Business Value of
Global Trade Management Solutions

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1. Introduction

The term “globalization” refers to the increasing integration of economies around the world, particularly through trade and financial flows. It has come into common usage since the 1980s, and captures the importance of trade interactions between countries in recent years. Since the beginning of the 1980s the total volume of international trade has been increasing on average by 6 percent per year; that is to say twice as fast as the global Gross Domestic Product (GDP), and today a large number of companies take part in international transactions.

Two major trends have contributed to the development of global trade over the past two decades, both of which can be related to the economic development of poorer countries. First, in many industries companies from developed countries have been facing a saturation of their traditional sales markets. As a result they had to find new opportunities in farther areas and move a substantial part of their business abroad. Countries with a lower level of industrialization and little local competition have been a particularly favorable market for geographical expansion. As a number of such areas have been developing at an increasing pace, the growth opportunities for firms based in richer countries increased dramatically. Indeed, companies selling into an economy where buying power and average consumption rate are increasing are almost guaranteed to see their sales boom.

At the same time, as trade becomes global and competition increases, companies must improve their efficiency and lower their production cost as much as possible. Consequently, over the years companies have been looking for new procurement channels, often by creating subsidiaries abroad, outsourcing offshore or opting for foreign suppliers. This enabled them to benefit from the cheaper labor and lower production costs in less industrialized countries. This trend has been accompanied and sustained by a smoothing of the quality standards that can be achieved in different parts of the world.

As a result of these trends a significant increase in the proportion of international transactions has taken place over the past decade. In 1993, international transactions of goods and services accounted for only about 13 percent of the $29,700 billion global GDP, while in

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1 Sources: “Develop an Application Portfolio Strategy to Address the Needs of Global Trade Management,” C. Dwight Klappich, Gartner Research, 17 November 2005.
2 The figures of international transactions give an estimate of the volume of goods and services exchanged in the world. The figures in this paper are based on the global volume of exports. The figures for imports are roughly the same because goods that are considered an import in one country are an export in the country of origin. The figures include transactions between countries of the European Union (25 members) as international.
2004 they exceeded $11,000 billion and represented almost 27 percent of the world’s GDP, which amounted to $41,290 billion during that year.\(^4\) There is no sign that this tendency is likely to change in the near future, as in 2004 global exports increased by about 21 percent, while in the same time span the world GDP grew by a mere 3.7 percent.\(^5\)

Only 20 percent of the total imports/exports in 2004 were of services, while merchandise accounted for approximately 80 percent of the exchanges and required cross-border transportation, often between continents.\(^6\) In 2004 the biggest merchandise exporter in the world was the European Union, with 18.1 percent\(^7\) of all exports. It was followed by the United States, which accounted for 12.3 percent of the value. China came in the third place with 8.9 percent, followed by Japan with 8.5 percent of all merchandise exports. On the import side, the United States was the major player with 21.8 percent of total imports, while the EU imported 18.3 percent of all the merchandise value exchanged internationally. China followed with 8 percent of the imports and Japan came fourth by importing 6.5 percent of the total global trade.\(^8\) (See Appendix 1 for a more complete list of the main exporters and importers in 2004.) A significant proportion of the international trade in Europe, North America, and Asia remained between countries from the same geographical area, but overall 41.1 percent of the world’s merchandise exports took place between countries from different regions.\(^9\)

Simultaneously, with the expansion of global trade, the environment in which commerce takes place has evolved. Communications, transportation means, as well as banking and other supporting services have improved and adapted to international operations. In addition, regulations have become more favorable to cross-border transactions, with the creation of trade agreements (e.g., the General Agreement on Tariffs and Trade (GATT)) and regulations in favor of labor mobility. As a result it is now possible for virtually any company to operate globally, both for sales and for sourcing.

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\(^7\) Source: ibid.


\(^9\) This figure only accounts for extra-EU trade, while trade between the 25 countries of the European Union is considered domestic.


However, global business opportunities still come at a cost. Trading internationally involves longer, more complicated and costly processes that are harder to manage compared to domestic trade. It also requires a higher number of actors and intermediaries in the supply chain.

