

Optimizing the Global Trade Management Solution Evaluation, Selection Process

Executive Summary

Global trade and supply chains are expanding due to the robust growth of markets across international boundaries. This has driven the establishment of manufacturing sites in distant locations supported by a global supplier base. Trade volumes have increased by 13.5% in 2010¹ and with it security requirements in managing global trade have increased accordingly. With such growth and security demands, effective communication and collaboration with partners in the supply chain is gaining more attention. Consequently, many organizations involved in global trade are focusing on processes and solutions that enable effective communication and collaboration. Solutions or packages focused on managing global trade aim to remove any informational blind spots and widen the boundaries of information distribution, as well as make available timely and accurate information for informed decision-making.

This paper discusses the attributes of Global Trade Management (GTM) packages and highlights the best practices in selecting, implementing and drawing benefits from them. Along with covering the functional and technology aspects of GTM packages, this paper also provides an independent and objective evaluation of the types of packages and deployment models and what the future holds for GTM packages. The paper also describes our proprietary tools and accelera-

tors that can be leveraged to expedite selection, process design and successful implementation of a GTM package

Global Trade Management – a Necessity and Not an Enabler

AMR Research Inc. defines GTM as “the practice of streamlining the entire lifecycle of global trade across order, logistics, and settlement activities to significantly improve operating efficiencies and cash flow.”² It is one of the few functions that directly affects the health of the entire supply chain – from procure, pay and order to cash – by acting as a conduit for information flow and collaboration with supply chain partners. Like every functional area, GTM is a combination of people, processes and technology. The key objective of any GTM package is to manage import and export functions, financial transactions associated with cross-border trade and information exchange among the supply chain partners. Additionally GTM packages enable information exchange, also known as “visibility” or “business partner collaboration.”

The need to implement GTM packages has grown significantly. This growth is accelerated by factors such as doing more with every dollar spent, business’s reduced risk-taking appetite, increasingly strict regulatory requirements, global security threats and the impact of events such

The Changing GTM Functional Footprint



Figure 1

as 9/11 on trade regulations. Factors such as the type of industry served and the niche business needs have also influenced the growth of GTM packages.

GTM Packages - Market Growth

The GTM market comprising software and services is expected to grow from the current \$287.8 million to \$429.1 million by 2014.³ Originally starting as international trade logistics (ITL) software, the solutions have evolved into GTM packages with larger functional footprints.

Despite its growth in terms of numbers, functionalities offered and developments in the deployment model, the key components critical to any GTM package have not changed. These

are the three C's: Compliance, Connectivity and Content.⁴ Compliance and Connectivity address, respectively, the regulatory requirements and the interactions among the supply chain partners. Content addresses the source and availability of data used by the GTM applications to execute and manage the global trade processes. Some package vendors might outsource this component to niche players. Thus, getting this information in a timely and accurate manner might become an added yet unknown risk.

Packages of varying functional capabilities are available today. Gartner provides a view of the key functionalities of a GTM package in Figure 2.⁵

Based on the Gartner classification of functionalities and our experience in GTM, we have derived a

