



WHITE PAPER: CASE STUDY

Conducted by Aaron Ansel, Chief AI Officer



Restricted Party Screening (RPS) Pilot Using Smart Screen™

-An AI adjudication agent for high-volume, export-related restricted party and sanctions screening.

Abstract

A Fortune 500 global manufacturer piloted KYG Trade's Smart Screen™, an AI adjudication agent designed to accelerate the process of reviewing and deciding whether an export compliance restricted party screening (RPS) hit is a true positive or a false positive, without replacing the organization's core screening engine. AI adjudication has already proven effective in financial-services screening programs, where machine learning and automation reduce false positives, improve reviewer consistency, and automatically document decision rationale for auditability.

The pilot evaluated Smart Screen™ across two rounds (3,695 and 58,919 core screening alerts respectively) and measured adjudication outcome (true positive versus false positive) accuracy, speed, and auditability.

Results:

99% adjudication accuracy

<1% of cases requiring human review and confirmation at scale

Correct handling of sophisticated risk scenarios, including indirect exposure and beneficial ownership signals, without degradation in decision quality.

1. Executive Summary

Restricted party screening (RPS) programs must process large transaction volumes while maintaining defensible adjudication outcome decisions. Core screening engines (e.g., SAP GTS, Thomson Reuters ONESOURCE, Descartes OCR) are typically tuned for sensitivity, which increases false positives and shifts the burden to human review.

In Know Your Customer and Anti-Money Laundering (KYC/AML) environments, these pressures have driven adoption of AI-assisted alert disposition—combining enrichment, classification, and auditible decision trails to reduce manual review load while improving consistency. Export compliance faces the same pattern, but with different entities, data fields, and procedural expectations—creating a clear need for an adjudication agent trained specifically for export compliance workflows and shipper operating realities.

Smart Screen™ adds a post-screening adjudication AI agent that quickly and accurately:

- Normalizes and validates core screening hits
- Enriches flagged matches with authoritative sanctions register data
- Uses deterministic and similarity fingerprints to deduplicate and retrieve precedent
- Produces schema-validated decisions (disposition, confidence, explanation)
- Escalates ambiguous cases through a structured review path (with optional external research), persisting an audit trail for each decision

2. Problem Statement

Trade compliance teams commonly face:

- Rising adjudication volumes due to expanding sanctions programs and regulatory scope
- Repeated false positives from look-alike names, transliterations, and generic acronyms
- Incomplete or inconsistent counterparty attributes, increasing manual research time
- Inconsistent adjudication across reviewers and over time
- Audit pressure to demonstrate how each decision was reached and what evidence was considered

3. Solution Overview

Smart Screen™ operates after the core screening engine. It adjudicates flagged hits and returns structured, auditible outputs:

- Outcome: False Positive or True Match
- Confidence Level: A standardized 1–5 integer scale learned from expert-reviewed adjudication examples

- Rationale: Plain-language explanation grounded in supplied facts, authoritative list metadata, and (when enabled) supplemental evidence

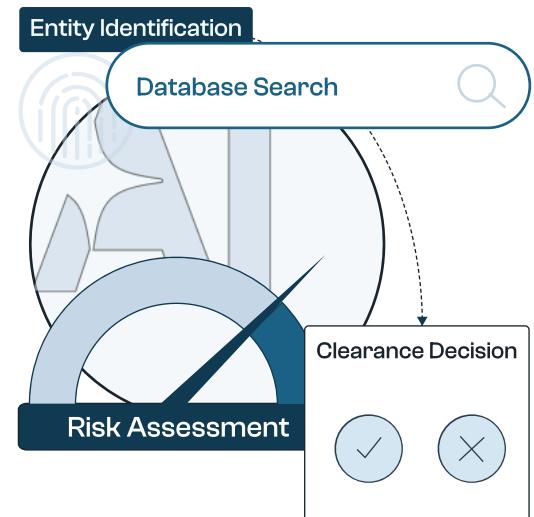
Confidence Level

The 1–5 confidence level is a standardized, reviewer-aligned signal of how strongly available evidence supports the disposition. It is not a deterministic point-based score (e.g., +2 for a name match, -3 for a city mismatch). In real-world screening, static scoring approaches often fail.

Sanctions and restricted party screening can appear to be a checklist problem, but regulators and industry bodies consistently note that point-based scoring frameworks struggle to accommodate differences in alphabets, languages, aliases, spelling variants, acronyms, and cultural nuance. These challenges are one reason why screening engines rely on complex, bespoke rule sets.