The most obvious drawback of cross-border trade is the longer and more expensive transportation. Products are shipped over much longer distances, and often need to cross oceans or continents to reach their final destination. In many cases several transportation means are used, including sea, ground (trucks or rail), and air transportation. This takes time, creates additional costs in the supply chain, and increases the risks associated with shipping, such as loss, shrinkage, or damages to the goods.

As a result of increased transportation time and other delays that may occur along the way, the average lead times in a global supply chain can grow dramatically. The long lead times, together with higher complexity of the supply chain, are likely to increase lead time variability and thus the uncertainty about actual delivery time. For manufacturing companies, this may cause serious disruptions in a production line; for instance, if essential components for a product assembly fail to be delivered on time. In addition, long and unpredictable lead times make it very challenging to meet demand, which may lead companies to lose customers and market share. Obsolescence issues can also appear, especially in the high-technology industry and in seasonal industries such as apparel, where products can become outdated in a very short time span. The long and unpredictable lead times also force companies to invest more in inventory and safety stocks, which ties up capital and increases the risk of obsolescence. More generally, production-to-market delays prevent companies from reacting quickly and efficiently to new opportunities and to unexpected changes in consumer demand or in market trends, which may weaken their competitiveness and position in the marketplace.

While dealing with lead times and lead-time uncertainties is common to any supply chain, whether domestic or international, cross-border trade also brings about several unique challenges. One of them is the large number of regulatory constraints regarding customs fees, quotas, quality standards, compliance, and product classification that must be taken into account. A thorough knowledge and perfect compliance with international regulations has become necessary to take the best advantage of trade agreements, reduce unexpected costs, and avoid fines, penalties, and costly delays due to customs issues. Failure to fully understand and take into account the full landed costs of importing goods from foreign locations can lead a company to make a sourcing decision that, in fact, increases its costs rather than saves money. These issues are all the more complicated due to the complexity of the combination of rules a company has to follow. Indeed, the regulations emanate from multiple institutions in several countries, and are likely to change over time, as security measures evolve and new trade agreements are created. For all these reasons manual management of regulatory issues and documentation linked to global trade are extremely time-consuming and prone to costly errors.
A global supply chain also requires a larger number of intermediaries: a classical international transaction requires one or several transportation companies and sometimes a third-party logistics provider, one or more customs brokers, and in some cases foreign trade agents and translators. The number of parties involved results in higher uncertainties and increases the risk of disruptions and miscommunication along the supply chain. A lack of communication between the different actors can have very serious consequences, as it can create inefficiencies that are difficult to detect and correct. In addition, responses to supply chain disruptions are likely to be inappropriate or delayed.

Global Trade Management (GTM) has become such an issue for many companies that a market for GTM software applications has been developing very fast over the past few years. GTM solutions interact with companies’ ERP systems and existing management applications as well as with some of the other actors involved in the trade process, including suppliers or customers, transportation providers, customs brokers, banks, etc. They also include updates from regulatory agencies. A complete GTM solution is a tool that should “assimilate all of the processes and management strategies and disciplines needed to run and manage a global supply chain.”[12] Such tools should aim to provide automated and integrated ways to manage sourcing, purchasing, shipping, and settlement in a global environment.

By enabling communication with trading partner’s systems, these applications should allow for better visibility along the supply chain, quicker correction of malfunctioning, and improved trade relationships. GTM solutions may also provide a way to automatically create all trade documents, to match them with each other, and check their compliance to current regulations. This should result in more efficient labor utilization, fewer errors, penalties, and fines, as well as smoother and faster operations. One of the other main advantages of GTM solutions is that they can usually enable management by exception, thus freeing personnel to focus only on those processes that need intervention and corrective action instead of having to deal with an overwhelming amount of information. In the long run GTM solutions may also help detect inefficiencies in the supply chain and improve tactical operations.

However, the investment required for creating, developing, and maintaining the software and services associated with a GTM solution is significant, and consequently the cost of using such applications may also be high. A firm in the process of implementing such a solution needs to consider all the costs associated with purchasing (or paying ongoing subscription fees), customization, integration, and employee training. It is, of course, essential for a decision-maker to be able to balance these immediate and periodical costs with the return on investment (ROI) of a GTM solution. Typically, the implementation of a GTM tool may result in three types of quantifiable improvements: cost reduction, cost avoidance, and increased revenues, as well as a number of intangible benefits such as increased customer satisfaction. While costs are relatively easy to assess, it may be quite challenging for companies to come up with a precise evaluation of the expected value to be brought by a GTM solution.