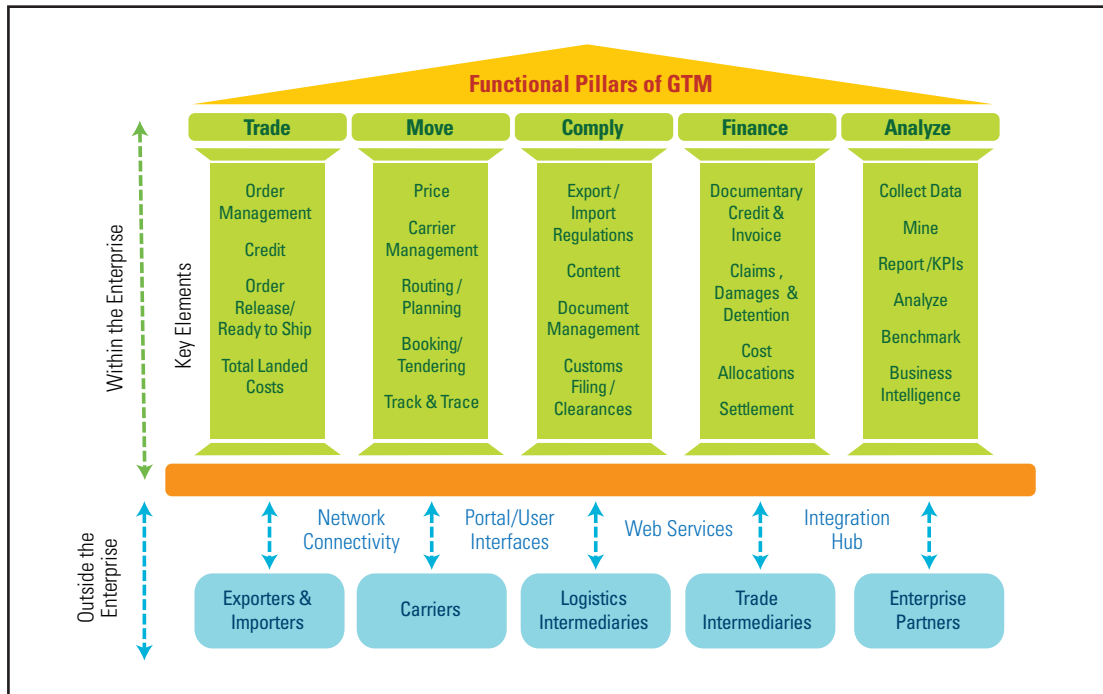
GTM at a Glance

Classification	Functions
Trade Functions	Sourcing; selling; export (customer) orders; import (purchase) orders; collaboration; product management; vendor management; document management.
Trade Compliance	Preferential trade agreements; license determination; document management; document filing; product classification (harmonized tariff schedule – HTS); customs declarations; import rules; export rules; duties/taxes; RPS (restricted party screening).
Core Transportation	Carrier booking; global logistics execution; shipment planning; multimode transportation; shipment consolidation; shipment routing; carrier communication; global visibility; landed cost control; shipment documentation.
Trade Finance	Letters of credit; settlement; reconciliation; invoice management; payment; insurance; trade financing.

Source: Adopted from "Developing an End-to-End Global Trade Management Functional Map," by C. Dwight Klappich/Gartner, Supply Chain Brain.com, e-INSIDER, March 2007.⁵

Figure 2

GTM: A Functional View



Source: Cognizant
Figure 3

view of a holistic GTM package, detailed in Figure 3. This footprint, we believe, will help address the needs of large global players operating across geographical boundaries.

How GTM Packages are Used

Of the GTM functions listed in Figure 2, the most commonly used are trade compliance functions, comprising restricted party screening and those related to regulatory compliance. The least-used GTM functionality is trade finance, which had been out of the GTM functional footprint until recently. Despite the evolution of GTM packages and their extensive use, a large part of GTM functions are still managed manually – thus increasing the risk of reporting errors to statutory authorities. This has resulted in large penalties, cancellation of licenses and in some cases may lead to imprisonment. Citing poor compliance, many customs authorities across the world have announced an increase in penalties. Apart from slowing down operations, manual processes often prove costly and suboptimal as they rely on human intelligence and tribal knowledge. Consequently, there has been an increased focus on managing the associated functional processes more effectively

and efficiently in terms of quality, accuracy and reliability driven by process automation.

We often find that departments managing GTM functions across many organizations are either understaffed or ill-equipped with the knowledge required to manage these functions on a global scale. This, along with frequent changes in the regulatory requirements, product classifications and documentary requirements, makes it infeasible for large global organizations to have in-house teams to track and execute such changes manually. As mentioned earlier, this has forced many organizations to rely on third parties such as freight forwarders or brokers and on software applications to manage the compliance-related roles. It's also noteworthy that some large corporations have taken the compliance functions and product classifications in-house, citing poor service levels, and have focused on automating the trade management functions. For example, Leggett & Platt insourced its previously outsourced GTM functions and automated the functions, saving about 2%-3% of its import costs.⁶

With no single solution to effectively manage end-to-end cross-border transportation including

GTM's Key Challenges

Compliance	Connectivity	Content
<ul style="list-style-type: none"> • Low levels of automation - A lot of manual processes. • Relying on third parties to execute compliance functions in unknown geographic regions. 	<ul style="list-style-type: none"> • Unable to connect with all partners including customs and service providers. • Lack of shipment visibility leading to high "on-the-move inventory." 	<ul style="list-style-type: none"> • Frequently changing regulatory requirements makes keeping the trade content current a challenge. • Growing concerns on security and non-compliance risks.

