

The Avathon Autonomy Platform

A Blueprint for Optimizing Global Trade Management Performance

A fast-moving trade environment demands agility and accuracy

Global Trade Management (GTM) is faster moving and more complex than ever, with new bulk trading rules, rising tariffs, and the recent suspension of de minimis exemptions. Regulations shift constantly, supply chains span continents and oceans, and every classification or tariff optimization decision presents real legal and compliance risk. This already-confounding situation is exacerbated by intricate and complex sanctions regimes, customs laws, and international trade agreements, making manual compliance nearly impossible. Getting Harmonized Tariff Schedule (HTS) codes right, for example, is only half the battle—the other half is ensuring you're not over-paying on duties, missing opportunities for tariff relief, or exposing your organization to unnecessary sanctions.

Recent tariff decisions by the Trump administration have [raised the effective average tariff rate from 2.5% in 2024 to 13.8% in 2025, the highest average level since 1939](#). China and many other nations have wasted little time preparing responses of their own, not only in higher reciprocal tariff rates but also more complex regulations governing those rates.

In a trade environment as complex and fast-changing as the current one, the ability to quickly and flexibly adapt is key to commercial success. Failure to effectively and accurately adapt to these changes can result not only in financial penalties, but delivery delays, reputational damage, and potentially increased scrutiny from regulatory authorities. But effective trade management practices can transform these challenges into competitive advantages, e.g., more accurate classifications, dependable automated audit trails, and proactive duty optimization.

With tariff volatility and geopolitical tensions driving unprecedented complexity, facilitators and practitioners of global trade are under pressure to deliver faster, more trustworthy decisions. Analyzing and acting upon critical trade data like item descriptions/specifications, Bills of Material (BOM), and supplier data can streamline trade processes by providing accurate HTS and country of origin codes, duty and drawback calculations, and immutable audit records for analysis and determination by licensed customs brokers. Done effectively, such a process can minimize landed costs and deliver greater value for shippers.

A comprehensive trade management solution is one that's able to span the full supply chain lifecycle—from classification and tariff optimization to supplier collaboration and sourcing simulation and execution. That means fusing diverse enterprise data sources, orchestrating workflows, and adapting dynamically to change—turning supply chains into resilient systems. In the end, effective global trade management becomes a key enabler of supply chain excellence

The Numbers Behind Global Trade Complexity

\$32 Trillion

Value of global goods trade in 2024

600+

trade agreements currently active worldwide

13.8%

Average U.S. tariff rate (2025, highest since 1939)

