules that detected round amounts, a high risk country and a volume increase.

Analyst’s processing time increases with each alert.

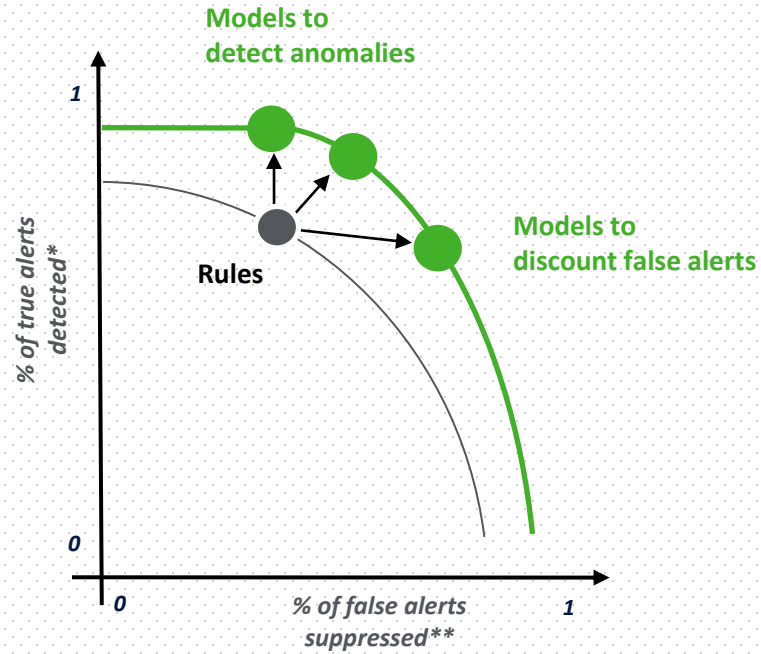
Each of those isolated **rules need maintenance** and cumbersome recalibration.

AI-based Transaction Monitoring



Based on **combined set of risk features** with flexible values as well as **contextual information** the model suggested a **low probability of true alert**, as e.g. round amounts, volume increase as well as the risk country can be **considered normal** under existing circumstances.

AI shifts the curve to the right



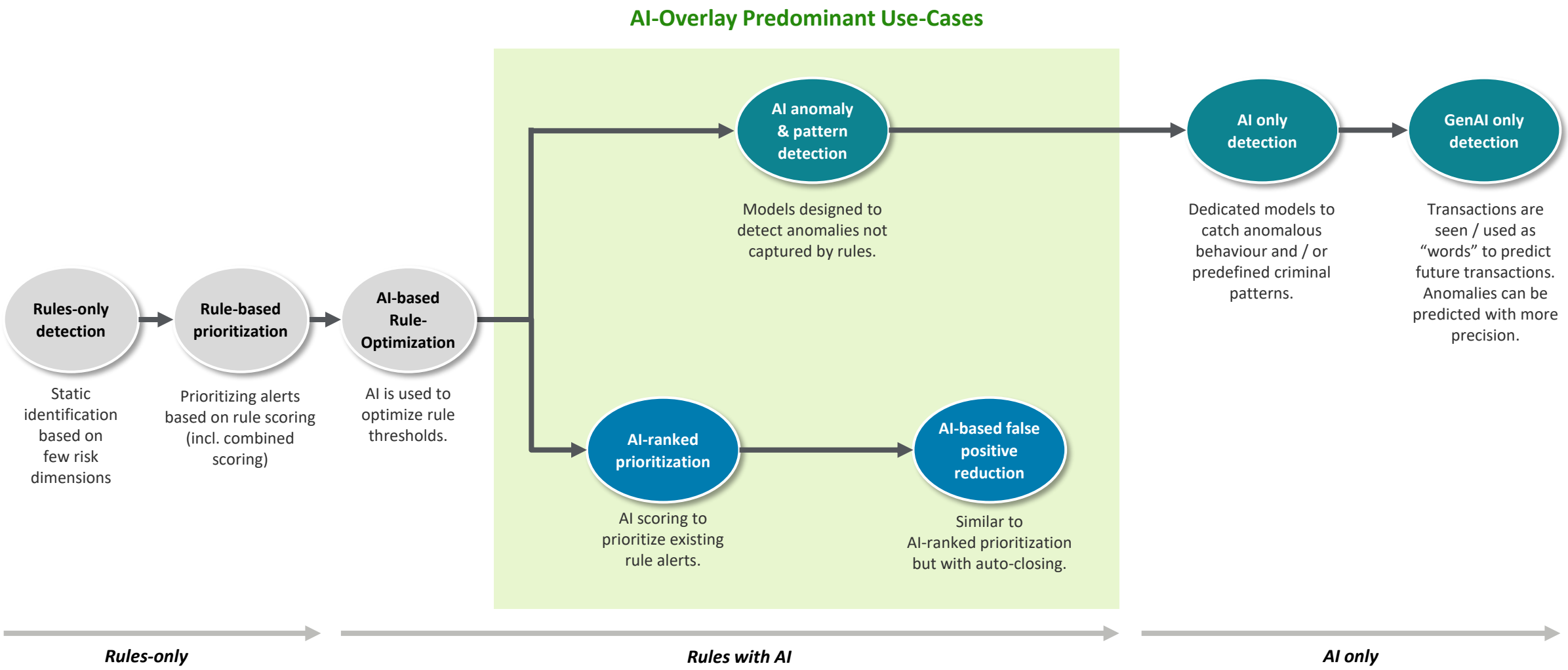
AI will **not be the „silver bullet“** to solve all AFC problems. Nevertheless, AI can help to

