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3rd wave
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Total Landed Cost - Optimizing the Value of Global Commerce Management

A ***3rdwave GCM*** White Paper

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Executive Overview

The value and importance of being able to manage total landed cost in a global environment has been discussed for many years. Over the past five years many companies have worked to establish total landed cost programs that provide the organization with an understanding of how globally sourced products compare against their own domestically manufactured production and against multiple vendor/county quotes.

In almost all cases, ERP or legacy systems do not have the requisite integrated data repository structures that reflect the global supply chain environment. This fundamental lack of infrastructure underlies the failure of ERP or legacy systems to provide the extended capabilities to execute accurate and complete total landed cost management.

Significant progress has been made in providing visibility into forecast total landed cost. These tools provide significant improvement for sourcing and purchase planning. However, little has been accomplished to enable companies to analyze and benchmark their forecast costs against actual performance and therefore a real understanding of how suppliers and service providers are performing from a cost perspective is lost.

A research document: Landed Cost Model Update, was presented by a team from Penn State at the 2007 CSCMP conference on the state of total landed cost. The presentation highlighted the current state of landed cost management and the significant lengths yet to be covered before companies can analyze and benchmark their cost variables and drive considerable value across the supply chain.

This paper summarizes the presentation and concludes with an outline on 3rdwave GCM's Total Landed Cost solutions. 3rdwave GCM provides the infrastructure to master total landed cost from forecast, budget and actual cost validation and authorization through to comprehensive analysis, reporting and benchmarking.

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Total Landed Cost – Optimizing the Value of Global Supply Chains

At the 2007 CSCMP Annual Conference, a presentation by a research team from The Center for Supply Chain Research, Smeal College of Business, The Pennsylvania State University provided an update on the state of Landed Cost in industry today. The authors presented three reasons why companies initiate low cost country sourcing (LCCS) projects: Drive Cost Lower, Improve Quality, and/or Increase Competitiveness. Two of the three reasons companies implement LCCS programs are directly related to and governed by how well a company executes its total landed cost program.

The research highlighted four challenges in creating a meaningful Landed Cost Model:

- Necessary data was not readily available
- Not allowing sufficient time for analysis
- Not continuously monitoring the landed cost
- Organizational structures inhibit cross-functional effort.

The purpose of the presentation was to suggest a modular landed cost model and to provide some context to and direction from the research.

This white paper looks at the findings of the Penn State study, raises implied questions based on the study, and discusses the current reasons for the failure of most of the offered total landed cost solutions to provide the required level of competency organizations need to manage their landed cost programs effectively. Finally the paper outlines how 3rdwave GCM provides the solution needed to enable companies to move to a comprehensive, accurate total landed model quickly and effectively.

The Research (as reported at CSCMP 2007)

The research had three components: six Case Studies, a limited 300-firm survey, and finally a broad industry survey. They determined that there are six stages in a comprehensive landed cost model. Those six stages are:

1. Contract Terms: Price paid to Supplier, Incoterms, Payment Terms and Exchange Rates (over time).
2. Global Logistics Costs: Ocean Terminal Receiving Charge, Ocean Terminal Handling Charge, CAF (Currency Adjustment Factor), BAF (Bunker Adjustment Factor), and Foreign Freight Forwarding Charges (3PL, consolidation, freight forwarding, agent fees, etc.).
3. Clearing Charges: HTS (Harmonized Tariffs) Customs Processing Fees, Harbor Maintenance Fees, Broker Fees, less Duty Management – Foreign Trade Zones (FTZ), Bonded Warehouses, Duty Drawbacks, GSP sourcing, and Trade Agreement programs.
4. Inventory Related Costs: Cycle Stock, Safety Stock, and Goods In-Transit.
5. Sourcing Overhead: Sourcing Costs (supplier identification, supplier qualification, contracting processes, and supplier development), Due Diligence, Relationships, and Learning Curve (quality and delivery).
6. Global Sourcing Risk: Compliance, DHS regulations, Supply disruptions, Reputation (Health, Safety, Environment).

The presentation went on to discuss the findings from the in-depth case studies of the six major firms from six different industries. What they found was that very few of the firms were able to execute landed cost beyond Stage 3 and only one was able to partially execute Stage 5 and Stage 6 (see table below).

Stage/ Case	Stage 1 Price	Stage 2 Transport	Stage 3 Customs	Stage 4 Inventory	Stage 5 Overhead	Stage 6 Risk
Case A	X	X	X			
Case B	X	X	X	X	Somewhat	X
Case C	X	X		X		
Case D	X	X	X	X		
Case E	X	X	X	Somewhat		
Case F	X	X	X			

The implication from the study is that even at large global firms, the level of landed cost sophistication is still at a relatively incomplete state. Extrapolating this to the general business population leads to the

conclusion that total landed costs are poorly managed, if managed at all. The findings and conclusions beg several key questions which we discuss below:

1. Why is a comprehensive landed cost model so difficult to employ in an organization?
2. Why, if there are landed cost tools available either, embedded in ERP solutions or as best of breed solutions, is the state of managing total landed cost so deficient?
3. What are the lost opportunities to the firm by not having a comprehensive landed cost capability?
4. What is required to implement a comprehensive total landed cost program?