The goal of the study summarized in this paper is to address this problem by identifying the potential impacts of a GTM solution on a company’s operations, and by developing an ROI model to assist companies in determining the expected costs and benefits of adopting a GTM solution. It has been developed based in part on inputs provided by TradeBeam, Inc.\textsuperscript{13}

In the next section of the paper we explain the study methodology. In Section 3 we discuss the business value of GTM solutions and describe the Value Matrix developed as part of this study. Section 4 describes the ROI model developed. Section 5 concludes this paper.

2. Methodology
The study was divided into the following major stages:

A. Identification of Business Value of GTM Solutions
As a first step, we identified the main issues companies involved in global trade are likely to face, and the business value GTM solutions are likely to provide, by mitigating or completely eliminating those issues. A detailed discussion of the identified business drivers is included in Section 3.

B. Construction of a Value Matrix
Next, we constructed a Value Matrix, which includes a more detailed description of the needs and issues that companies involved in global trade may face, the main stakeholders concerned by these issues, and the ways by which a GTM solution may help in mitigating these issues. The Value Matrix is discussed in more detail in Section 3. Its construction was based in part on the methodology described in the book \textit{ROI Selling}, by Nick and Koenig.\textsuperscript{14}

C. Development of an ROI Model
The last step of the study was the development of an ROI model, which aims to help companies assess and compare the costs and benefits of implementing a GTM solution. The model was developed as an Excel spreadsheet and includes four main parts:

- A list of Pain Indicator questions, in which users are asked to identify those problem areas related to global trade management that are relevant for their organization, and which they expect to improve with a GTM solution in place.
- A detailed questionnaire that asks users for data specific to their organization, and uses this data to calculate the expected quantifiable improvements that can be achieved with a GTM solution in place. It includes separate sections for each of the identified GTM problem areas.

\textsuperscript{13} Website: \url{www.tradebeam.com}
• A summary of all the relevant expenses associated with adopting a GTM solution, including one-time costs plus on-going subscription fees. The data for this part of the ROI model should be provided by the GTM solution provider.

• A summary page, which includes a summary of all the expected quantifiable benefits as well as the costs associated with implementing a GTM solution. In addition, this page includes a set of financial metrics that a decision maker can use to evaluate the overall value and ROI of the proposed solution.

The ROI model is described in more detail in Section 4. While the model is based on the TradeBeam solution, it is likely to be applicable (possibly with some modifications) for other GTM solutions as well.

3. Business Value of GTM Solutions

This section of the white paper discusses in detail the potential business drivers for adopting GTM solutions, as well as the tangible and intangible benefits users of such solutions are expected to gain. In addition, this section describes in detail the Value Matrix, which summarizes the major challenges related to global trade and the value of a GTM solution.

3.1 Business Drivers for Adopting GTM Solutions

Companies that are involved in global trade and consider implementing a GTM solution, usually do so in order to improve their performance in one or more of the following areas:

Inventory Optimization and Reduction of Logistics Costs

One of the challenges associated with global trading is long, and oftentimes highly unpredictable, transportation time, which increases logistics costs and the complexity of inventory management. Properly managing global trade operations is likely to provide companies with the following benefits:

• Faster order processing
• Fewer delays for the goods while in transportation
• Improved visibility to the goods while in transportation

All these improvements are likely to reduce the total duration and variability of order-to-delivery cycle time, which in turn will allow the company to reduce its required levels of on-hand inventory and safety stocks. With lower levels of inventory, the number of obsolete products is also expected to be reduced. The lower lead time variability, together with the improved accuracy of the inventory management system due to fewer obsolete products on stock, can have a positive impact on the magnitude of stockouts and delays, and consequently on the level of lost sales and/or penalties to customers for delayed order delivery. In those cases where the imported goods are used for production, fewer stockouts will reduce the frequency and duration of stoppages in the manufacturing lines.
In addition to improved inventory management, these benefits brought about by a GTM solution are likely to reduce demurrage and detention costs, and thus have a positive impact on total logistics costs.