1) **detect more true cases** when designed to look for suspicious anomalies and to
2) **suppress more false alarms** by keeping the same amount of true positives.

AI can „shift the curve to the right“.

* True Positives / (True Positives + False Negatives)
** True Positives / (True Positives + False Positives)

Evolution Of AI Use-Cases In Anti-Financial Crime



AI Overlay helps to avoid legacy replacement challenges and to mitigate AI adoption barriers

Legacy Replacement Challenges

Process Changes

- **Alert handling** may need to **adapt** to the new **Case-Management-System**
- Complete system change will be more likely to **draw scrutiny from regulators**
- **Investigation** may need re-engineering to **fit the new system's functionalities**

Risk configuration

- The rules between two systems are never identical thus requires a **new setup, recalibration and testing**
- **Customized rules** may need to be rebuild in the new system
- **Rigorous testing and validation** is required for new systems

Data connectivity

- **Historical transaction** data also needs **to be migrated**
- **Data privacy and security concerns** are more difficult to deal with
- **New data points** may need to be available/**sourced**
- Need to **build new data connectors**
- **Mapping client data** to vendors data groups

Additional AI Considerations

- **Regulatory insecurity**, as for example Regulation in Germany is not ready to provide a frame to allow for automated AI solutions
- **Knowledge restrictions** as a combination of AFC and IT knowledge needed for successful implementation projects
- **Data quality restrictions**
- **Missing trust** in new technologies and technology vendors
- **Reluctance to change** and fear of new technology