The Discussion

Why is a comprehensive landed cost model so difficult to employ in an organization?

Several factors make a total landed cost model very difficult to employ within any organization.

- At least five different departments are involved in providing supporting data: procurement, global supply chain/logistics, import operations, trade compliance and finance.
- Lack of understanding and consensus of the cost variables to use – which ones, how many?
- Absent or inappropriate infrastructure to capture and populate forecast, estimate and actual cost variables.
- Inability to aggregate costs across multiple shipments at the supplier, service provider, product, shipment and category level.
- Lack of integrated reporting, analytic and benchmarking tools to support "slicing and dicing" of information and automatically and accurately compare and highlight variances between forecast, estimate and actual landed costs at any level of the global supply chain.

Why, if there are landed cost tools available, either embedded in ERP solutions or as best of breed solutions, is the state of managing total landed cost so deficient?

In a word … integration or more appropriately lack of integration. A complete landed cost model must provide the infrastructure to integrate and synchronize all the cost variables from the sources of the data. In virtually every instance the source of the data resides across functional silos in an organization.

In almost all cases, ERP or legacy systems do not have the requisite integrated data repository structures that reflect the global supply chain environment. This fundamental lack of infrastructure underlies the failure of ERP or legacy systems to provide the extended capabilities to execute accurate and complete total landed cost management.

The best of breed solutions, most of which are outside corporate systems and exist as hosted or SaaS models, while providing many of the required capabilities to do forecast landed cost, are unable to provide integration and synchronization with the financial components of the host systems. The inability to integrate and synchronize actual cost inputs result in the failure of the solution to provide the capability to analyze and report on the variances that occur.

What are the lost opportunities to the firm by not having a comprehensive landed cost capability?

For most organizations, the costs of not having a dynamic and comprehensive cost model are significant. The problem, in almost all instances, is that costs are hidden because organizations don't have comprehensive landed cost models from which to work. Therefore, it is difficult to understand the value of managing costs on a rational ROI level.

As organizations grapple with sourcing in a global environment, managing total landed cost is becoming increasingly important. Organizations looking to optimize their global supply chains know they must be able to accurately predict what their landed costs are by supplier and service provider and have the capability to analyze the actual costs against forecasts at the item, container, shipment, service provider, and supplier levels -- or another variable they determine is necessary.

Only by forecasting and benchmarking the forecast against actual performance will the organization be able to optimize its current and future sourcing processes by supplier and service provider and improve the overall performance of their global supply chains. Without accurate

total cost analysis and benchmarking, organizations will fail to continuously improve their global commerce performance.

What is required to implement a comprehensive total landed cost program?

First, the organization must agree on the purpose of the total landed cost model. Is it to support some or all of: cost forecasting, cost management, financial control, analysis, reporting, and benchmarking? In most instances, the model will be required to support multiple objectives across multiple departments and divisions within the company. The use for the total landed cost model varies depending on the requirements of the task being supported.

- Sourcing, procurement and supply chain/logistics need a total landed cost model for planning and forecasting and supporting optimal purchasing decisions.
- Imports require total landed cost models that support execution and insure actual costs attributed to a shipment are accurate and in conformance with the forecasts.
- Finance need a total landed cost model to aid in asset allocation, cash management, auditing and accounting, and financial compliance.

Second, there must be consensus on the cost variables to be used. This requires cross-functional collaboration of all the departments involved in providing source data to the landed cost model.

Third, an appropriate information infrastructure to capture **all** of the cost variables and organize them according to the organization's total-cost model is critical. The information infrastructure requires an integrated solution that allows inter-organizational departments to input their cost elements in support of the landed cost model. This requires a powerful data repository that is designed not only to capture the cost variables but with the intelligence to manage the variables according to the reality of the supply chain.

Fourth, the model must have reporting and visibility tools that present the cost information to the sourcing, supply chain, import, compliance, and finance groups in a way that is meaningful and useful in supporting their activities. The model must:

- Accurately analyze each at the item, shipment, project level and provide visibility into product variability of actual to forecast costs.
- Benchmark supplier cost conformance and performance against contracts.
- Benchmark service provider cost compliance with contracts and service level agreements.

The 3rdwave GCM Total Landed Cost Solution

3rdwave GCM delivers full total landed cost capability by providing a comprehensive solution that enables the organization to capture its cost variables at the necessary level of granularity to support total landed cost forecasting, cost management (auditing, authorization, and payment), and analysis, reporting and benchmarking. 3rdwave GCM Total Landed Cost solution provides a fully-integrated environment that enables collaboration across functions and provides views to cost information in ways needed by the users.

Managing Cost Variables:

3rdwave GCM's global data repository is designed to incorporate "n" cost variables and manage them throughout the lifecycle of a contract, shipment or item. The 3rdwave GCM repository inherits the data cost variables from internal systems or imports external data at the most granular level in support of the total landed cost programs.

Yet the power of 3rdwave GCM total landed cost management solutions is in automating the "triple" matching of costs throughout the product purchase and import lifecycle insuring the entire forecasting, monitoring, and auditing processes are fully-integrated and reconciled.