**Automation of Import and Export Processes**
In order to improve the efficiency of their internal operations, reduce the costs associated with errors in documentation, and be able to respond faster to new trends in the market and customer requirements, companies seek to automate as much as possible their import and export processes.

A GTM solution can automate many of the processes related to import/export of goods, such as managing letters of credit and preparing the required documentation. Consequently, the number of working hours associated with these activities can be substantially reduced, which improves employee productivity. In addition, minimizing paperwork also reduces or completely eliminates errors in those documents, which means that employees need to spend much less time identifying and correcting those errors, and that penalties associated with inaccurate documentation can be reduced.

Shortening the duration of import/export processes through automation also allows companies to bring new products to the market faster and to react faster to changes in customer needs and expectations. As a result, these companies are likely to improve their competitive position in the market and increase sales. Improved management of letters of credits may also reduce the shipment-to-payment cycle time for exported goods, which will in turn reduce capital expenditure.

In addition, a GTM solution, which can support all import/export processes with a single system and a single database, eliminates inefficiencies and duplication of work. Furthermore, the easily accessible data stored by a GTM solution makes it easier for companies to audit their import/export processes.

Finally, a GTM solution makes accurately calculating total landed costs easier, taking into consideration the aggregate of product cost, shipping, handling fees, insurance (if any), and governmental fees charged by the exporting and importing countries. This is likely to result in improved sourcing decisions.

**Improved Visibility**
As mentioned earlier, one of the challenges associated with global trading is long and unpredictable transportation time. In addition to its negative impact on inventory management and logistics, the long transportation time means that more capital is tied up in in-transit material. With improved visibility, it becomes easier for companies to identify potential sources of delay and take appropriate steps to mitigate them, thus shortening total transportation time, and consequently lowering the company’s annual cost of capital.
Furthermore, as global trading involves business partners that may be located in different countries or continents, communicating with them and monitoring their actions may be challenging and costly. The use of manual processes (phone, faxes, etc.) to communicate with trading partners requires many working hours, and may also be quite expensive and prone to misunderstandings. Another challenge is related to manual verification of the accuracy of trading partner’s bills, which is likely to require many working hours and may still not guarantee total accuracy.

With a GTM solution in place, companies can automate and improve their communication with their suppliers, and more easily monitor their performance. That way, the chances for any misunderstandings or for a mismatch between the company’s expectations and what the supplier delivers is significantly reduced. A GTM solution also makes it easier and less time-consuming to verify the accuracy of trading partner bills, and avoid being overcharged.

**Better Address Compliance Issues**
Companies involved in global trading face the challenge of complying with a complex web of ever-changing government trade regulations. Failing to comply with the millions of trade rules around the world, which may sometimes change with little notice, can have a significant impact on a company’s bottom line due to incorrect calculations of duties and fees. In addition, companies may be exposed to fines and penalties for trade violations, and may even have their trade privileges being revoked. Finally, inaccurate documentation may result in delayed shipments, which in turn lead to stockouts and lower customer satisfaction.

A GTM solution provides access to the most current trade information available. This service ensures that companies stay up-to-date with the most current trade regulations without being required to invest a significant number of working hours on manual updates. Trade information provided by GTM solutions is likely to include classification codes, required customs duties and fees, compliance rules, denied party lists, and required trade documentation. Another benefit of a GTM solution is that it allows electronic data transfer to brokers, thus limiting the amount of data entry for the broker and consequently reducing brokerage costs.

In addition, the information and tools provided by a GTM solution can help companies take better advantage of free trade agreements (FTAs), and consequently reduce their expenditure on duties and taxes.

**3.2 Impact of GTM Solutions on Business Goals**
The adoption of a GTM solution can have a positive impact on some of the company’s tangible and intangible business goals, as summarized in this section.
3.2.1 Quantifiable Business Goals
The quantifiable business goals identified in this study as those that can be improved with a GTM solution in place include cost reduction, cost avoidance, and increased revenues. These are the business goals that are captured in the ROI model.