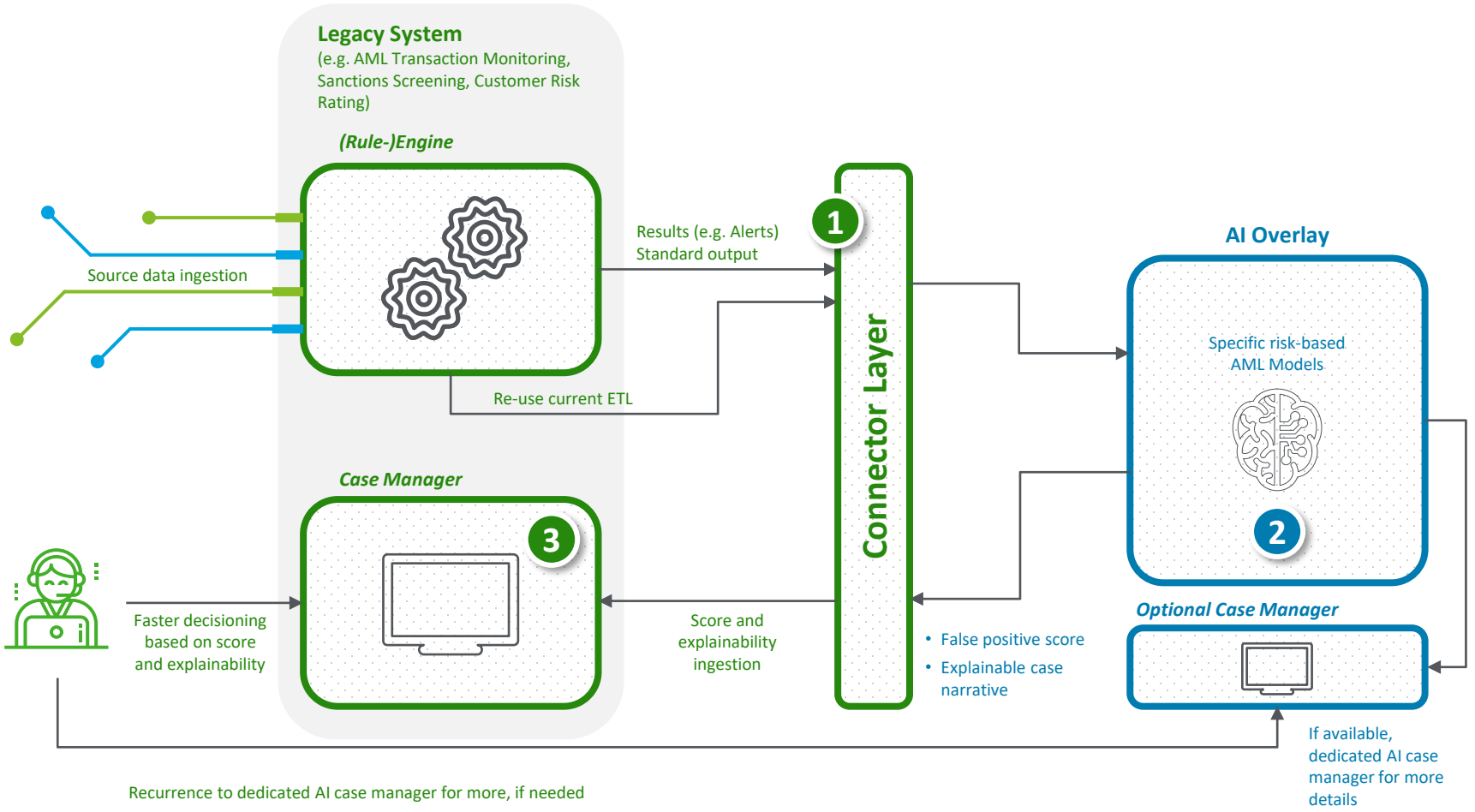
Exemplified AI Overlay Setup

Under AI Overlay we understand a complementary **AI layer on top or along side** of an existing **legacy system**, **enriching the original results** with an explained score derived from AI-based calculation which can be used for various purposes.

1. On the left, a **legacy system** (e.g. for transaction monitoring) **forwards its results** and underlying data to the AI overlay system.

2. Based on the available data points, a specifically designed **AI model (re-) calculates the propensity** of the underlying risk.

3. From their the **risk score** as well as an **explainable case narrative** is **forwarded** back to the legacy **case manager** where it is used by the analyst to evaluate the original alert produced from the legacy system.



Practical Considerations on the Road to AI Overlay

02/ *Regulation*

- **Regulators should be integrated early** to identify roadblocks and concerns.
- **Concerns should be taken seriously** and addressed in technical & procedural setup.
- Practical considerations could arise on questions regarding **testing procedures**, **recall-rates ("no SAR left behind"), human-in-the-loop processes**, **explainability**, **model governance** etc.

