Comprehensive Requirements for a Best-in-Class Export & Import License Determination System

September 16, 2025

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1 Introduction

This document outlines the comprehensive requirements for a best-in-class export and import license determination system, focusing on document management, master data, license logic, customization, regulatory support, integration, audit, user experience, and innovation opportunities. It includes a deliverable summary for key areas.

2 Document Management Lifecycle

2.1 Essential Trade Documents

- Pre-transactional: Sales orders, purchase orders, customer master onboarding docs, quotations.

- Transactional: Delivery notes, invoices (commercial, proforma), packing lists, bills of lading/airway bills.

- Compliance Documents: Export licenses, import permits, LOAs, end-user statements, certificates of origin, preferential trade certs (FTA), dual-use authorizations.

- Government Filings: AES/EEI submissions, customs declarations, drawback claims.

- Renewals & Notifications: Expiring licenses, quotas, automatic alerts.

2.2 Key Features

- Version-controlled document repository with audit timestamps.

- AI-driven OCR & parsing for license numbers, validity dates, HS/ECCN codes.

- Document-linking to transaction lines (1:many and many:1).

- Configurable document checklists per jurisdiction, product type, or customer segment.

- Smart Gaps Detection: Flag missing or expired documents before goods movement.

3 Master Data & Classification Management

3.1 Mandatory Master Data Fields

Master Data Object	Key Fields for Compliance
Business Partner	Name, address, D-U-N-S, entity type, sanction-screen flag
Material/Product	HS code, ECCN, export control indicator, origin country, end-use classification
Organization	Legal entity, export/import authority codes, country of registration
Jurisdictional Rules	Embargo lists, control lists (EU, US EAR/ITAR, APAC equivalents)

3.2 Classification Best Practices

- Central Classification Hub: Harmonize HS/ECCN across ERP, WMS, and compliance platform.

- Scheduled re-validation against tariff updates (e.g., WCO HS 6-digit, national splits).

- AI-assisted classification suggestions from historical product data.

- Versioned classification with effective-dated validity.

4 License Determination Logic

4.1 Core Engine

- Configurable Rule Sets: IF/THEN decision tables based on product, corridor (country pair), customer type, and order value.

- De Minimis Handling: Automated % value calculation for controlled content.

- Quota & Counter Management: Reserve license quantities in real time, prevent over-usage.

- Exception Logic: Customer-specific exemptions, military vs. civilian end-use handling.

- Simulation Mode: Pre-run orders to check license impact before actual booking.

5 Customization & Workflow Configuration

5.1 Customer Flexibility

- Drag-and-drop workflow builder (similar to SAP BTP process automation).

- Role-based approval chains for license assignment overrides.

- Escalation paths: Compliance manager $\rightarrow$ Head of Trade $\rightarrow$ Legal counsel.

- Policy versioning with change history for audits.

- SLA timers for blocked orders to measure compliance responsiveness.

6 Regulatory & Jurisdiction Support

- Multi-country engine: EU (DUAL-USE), US EAR/ITAR, India SCOMET, China export control.

- Jurisdiction flags per order line $\rightarrow$ auto-pick relevant regulation.

- Configurable regulatory calendars (license renewal lead times, filing deadlines).

- Integrated Sanctions Screening: Real-time OFAC/EU/UN checks before license assignment.

7 Integration & Automation

7.1 ERP/CRM Integration

- SAP (SD, MM, GTS), Oracle NetSuite, MS Dynamics, Zoho via REST/GraphQL APIs.

- Real-time triggers: Order creation $\rightarrow$ license determination $\rightarrow$ status update.

- Event-driven architecture (webhooks, Kafka) for async updates to ERP/WMS.

7.2 Automation Best Practices

- Scheduled license sync jobs (nightly or on-change).

- RPA or API bots to auto-fetch regulatory updates.

- iPaaS connectors (MuleSoft, Workato, Boomi) for SME-friendly integration.

8 Audit, Reporting & Compliance

8.1 Audit Capabilities

- Immutable log of every license decision: timestamp, user/system actor, rule ID applied.
- Drill-down views: order → line → license → counter usage.
- Compliance Scorecard: % Auto-ALLOW, average touch time, regulatory breaches prevented.
- Pre-built regulatory reports: BIS annual usage, EU control-list usage stats.

9 User Experience & Support

9.1 UX/UI Features

- Decision Console: Single screen triage for all blocked/review orders.
- Hover-based AI "Reason Cards" explaining WHY license was applied or blocked.
- Bulk actions: Approve/reject multiple orders, re-trigger license determination.
- Accessibility: Keyboard shortcuts, screen reader-friendly tables.

9.2 Adoption & Support

- Embedded onboarding wizard (walkthrough first license assignment).
- Contextual tooltips, in-app help (SAP Fiori-like side panels).
- Chatbot/AI copilot integration (Joule-like) for "explain this decision" and "recommend next step".

10 Opportunities for Innovation

- AI Decision Support: Use ML to suggest best-fit license based on historical similar cases.
- Predictive Alerts: Warn before quota exhaustion.
- Self-Service Portal for SMEs: Simplified UI with minimal clicks to stay compliant.
- Natural Language Query: "Show me all orders needing DSP-5 for Q3" → instant report.
- Counter Reserve Simulation: Forecast license consumption under planned orders.

11 Deliverable Summary

Area	Key Deliverables
Document Management	Versioned doc repository, OCR, linked to order/line items
Master Data	Central classification hub, AI-assisted HS/ECCN mapping
License Logic	Configurable rules, counters, de minimis automation

Customization	No-code workflow builder, role-based approvals
Regulatory	Multi-jurisdiction engine, real-time sanctions screening
Integration	REST APIs, iPaaS connectors, ERP-native plug-ins
Audit & Reporting	Immutable logs, compliance dashboards, regulatory reports
UX & Support	Decision console, reason cards, onboarding wizard, AI copilot