Reduce/Avoid Costs
Many of the benefits discussed in Section 3.1 are likely to result in cost reduction. They include lower inventory levels, safety stocks, and obsolescence due to shorter and less variable transportation time; improved management of letters of credit; the ability to make better use of Free Trade Agreements; automation that replaces manual activities and thus saves working hours; improved visibility to goods in transit, which may help reduce demurrage costs; reduction in processing times and total order lead times, which reduces the customer order-to-payment cycle and consequently reduces cost of capital; and the ability to better manage return processes.

Examples of improvements that lead to cost avoidance include the ability to stay up-to-date regarding trade regulations and security requirements and improved document accuracy, which consequently help companies avoid paying penalties and fines for non-compliance; fewer stockouts, which eliminate the need to expedite shipments and/or pay penalties to customers due to late deliveries; and elimination of manual processes, which help personnel avoid spending time on identifying and correcting errors.

Other benefits that lead to cost reduction and avoidance include the use of a single IT system to support all import/export processes, which eliminates the need to spend time on data retrieval and on re-entry of data; and the ability to audit the import and export processes, which can help companies identify opportunities to improve these processes and thus save costs.

Furthermore, the ability to accurately calculate total landed costs can help companies optimize their sourcing decisions, and consequently significantly reduce their associated costs. While these savings were not captured in the ROI model since they are likely to be too dependent on the exact situation each company is facing, they may be quite significant, and so companies should not overlook these benefits when considering the value of a GTM solution.

Increase Revenues
Examples of benefits that lead to higher revenues include fewer stockouts, which result in fewer instances of lost sales; and the ability to shorten the time from design to market, and thus enter the market earlier, capture higher market share, and increase sales level overall. The latter benefit is especially important for time-sensitive items, in which each day or week of late entry to the market can have a significant impact on margins and total market share.
3.2.2 Intangible Business Goals

In addition to the quantifiable business goals described in subsection 3.2.1, companies that implement GTM solutions are likely to achieve several intangible benefits, such as fewer disruptions, improved customer satisfaction and service levels, and avoiding bad publicity. While these benefits are difficult to quantify, they are still very valuable, and so prospective users of GTM solutions should not neglect taking them into consideration when determining the expected value of such solutions for their organizations.

Avoid Disruptions

A GTM solution can help companies to avoid disruptions and have smoother operations in a number of ways. First, by automating many of the import and export processes, the likelihood for unexpected delays due to errors in documentation or due to the need to search for and verify the required information is significantly reduced. Consequently, the total duration of these processes becomes much more consistent and predictable. Furthermore, many of the problems associated with inaccurate documentation, such as delays at customs holding facilities, can be avoided. Supporting all import/export processes with a single GTM system further contributes to the improved predictability of internal operations. Another major benefit of a GTM solution is that it provides access to the most up-to-date denied party lists, which eliminates the risk of companies to have their trade privileges being revoked. A GTM solution also improves communication with business partners, and thus reduces the likelihood of misunderstandings, which may cause delays in the process or may even result in the company receiving the wrong items from its overseas suppliers.

Improve Service Levels and Customer Satisfaction

A GTM solution may have a positive impact on customer satisfaction and service levels in a number of ways. One of the major benefits of a GTM solution is the improved visibility it provides to the goods in transit. With improved visibility, as soon as unexpected problems or delays are identified companies can take various steps to minimize the impact on their customers, such as re-route or re-allocate inventory to avoid stockouts. (This is especially important for seasonal industries such as apparel or for goods with a very short life cycle). It is also easier for companies to resolve those issues faster, and take appropriate steps to prevent delays from happening again in the future. When delays cannot be prevented, companies can at least notify their customers early on, which is likely to lower the customers’ level of dissatisfaction. Shorter order processing and higher accuracy of required documentation—two additional benefits of a GTM solution—are also likely to result in fewer delays and overall shorten order lead time. Finally, a GTM solution can help companies better control the operations at their suppliers’ sites, which can have a positive impact on the quality and the timeliness of the goods delivered.

Avoid Bad Publicity

A company’s brand image is one of its more valuable assets. Inability to adequately monitor the operations at their suppliers’ sites overseas may put a company at risk for social compliance issues. While the likelihood of such an event taking place is quite low, its
consequences can be severe, and so the ability a GTM solution provides to better control supplier selection and improve ongoing monitoring of supplier operations is of much value. Companies can also have bad publicity as a result of having frequent regulatory compliance issues. The access a GTM solution provides to the most current trade regulations, compliance rules, and denied party lists significantly reduces—or completely eliminates—the chances for a company to violate any of these rules and regulations.