Figure 4

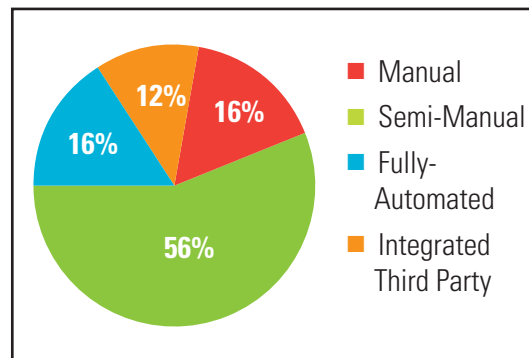
trade, compliance, transportation and finance functions, the key challenges of GTM solutions in terms of the three C's discussed earlier are summarized in Figure 4.

Global trade is more complex than domestic trade. It has longer cycle times, larger numbers of touch points, multiple modes of transportation moving goods across multiple time zones through multiple carriers, billing in diverse currencies, various languages and governance by numerous laws. Yet it is common to find that the automation levels of global supply-chain processes are generally lower than domestic supply-chain processes.⁴

A large part of cross-border trade still uses paper documents and manual entries. This is primarily because the focus has largely been on optimizing ground transportation. International trade has traditionally been executed with the help of third parties with local knowledge.

Over time, GTM packages have also adapted to technology developments, largely in their collaboration, processing capabilities and mode of deployment. These range from in-house developed applications deployed behind the firewalls to present day SaaS-based applications such as GT Nexus and TradeBeam, which was recently acquired by CDC software. More vendors now offer many deployment options, beyond merely

Level of Automation in GTM Applications



Source: Kewill Benchmark Survey⁴
Figure 5

a choice of license, hosted or SaaS based. Traditional custom-built applications, with niche customer-specific capabilities, were able to sustain the business for some time. However, these often fell short in terms of flexibility, especially when users tried to expand or change their operational or technology footprint. The proliferation of items classifications and the dynamic regulatory compliances have added to the limitations.

As Figure 6 shows, after custom developed applications, licensed on-premise, behind-the-firewall applications emerged. Large similarities in global

GTM Delivery Models

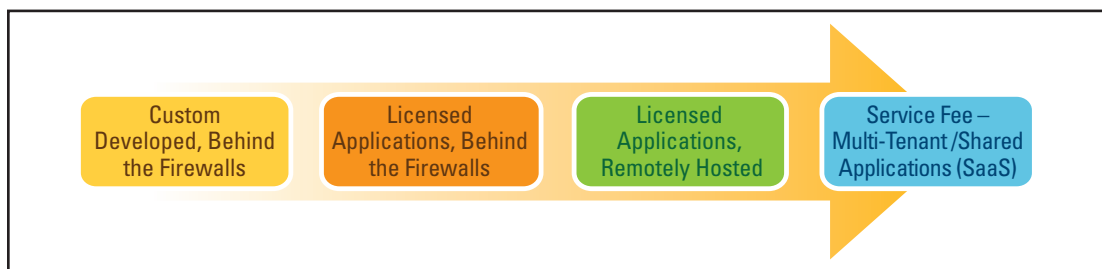


Figure 6

operating models and initiatives of regulatory bodies such as the World Customs Organization (WCO) involving standardization of operating procedures around compliance and communication across industries, have made this the most commonly adopted model. User apprehensions about data security and the risk of sharing data beyond the firewalls have fueled the popularity of this model.