01/ *Selection*

- AI overlays can either be built **inhouse or acquired** from 3rd-party vendors.
- In case of an external solution, a **careful market analysis** as well as **RfP-process** should be pursued with the aim to find suitable solutions for the specific use-case (e.g. AML TxM, screening, trade finance etc.).

03/ *Implementation*

- Among other things **deployment environment** considerations should be clarified and whether there are any **incompatibilities** (e.g. between cloud and on-prem services).
- Furthermore, **(regulatory) relevant processing times** should be considered as a multilayered AI overlay construct might **not allow for real-time** decisioning.
- Furthermore, **analyst workflows and user-interfaces** should be considered. E.g. whether the legacy case manager is able to **display explainability values.**

Case Study: AI Overlay Proof of Concept (POC)

General Remarks

- A POC is a **cost effective start** to see the potential in AI for efficient
- Can be performed **inhouse or by 3rd-party vendor**
- For 3rd party vendor, careful **selection needs to take place** as a POC requires effort and time
- POCs can be performed **in almost any setting**
- Total duration approximately **3-4 months** (after selection)
- It is advisable to **integrate regulator early** into POC project considerations

General Data requirements (usually)

- Historic KYC & transaction data (**6 to 24 months of data**)
- **No format requirements**
- Historic **labeled data set** (even if only few available)
- **Data quality** is often a perceived concern, however, there are many **solutions available**

General Organizational requirements

- **Regular** (weekly) **meetings**
- **Contact for business** related questions
- **Contact for data (science)** related questions

1. Case Study Setting

- Tier 1 Bank in DACH region
- Use-case: false positive probability score for faster decisioning
- SME-Customers
- Duration 12 weeks

2. Data & IT Requirements

- Data used: 18 months training data (>700m)
- Historic back-testing to infer model performance and blind-tests at the end performed by client
- Market dominant legacy system as a baseline
- On prem
- IT Setup SQL query interface, Kubernetes cluster, 48 CPUs & 64 GB RAM, IDE & local git for local dev

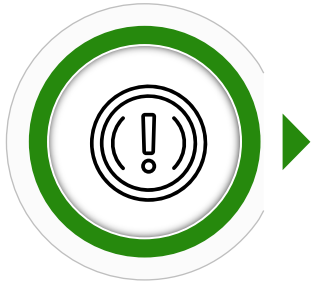
3. Results

- 47% of cases were labelled above the false positive threshold (which turned out to be false positives) translating into approximately 3,5 FTE time savings*
- Less than one missed out true positive per month (>99% recall)

* 2.000 alerts per month => 24.000 alerts per year => 11.280 labelled false positive => 30 min time savings per case => 5.640h / 1.600h (per FTE / per year) => 3,5 FTE / year

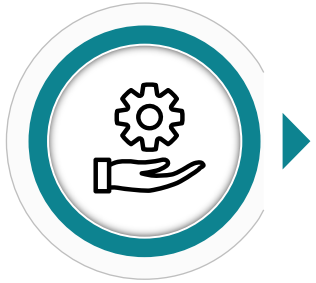
Summary of Key Messages

AI as the way forward in financial crime fighting



Given the big-data and repetitive nature of AFC Compliance tasks, AI is a fruitful approach to tackle shortcomings of the current fight against financial crime.

AI Overlay as a solution to start your journey



Adoption obstacles can be overcome with lighter AI Overlay integration complementing existing processes and procedures. This allows to boost efficiency in the short-term and makes room for long-term AI strategy planning.

Proof of Concept as a starting point

A cost effective way to „dip your feet in“ would be to perform a POC internally or with a suitable vendor to better understand your own efficiency potential.

Q&A

Upcoming Webcasts

Episode IX: Transition Finance – Impulse für die Transformation der Finanzwelt

Datum: 23. Jan 2025 | 14:00 Uhr

Details to follow.

Episode X: Revolution oder Déjà-vu? Financial Data Access (FIDA) und der Weg zu Open Finance

Datum: 20. Feb 2025 | 14:00 Uhr

Details to follow.

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