3.3 Structure of the Value Matrix
The Value Matrix summarizes the issues and challenges companies involved in global trade face, and the ways in which a GTM solution may help them mitigate these issues and improve their performance.

The Value Matrix includes the following information:
- A list of reasons for people or companies to deploy GTM solutions, as well as the business issues associated with these reasons.
- The main stakeholders concerned by these issues and the precise outcomes in terms of benefits expected from the implementation of GTM solutions.
- The business goals that can be improved when each of the listed issues is addressed, as well as a precise, quantifiable, and measurable metric that is used to determine the expected return on investment.
- The specific features/modules of a GTM solution that can help address each of the identified issues. This is the only part of the Value Matrix that should be based on a specific GTM solution (the Value Matrix developed in this study was based on the TradeBeam solution suite).

The Value Matrix summarizes in a single spreadsheet the major pieces of information needed to support the development of the ROI model. Prospective users of GTM solutions may use this information to help them gain a better understanding of the potential benefits of such solutions. In addition, solution providers may use the Value Matrix internally for training purposes, as well as externally as a support tool during the sales process to help match the needs of a prospect customer with the most appropriate solution.

The Value Matrix includes the following categories, which are discussed in more detail in the upcoming paragraphs:
- Why-Buy Statement
- Business Issue Statement
- Stakeholder
- Desired Outcome
- Feature/Solution
- Business Goal
- Value Metric
Each why-buy statement is linked to a business issue, a stakeholder, a list of desired outcomes, a business goal, a value metric, and relevant features/solutions of the GTM solution under consideration. An example provided at the end of this section helps demonstrate the type of information that is listed in the Value Matrix under each of these categories.

**Why-Buy Statement**
The why-buy statements list all the major emotional reasons why companies deploy GTM solutions. They are organized in the Value Matrix under the same four categories identified in section 3.1: inventory optimization and reduction of logistics costs, automation of import and export processes, improved visibility, and better address compliance issues.

**Business Issue Statement**
The business issues are the logical explanation for the issues that were expressed in each of the emotional why-buy statements. They state a measurable and quantifiable pain, malfunctioning or loss that may be experienced by companies involved in global trade.

**Stakeholder**
This section identifies the decision makers within a customer’s organization who suffer the most from the identified business issue, and who are likely to take part in a purchase decision of a GTM solution.

**Desired Outcome**
Desired outcomes investigate the results prospective users expect to achieve from the GTM solution. They provide a quantifiable and measurable outcome that resolves the issues identified by the why-buy and business issues statements.

**Feature/Solution**
This section matches the customer’s pain and desired outcome with a specific part of the GTM solution under consideration (in this case, the TradeBeam solution suite). The features listed are expected to meet or exceed the desired outcomes so as to resolve the customer’s issues.

**Business Goal**
The business goals link each why-buy statement to the high-level business goals that a prospective customer expects to achieve from the implementation of a GTM solution. The business goals listed in the Value Matrix include all the tangible and intangible goals discussed in section 3.2.

**Value Metric**
The value metric provides one or several units of measure of the benefits provided by the GTM solution. It is always precisely defined, quantifiable, and measurable. It includes metrics such as cost reductions, sales increase, labor time reduction, cycle time reduction, etc. These
value metrics are directly used in the ROI model to get user inputs and perform the calculations of the expected return on investment.

**Example**

As an example, the why-buy statement “We need to avoid stockouts” is linked to the following information:

- **Business Issue:** Stockouts result in lost sales and lost customers; they cause our manufacturing line to shut down or force us to make unplanned changeovers.
- **Stakeholder:** VP Sales, Account Executive, Customer Service Manager, Supply Chain manager, Materials Manager.
- **Desired Outcome:** We want to reduce the total value and frequency of stockouts per year.
- **Feature/Solution:** Emailed Alerts and Visual signals on the TradeBeam portal notify customers and suppliers when inventories fall below safety stock levels. This gets all parties involved in fixing the problem before it becomes a stockout. Advance notifications of potential stockout situations allow transportation managers to re-route or re-allocate inventory to avoid the stockout. By reducing delays and uncertainty at border crossings, inventory moves consistently, which in turn reduces stockout situations.
- **Business Goal:** Reduced stockouts will lead to cost reduction, increased revenues, and improved customer satisfaction and service levels.
- **Value Metric:** Reduction in lost sales due to stockouts; reduction in expedite shipment expenditures; reduction in penalties from customers due to late deliveries; reduction in costs associated with manufacturing stoppage.