The GTM package market is largely dominated by the best-of-breed applications such as Management Dynamics, Descartes, Integration Point, Kewill and GT Nexus deployed in many different models. The package footprint may vary based on the requirements, region in which these are deployed and the industry they serve. Some package vendors outsource certain functionalities such as sourcing data and content to niche players, so they exist in functional silos and are thus less comparable at a functional level. Present-day GTM packages may also compete with many transport management systems (TMS), but their capabilities in addressing the specific requirements of global transportation might be very different. Several ERP-based vendors have been late entrants in this space. Despite limited functional depth, ERP-based GTM packages such as SAP GTS and Oracle GTM provide the advantages of tight integration and seamless flow of information with the back-end ERP applications and thus other business functions. However, we often find that this integration between ERP and their GTM package is not up to the required levels or is not readily available. This might reduce the advantages of such solutions. However, given the global security concerns on data integrity the traditional, behind-the-firewall, model is here to stay for some time.

To lower operating costs, some vendors offer the traditional license-based application from a remotely hosted environment. Like the traditional model, this model also has the license fee apart from the additional infrastructure fees. Though not as common as the traditional model, this model has helped some users to not only lower their operating costs but also leverage superior application performance supported by stringent SLAs offered by the vendors. Nonetheless, with this approach there might be issues concerning integration with other organizational applications that should be considered before adopting this model.

Like every other application that relies on external communication, GTM solutions have also moved towards a software-as-a-service (SaaS) deployment model. Many of the leading SaaS-based GTM packages such as GT Nexus operate on a subscription fee and/or transaction-cost basis. Thus, they have been able to lower the operating costs and scale up while providing a common platform for users to connect with service providers and carriers such as the ocean carriers. Based on a multi-tenancy model and operating in a single environment, the advantage of this model is that the upgrades are managed by the service provider. A clear advantage of this model is that all the supply chain partners operating in this model share the same application version and view the same data. This helps in breaking down silos both within and outside the enterprise. Many organizations have also used this model to share information across functions and departments, thus improving operational efficiencies. The potential adoption of this model is higher since the Internet is used as the communication medium. To alleviate users' fears about data security and availability due to use of the Internet, some vendors have made the applications available via private networks. Generally, SaaS-based applications have smaller but more frequent upgrades.

Despite the above-cited advantages – lower costs of ownership, scalability, established networks and benchmarking with other players – anxiety remains around data security, availability and flexibility in configuring specific workflows as compared to a traditional behind-the-firewalls, license-based model. It's often noted that the cost advantages of a SaaS-based model compared to the traditional behind-the-firewalls license-based model even out after a few years, especially if the transaction volumes are high.

The latest innovation in the area of deploying GTM packages is the hybrid deployment model such as that offered by Questaweb.⁷ This is a combination of the traditional on-premise model with the customers retaining the critical functions in house and using the hosted or the SaaS model to execute noncritical standard tasks such as tracking and tracing, messaging, etc. This model has a large potential to grow though very few vendors currently offer it. A wait-and-watch approach is recommended for this model as it is still being established and fine tuned.

Global Trade Management: Offerings

This section details how our proprietary tools and accelerators can be leveraged in designing global trade processes and selecting GTM packages.

To gather requirements, we use a comprehensive requirements gathering methodology using appropriate tools and techniques, as shown in Figure 7.

Our proprietary STEER framework, as presented in Figure 8, can be used to diagnose a client's

An Approach to Requirements Gathering

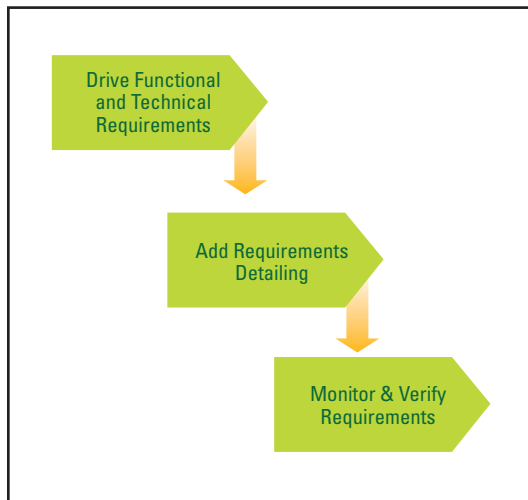


Figure 7

GTM operating model needs and formulate an improvement and implementation plan.