Smart Screen assigns confidence using a learned, reviewer-aligned approach grounded in historical adjudication outcomes. Objective signals—such as name similarity, location alignment, identifier matches, and list metadata—remain central. However, confidence reflects the totality of evidence, rather than isolated attributes evaluated independently.

Each confidence level is accompanied by recorded confidence drivers, enabling auditors to review how expert judgment was applied.



4. Tailoring Instructions and Enforcing Caller Policies

Smart Screen™ supports per-screened party and per-request tuning while maintaining consistent adjudication controls.

4.1 Request-level controls

Each screening request can carry:

- user_note
- review_threshold
- allow_external_research

Organization-wide defaults cascade while allowing case-level overrides. User notes may include directives such as:

“Always cite sources when research is performed”

“Explicitly call out alias mismatches”

“Enumerate disqualifying factors before concluding ‘no match’”

These instructions influence both inference and review stages.

4.2 Structured prompt augmentation (deterministic layering)

Adjudication is governed by deterministic policy layering, ensuring that compliance-critical instructions take precedence over general model reasoning. Caller-specific mandates—such as required language or mandatory citations—are enforced through structured response schemas.

4.3 Research gating (audit-friendly toggle)

When external research is enabled, Smart Screen records:

Information gaps identified

Research questions generated

Sources consulted or unanswerable flags

Final adjudication outcome and rationale

When disabled, cases are escalated based solely on available screening and list data.

4.4 Multi-turn persistence of directives

User-defined directives persist throughout the adjudication lifecycle, ensuring consistent application from initial evaluation through final review.

4.5 Auditable outcomes and enforceable fields

Structured responses allow downstream systems to verify compliance with caller mandates and audit requirements without relying on free-form narrative.



5. Pilot Design and Methodology

5.1 Scope

Round	Total Hits
Round 1	3,695
Round 2	58,919

5.2 Evaluation approach

Round 1: Smart Screen adjudicated alerts using enriched core screening data under production-like conditions, without external research.

Round 2: The evaluation scaled alert volume and introduced more complex risk scenarios, including indirect exposure and beneficial ownership indicators.

Metrics tracked included:

- Adjudication accuracy
- Escalation rate
- Consistency
- Audit completeness

6. Results

6.1 Round 1: Initial pilot with enriched data

Smart Screen was evaluated on 3,695 screening alerts, including list identifiers used to enrich the data for disposition.

- Adjudication accuracy: 1,276 / 1,286 (99%)
- Time to complete: 8 minutes
- Human confirmation required: 10 / 1,286 (~0.78%)
- Escalated for review: 115 / 1,286 (9%)

Data enrichment materially improved adjudication quality by expanding sparse alerts with authoritative list-specific metadata, such as aliases, addresses, dates, and list annotations.

6.2 Round 2: Scale and sophistication

At scale, Smart Screen evaluated 58,919 alerts with:

- Adjudication accuracy: 58,667 / 58,919 (99%)
- Time to complete: 2 hours, 15 minutes
- Human confirmation or additional review required: 252 / 58,919 (~0.43%)

Accuracy and consistency were maintained despite increased volume and analytical complexity.

7. Examples: Adjudication in Action (Traceable Payloads)

The following examples demonstrate how Smart Screen embeds evidence, data sources, and reasoning lineage directly in the explanation field, enabling replayable, auditor-ready decisions without external context.

(Examples 1–4 unchanged except for minor editorial normalization; terminology already aligned.)

8. Governance, Audit, and Defensibility

Smart Screen produces regulator-grade decision artifacts, including:

- Canonical request identities
- Authoritative sanctions metadata
- Precedent retrieval
- Explicit review thresholds
- Persisted outcomes with timestamps
- Structured escalation records

9. Limitations and Appropriate Use

Smart Screen™ does not replace:

- Compliance program ownership
- Legal determinations
- Required human review

The system operates within client-defined policy parameters, including confidence thresholds and research permissions, allowing organizations to align automation behavior with their risk tolerance.

10. Conclusion

This pilot demonstrates that a post-core screening AI adjudication agent can materially reduce manual review volume while maintaining high adjudication accuracy and producing defensible, auditible outcomes. Smart Screen™ enhances—not replaces—existing screening infrastructure, enabling organizations to preserve prior investments while improving disposition efficiency, consistency, and auditability.

For more information about KYG Trade and its products, contact [Leslie Levy August, CMO](#).