**4. ROI Model**

While companies that adopt GTM solutions may gain both quantifiable and intangible benefits, the ROI model developed in this study focuses on calculating the expected tangible benefits, based on the specific business characteristics of each prospective user.

The ROI model was built as an Excel® spreadsheet and requires users to input data specific to their organizations (e.g., average dollar value of current inventory levels; current annual revenues; and current average number of LCs managed per year). Based on this data, the model calculates for each of the why-buy statements the current costs associated with it, as well as the expected cost reduction, cost avoidance, and/or increased revenues that can be gained once the GTM solution is implemented. The model uses this information, combined with inputs regarding the expected one-time and ongoing costs associated with using the GTM solution, to calculate total costs and benefits, as well as a number of financial metrics such as a 5-year Net Present Value (NPV).
The following is a brief description of each part of the ROI model, the required inputs, and the model outputs.

**Pain Indicator Questions**  
In this spreadsheet users are asked to indicate the main improvements that they expect to realize following the implementation of a GTM solution. The spreadsheet includes a list of all potential improvements based on the identified business drivers for adopting a GTM solution, as described in section 3.1. Examples of the questions listed in this spreadsheet include: “Is your goal to reduce your inventory levels?” or “Are you looking for a cheaper and more effective way to manage your letters of credit?” Users are requested to answer Yes or No to each of these questions. Since not all companies face issues related to all the identified business drivers, the purpose of the Pain Indicator questions is to narrow down the ROI calculations to cover only those issues that are relevant for each user. Based on users’ answers, the ROI model is automatically adjusted to display and perform the calculations related only to those questions to which a user answer was “Yes.”

**Detailed Questionnaire**  
A single spreadsheet in the ROI model is dedicated to data collection from users, as well as to detailed calculations of the expected quantifiable benefits. The spreadsheet is divided into four sections, one for each of the identified areas of improvement described in Section 3.1. In each section, users are asked to provide some data that is specific to their organization. For example, to calculate expected savings associated with improved letter of credit management, users are asked to provide such pieces of data as average number of LCs per year and average number of draws per LC, as well as the number of working hours spent weekly on managing LCs and the average courier fees per LC/draw. Based on the data provided by users, as well as information provided by the solution provider regarding the expected percent improvement in each area, the ROI model calculates the expected benefits related to each of the identified issues in terms of cost avoidance, cost reduction, and/or increased revenues. The calculations are presented in a very clear way, so as to make it easy for users to understand how each of the expected benefits is derived.

Appendix 2 lists all the expected improvements considered in this spreadsheet.

**Required Expenses**  
This spreadsheet summarizes the costs associated with implementing a GTM solution. It is assumed that users will be required to make an initial investment to set up the GTM solution, and in addition will pay an annual subscription fee, the level of which is likely to depend on the total expected number of transactions. Inputs for this spreadsheet should be provided by the GTM solution provider, or—if available—from the company that considers implementing the solution.
Summary

The summary spreadsheet provides a summary of all the calculations conducted and data collected in the ROI model. It presents the one-time and ongoing annual investment required, and compares it with the total one-time and ongoing annual expected cost savings and revenue increase. In addition, the summary spreadsheet calculates such financial metrics as payback period, internal rate of return, return-on-investment, and net-present-value over a 5-year planning horizon, and also provides a breakdown of the expected cost savings and increased revenues for each of the identified business drivers. Several diagrams show graphically some of the major results, such as benefits by category and expected ROI in the first year and in consecutive years.

5. Summary and Conclusions

Over the past decade we have seen a significant expansion of global trade, with the value of international transactions almost tripling between 1993 and 2004. This trend was of much economic value, as it provided new market opportunities and, in parallel, provided access to low-cost labor, and thus allowed manufacturing companies to significantly reduce production costs.