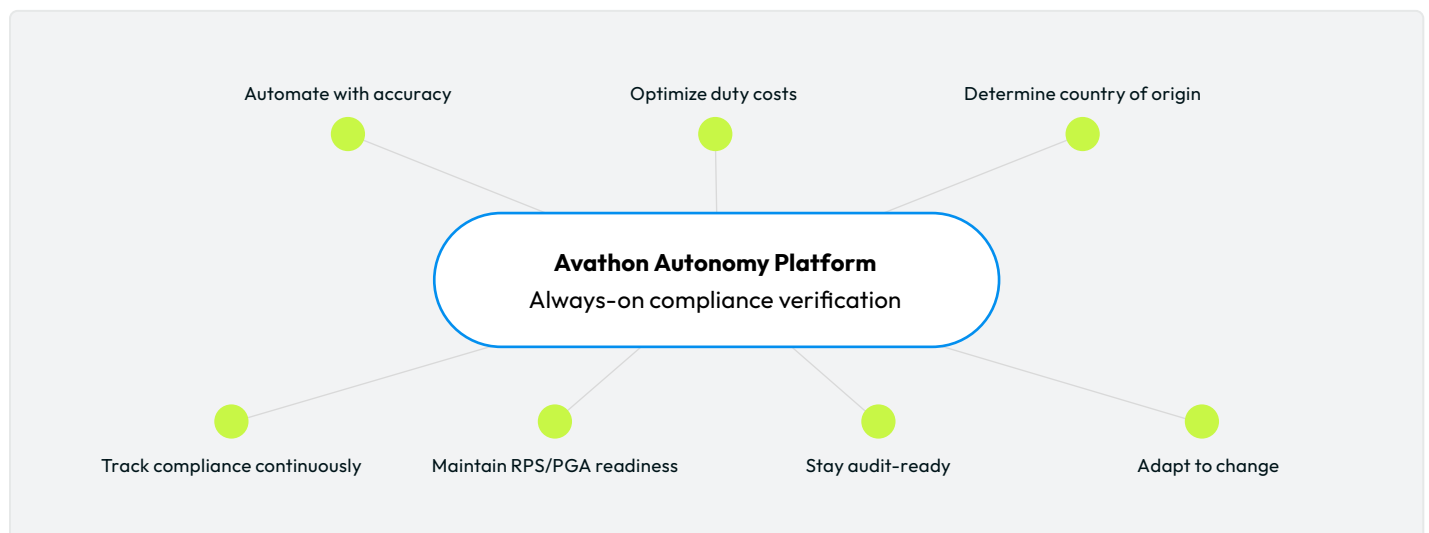
+30%

increase in trade compliance costs since 2022

Effective global trade management requires a wide-ranging capability set

Implementing effective, efficient, and timely global trade management processes demands a wide range of technical expertise and flexibility, particularly given the rapid pace of regulatory and political change.

- **Automate with accuracy:** Manual item classification slows global trade processes and frequently leads to errors. Accurately analyzing item descriptions, technical specifications, and BOM details to assign precise HTS codes reduces errors and drives efficiency. Combining data-driven reasoning with industry rulings and precedents provides classifications users can trust at scale, freeing team members from repetitive work and reducing costly mistakes.
- **Save on duty costs:** Compliance isn't just about avoiding penalties; it's also about optimizing costs. It's critical to continuously check for tariff engineering opportunities, alternative headings, and special program eligibility such as free trade agreements. By identifying these opportunities before goods are shipped, trade managers can minimize delivered costs while still ensuring full compliance with regulations.
- **Determine country of origin:** Accurately determining country of origin is one of the most challenging aspects of global trade—particularly with multi-tier supply chains and frequent supplier changes and relocations. Ideally, origin determination should be automated by analyzing BOM structures, component sourcing, and manufacturing steps against jurisdictional rules. Such an approach enables users to proactively check whenever suppliers, materials, or processes change, ensuring they maintain preferential treatment under trade agreements.
- **Adapt to change:** Tariff codes, duty rates, and rulings aren't static—and trade management tools shouldn't be either. Rather, such tools should continuously monitor regulatory updates and automatically reevaluate trade portfolios whenever changes occur. Affected items can then be flagged with clear next steps, so shippers can stay ahead of compliance risks and duty exposure without having to manually track shifting rules across markets.
- **Stay audit-ready:** Every recommendation or action taken by an automated trade management solution must include built-in transparency. Rather than relying on memory, spreadsheets, or disconnected notes, it's important that users have access to complete descriptions of how and why certain codes were assigned, countries of origin identified, etc. Evidence sources, confidence levels, and human overrides must be captured in clear and immutable records for future reference. When audits arrive—whether internal, broker-led, or regulatory—trade managers should be able to respond promptly, with a minimum of research work.
- **Maintain intelligent RPS and PGA readiness:** Trade disruptions often stem from two critical blind spots: Restricted Party Screening (RPS) that drowns managers in false positives, and last-minute holds from Partner Government Agencies (PGAs). It's therefore critical that automated trade solutions filter for RPS, reducing noise while ensuring no true risks are missed. In addition, automatically checking PGA requirements tied to product classifications can surface any documentation and permit needs early in the process. Together, these capabilities will help trade managers avoid shipping delays, regulatory fines, and last-minute scrambling at the border.
- **Track compliance continuously:** Because regulations governing international trade are a constantly moving target, it's important that any trade management solution proactively and automatically re-checks classifications and tariffs as rules and rates change, ensuring decisions stay current and accurate.