Our eValuIT is a proven scientific means of structuring a multi-criteria decision-making framework. The framework statistically evaluates packaged applications and recommends the package with the best fit. It enables modeling and attaching attributes to the functional requirements as well as other non-functional and technical requirements. The framework also provides a means to perform sensitivity analysis, thus reducing subjectivity and improving the consistency of results.

To better define the business objectives and scope, we can leverage our in-house solution envisioning workshops (SEW) methodology to help understand the business goals and critical-to-quality attributes of the project along with arriving at the high-level business requirements. SEWs are used to accelerate the requirements sign-off process, thus lowering the implementation time. The SEW process is divided into five steps, as shown in Figure 9.

For helping clients manage GTM package selection, we work in close coordination and alignment with the client teams. We recommend that the packages be evaluated using sample client data to better understand the functional capabilities offered. This will help set the baseline to compare packages in an unbiased and objective manner.

Cognizant's STEER Framework

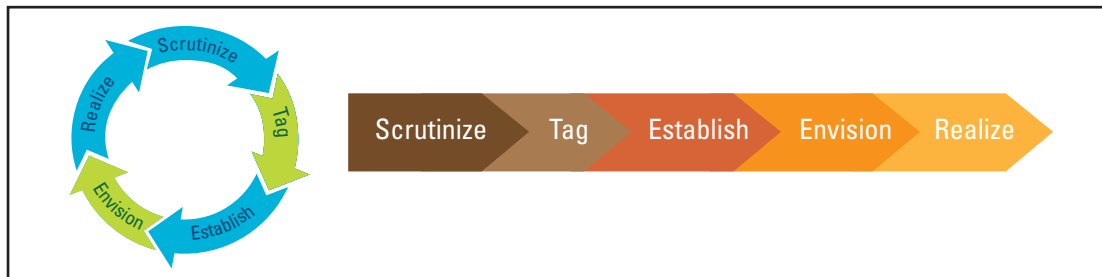


Figure 8

Cognizant's Solution Envisioning Workshops Framework

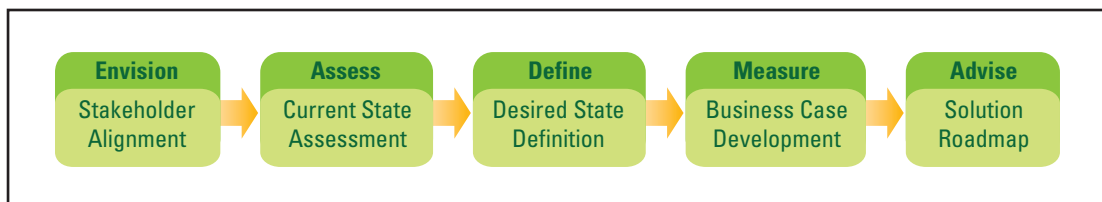


Figure 9

Based on our experience, some of the key considerations when selecting a GTM package include:

- Functional fit– Addressed by the present capabilities or by the planned product enhancements. “It is essential that organizations build more points of flexibility into their systems to be able to accommodate future scenarios.”⁸
- Capability to manage regional requirements and experiences – including multilingual and multi-currency capabilities.
- Experience in relevant industry verticals and geographies.
- Certification to connect with customs such as automated broker interface (ABI).
- Deployment models offered.
- Interfaces – with external systems and internal systems such as ERP, TMS, etc.
- Trading partner connections with existing trading partners including carriers, across modes and the levels of connection including individual EDI messages, etc.
- Trade content source used by the vendor.
- Pricing options and SLAs along with the financial viability of the vendors.

After customers select a vendor, it is advisable to pilot the solution in a trade lane-based approach. Opting for a trade lane approach would help the customers to assess the capability of the package to address the requirements in a live environment. This option also provides options to measure and fine-tune the implementation and subsequent rollouts across geographies as required, with lower risk. Trade lanes should be carefully selected so that the pilot may act as the baseline.

Once the base implementation is completed, rollouts should be planned with due considerations of the strategic directions, volumes, readiness to change and system limitations, if any.