Simultaneously, with the expansion of global trade, the environment in which commerce takes place has evolved, with improvements in communication and transportation means, as well as banking and other supporting services. In addition, regulations have become more favorable to cross-border transactions, with the creation of trade agreements and regulations in favor of labor mobility.

Still, there are numerous challenges associated with international trading. Some of them are related to the longer, more complicated and costly processes that are harder to manage compared to domestic trading, and put a strain on the ability to maintain operational efficiency and successfully meet evolving market needs. In addition, there are a large number of regulatory constraints regarding customs fees, quotas, quality standards, compliance, and product classification that must be taken into account. A thorough knowledge and perfect compliance with international regulations has become necessary to take the best advantage of trade agreements, reduce unexpected costs, and avoid fines, penalties, and costly delays due to customs issues. But manual management of regulatory issues may be extremely time-consuming and is prone to costly errors.

For these and other reasons, a market for GTM software solutions has been developing very rapidly over the past few years. GTM solutions are likely to provide a number of benefits for companies involved in global trade. The areas identified in this study as the major business drivers for adopting GTM solutions include automation of import and export processes, higher visibility to the goods at the supplier site and while in-transit, improved ability to address compliance issues, and improved inventory management capabilities. These benefits
are likely to translate into lower costs and increased revenues, and consequently have a positive impact on a company’s bottom line. In addition, adoption of GTM solutions may result in a number of intangible benefits, such as higher customer service level and customer satisfaction, smoother operations with fewer disruptions, and avoidance of situations that may result in bad publicity.

While a GTM solution can no doubt be of value to companies involved in global trade, the expected benefits should be compared with the initial installation costs as well as the ongoing costs of using the solution in order to figure out its net impact on the company’s profitability. To help companies quantify the expected benefits of a GTM solution and compare them with the associated costs, we have developed a detailed ROI model as part of this study. The model requests users to enter data specific to their organization; in addition, some data is required from the GTM solution provider regarding expected percent improvements as well as one-time and ongoing costs. Based on this data, the model calculates expected benefits in a number of areas, as well as a number of financial metrics that are intended to help decision makers determine the value of the GTM solution under consideration. The model can also be used to determine which of the various modules/solutions out of a complete GTM solution suite are expected to yield the highest ROI. This information can be used to prioritize which modules to implement first.

While we made an effort in our analysis to capture many of the major benefits companies involved in global trading may realize following the implementation of a GTM solutions, by no means do we suggest that our list of benefits is exhaustive, or that all benefits identified in this study apply to all GTM solutions available in the marketplace.
## Appendix 1

### Leading Importers and Exporters in World Merchandise Trade in 2004

(Excluding Intra-EU Trade)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Exporters</th>
<th>Value ($ billion)</th>
<th>Share (%)</th>
<th>Annual % change</th>
<th>Rank</th>
<th>Importers</th>
<th>Value ($ billion)</th>
<th>Share (%)</th>
<th>Annual % change</th>
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<td>Mexico</td>
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<tr>
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</table>


15 Retained imports are defined as imports less re-exports.
16 WTO Secretariat estimates
Appendix 2
Problems/Issues Considered in the ROI Model

As explained in Section 4, the ROI model includes four sections, one for each of the identified areas of improvements. The following is a list of all the expected improvements in each of these areas, which were taken into consideration in the ROI model.

Optimize Inventory
This section addresses the following expectations:
• Reduce logistics costs
• Reduce inventory levels
• Reduce stockouts

Automate Import and Export Processes
This section addresses the following expectations:
• Manage letters of credit (LCs) cheaper and faster
• Shorten time to market
• Minimize paperwork
• Reduce errors in import/export documentation
• Be able to audit import/export processes
• Support multiple import/export processes with a single system
• Better understand total landed costs

Improve Visibility
This section addresses the following expectations:
• Reduce transit times
• Be able to directly communicate with business partners
• Better control trading partners’ bills

Better Address Compliance Issues
This section addresses the following expectations:
• Reduce brokerage costs
• Reduce duties and taxes, and take better advantage of free trade agreements (FTAs)
• Improve documentation accuracy, to avoid penalties and fines