Global trade stakeholders benefit from automation in diverse ways

Importers

Importers gain confidence that every SKU is classified correctly and duties are optimized before shipments leave the dock. This reduces delays, avoids overpayment, and ensures audit-ready records that protect margins while keeping goods moving smoothly.

Customs Brokers

Brokers can process more entries in less time with fewer exceptions clogging their queues. With transparent explanations and evidence for each code, an automated trade solution strengthens broker–importer collaboration and minimizes rework or disputes.

Logistics Providers

For logistics partners, trade process automation means fewer shipment holds and last-minute surprises. By surfacing PGA requirements and restricted party risks early, these capabilities enable shippers to deliver smoother cross-border flows and higher service reliability.

Regulators

Regulators benefit from cleaner, more consistent, and well-documented submissions. Automation ensures that every classification decision is traceable, supported by evidence, and aligned with rulings—building trust and reducing the need for costly interventions.

Conclusion—Agile and effective global trade management equals commercial success

Avathon's Autonomy for Global Trade Management platform was developed with all of the foregoing stakeholders, challenges, and functional requirements in mind. The platform uses the power of AI to automatically unify data across trade and operations, predict disruptions, prescribe responses, and execute resolutions. By embedding AI-enabled capabilities into the very core of trade management, Avathon has transformed global trade from a reactive process into a proactive autonomous system built for resilience and growth.

How the Avathon Autonomy platform works



Ingest

Extract item data, specifications, images, and BOMs from PLM/ERP/PIM, and sync supplier declarations.



Enrich

Normalize attributes and relationships with our proprietary Computational Knowledge Graph (CKG) of products, materials, processes, and rulings.



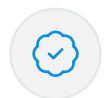
Classify

Test hypotheses with agentic workflows across headings/subheadings, apply rules, and compute confidence.



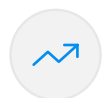
Identify

Sense and identify exceptions with continuous monitoring.



Resolve

Handle exceptions through agentic automation to get additional information from engineering or shippers, reducing the manual effort of obtaining information.



Optimize

Surface duty-savings and Free Trade Agreement (FTA) opportunities before PO/ship date.



Ensure

Store decisions, evidence, and versions for audit and automatic re-checking when regulations change.



Avathon has partnered with Livingston International, one of the largest trade services providers in North America, to optimize their customs clearance operations using AI.

“With Avathon, we are at the intersection of a transformational shift in trade management solutions,” said Robert Smith, CEO of Livingston International. “Global trade demands speed, quality, and risk mitigation, and achieving those outcomes at scale requires AI as an enabler. This joint capability will enable us to classify goods with greater confidence, reduce costly errors, and create a more resilient and transparent foundation for global commerce. We are doing this because we believe in pioneering the technologies and processes that will become integral to our success and the success of our industry as a whole.”

To further accelerate this vision, Avathon is collaborating with Google Cloud to integrate its advanced data, AI, and infrastructure capabilities into the Autonomy Platform. This joint approach ensures that the GTM solution remains the most intelligent, scalable, and resilient option for trade and supply chain leaders worldwide.

The rapidly shifting regulatory and operational demands of global trade management ensure that managers and executives will be continuously challenged to deliver world-beating performance results. But while politics and regulations change, the goals of supply chain management do not; products must be delivered on time, in the required quantities, and at the expected cost. Avathon Autonomy for Global Trade Management is the platform that delivers these unflinching demands.

About Avathon

Avathon is the leader in Autonomy for Operations. The Avathon Autonomy Platform powers a synthetic workforce of autonomous agents, transforming how businesses plan, orchestrate, and manage operations across manufacturing, supply chain, and asset management. For more information, visit www.avathon.com