Similarly, the key criteria for deciding the deployment model include:

- Total cost of ownership – With large volumes, the cost advantage of the SaaS model (in terms of hardware, software and personnel) tends to diminish. The sliding scale pricing offered by some vendors might need close attention before an approach is decided upon. It is imperative to also consider the growth in the number of transactions when deciding the TCO and creating the business case.

- Strength and capability of in-house IT team to manage GTM packages.
- Data archives and availability of user data, including retrieving information from partners beyond one's firewalls.
- Data security is a significant aspect. Many supply-chain practitioners are still apprehensive about putting their data on the cloud. However, it is also true that data in the hands of persons inside or outside an organization, especially when the processes are managed manually, may not be very secure either.
- Deployment capabilities and model should also be considered.

To improve the collaboration among trading partners and getting timely and accurate status updates for key transportation milestones, we have worked with a leading heavy equipment manufacturer to enable the flow of information from legacy order management application to a leading SaaS-based GTM package, used for managing international shipments. We converted the orders to the format required by the SaaS-based GTM package. While enabling the information flow to the GTM package, we also enabled adding business rules to create milestones for tracking the orders based on the updates sent to the GTM package by the client's partners. The project has helped the client leverage the advantages of a SaaS-based application: connectivity with partners outside the enterprise.

GTM Applications: The Future

Despite the ERP-based GTM applications vendors trying to catch up, there will always be some areas such as trade finance and trade compliance that will be the domain of niche applications. There may not be a ubiquitous end-to-end solution or package in the immediate future even though a few leading ERP package vendors have partnered with smaller niche GTM vendors to enhance the functional footprint. Thus, it is imperative to understand and work on the information flow between the ERP/order management functions and the GTM applications. To avoid the high application and vendor switching costs and to recognize the true benefits, a detailed assessment is recommended. Apart from helping build a business case on the GTM package to use/build, this will also assist in finalizing the deployment model. To successfully select and implement a GTM package, it is important to recognize that there is no escaping the initial efforts required.

The GTM landscape has seen and will continue to see a lot of acquisitions as bigger package vendors try to fortify their positions. Among the user communities, particularly the medium to large players, application modernization, rationalization and vendor consolidation will prevail. GTM packages and especially the SaaS-based packages are here to stay and grow, even though it may take some time for these to be the norm. With pressures to lower costs and improve oper-

ational efficiency in an increasingly security-conscious business environment with a growing number of regulations and proliferation of items to move, voices for the need for a robust GTM application are only growing louder. If not already invested, now is the time to invest in automating and creating a strong GTM solution that not only impacts the bottom line but also collaborates to improve the operational efficiencies across the entire supply chain.

Footnotes

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About the Author

Ravi Joshi is a Manager at Cognizant Business Consulting, working within the Manufacturing and Logistics Practice. With 16-plus years of experience in the manufacturing domain, Ravi has worked on a diversity of transportation and logistics consulting engagements with leading logistics service providers, port and terminal operators and freight forwarders. His key areas of expertise include supply chain consultancy, business process reengineering, transportation management, analytics and business intelligence. Ravi holds a bachelor's degree in Nautical Sciences from the University of Mumbai, India and a master's degree in international transport with logistics from Cardiff Business School, Cardiff University, Wales, UK. He can be reached at Ravi.Joshi2@cognizant.com.



About Cognizant

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World Headquarters

500 Frank W. Burr Blvd.
Teaneck, NJ 07666 USA
Phone: +1 201 801 0233
Fax: +1 201 801 0243
Toll Free: +1 888 937 3277
Email: inquiry@cognizant.com

European Headquarters

1 Kingdom Street
Paddington Central
London W2 6BD
Phone: +44 (0) 20 7297 7600
Fax: +44 (0) 20 7121 0102
Email: infouk@cognizant.com

India Operations Headquarters

#5/535, Old Mahabalipuram Road
Okkiyam Pettai, Thoraipakkam
Chennai, 600 096 India
Phone: +91 (0) 44 4209 6000
Fax: +91 (0) 44 4209 6060
Email: inquiryindia@cognizant.com