Continuous and automatic "triple" matching of costs variables in the 3rdwave GCM total landed cost solution delivers cost control at every stage of the procure-to-pay cycle. The results are accurate variance analysis and visibility across functional silos and efforts, exact cost auditing, dispute resolution support, payment authorization and comprehensive cost benchmarking capability.

Cost Forecasting and Budgeting:

3rdwave GCM total landed cost capabilities provide automated landed cost forecasting by supporting cost evaluation and visibility at the Request for Quotation level. 3rdwave GCM provides comparative total landed costs of an item from various sourcing options based on the rules of the sourcing or purchasing groups.

At the Purchase Contract/Order level, 3rdwave GCM establishes a full landed cost budget against each item based on the purchase terms and conditions. 3rdwave GCM integrates the forecasted total land cost from the RFQ and establishes item level budgets in the P.O.

Cost Management:

3rdwave GCM's triple match processes automate cost validation against individual landed cost budget elements. Every landed cost budget element is compared against the budget. Variances outside of established business rules are noted and made visible to operators. By automatically triple matching and validating actual to budget costs, 3rdwave GCM eliminates the highly manual component of invoice validation and authorization. Invoices that are outside of conformance to budget costs are flagged for resolution prior to payment. Invoices that meet the business rules for cost acceptance are authorized for payment.

Analysis, Reporting, and Benchmarking:

3rdwave GCM's powerful analysis, reporting and benchmarking capability supports cost management, and operational and financial control and planning. At a transactional level, 3rdwave GCM constantly monitors and analyzes cost activities insuring that all cost variables related to an item are validated at the time a trigger event occurs. This automated and constant real-time analysis and validation of budget to actual activity provides total visibility into cost status.

3rdwave GCM's web-based reporting tools provide reports that are tailored to the specific user and their requirements. 3rdwave GCM reporting tools support quick ad hoc queries and present the results in a meaningful and useable manner.

3rdwave GCM provides the organization with the ability to benchmark costs from virtually any perspective - the item, shipment, supplier, service provider, etc. - and enable true landed cost insight into the effectiveness of the supply chain. The ability to benchmark the various cost variables, suppliers and service providers supports constant improvement in sourcing and purchasing of both product and related logistics' services based on real numbers. Without the ability to benchmark suppliers and service providers as to the cost effectiveness of their products and services, it is virtually impossible to make meaningful and rational cost improvements to the global supply chain.

The Value Proposition of 3rdwave GCM Total Landed Cost Solutions

Benefit Opportunities	3rdwave GCM Deliverables	3rdwave GCM Total Landed Cost Value	Department
Optimize sourcing and purchase order decisions	Full landed cost forecasting and budgeting at the RFQ and Purchase Contract level based on dynamic user-defined cost variables and company rules.	Accurate forecast landed cost calculations supporting sourcing decisions. Accurate budget landed costs provide initial benchmark structure for downstream analysis.	Sourcing, Procurement
Optimize logistics performance and cost management	Full cost control based on logistics contracts and associated costs with transactional deviation control.	Flexible cost environment insures that changes to budgeted cost based on actual performance are managed effectively. Insures downstream visibility to actual costs for streamlined auditing and authorization procedures.	Logistics, Imports

Automate cost validation, authorization and payment	Enables in-house invoice approvals with minimal overhead – eliminates need for outsourcing freight and related logistics.	Integrated cost budgeting to auditing processes supports automated invoice auditing and variance recognition. Reduces or eliminates need for outsourcing. Insures accuracy. Provides metrics for analysis and reporting.	Accounting, Finance, Purchasing, Logistics, Imports
Cash and Asset Management	Full visibility into cash requirements based on all supply chain costs	Supports cash flow projections based on accurate landed cost forecasting, budgeting and actual supply chain performance.	Finance, Accounting
Total Landed Cost analytics and reporting	Provides full visibility into cost performance from multiple perspectives – operational and financial. Enables evaluation of supply chain and partner performance based on cost metrics.	Visibility into cost variances with reason coding. Visibility into total cost of doing business with suppliers and service providers.	Accounting, Finance, Purchasing, Logistics, Imports
Supplier and Service Provider Benchmarking	Supports benchmarking actual performance of supply chain partners against budgets and SLAs.	Enables collaborative continuous improvements with suppliers and service providers based on benchmark analysis. Reduces future total unauthorized costs.	Purchasing, Logistics, Imports

3rdwave GCM by Blinco Systems Inc.

Since 1988, Blinco Systems Inc. ("BSI") has been a leading developer and solutions provider in Global Commerce Management, synchronized global supply chain execution and has provided extensive and comprehensive consulting services to companies involved in global trade and commerce. BSI's clients range from global sourcing subsidiaries and divisions of multi-billion dollar companies to SME's global sourcing, distribution and brand management companies.

BSI's 3rdwave GCM solutions fully support our client's unique business processes. Our solutions insure that our clients can execute, manage and control their global environment to constantly improve their available-to-ship/available-to-deliver capabilities at the lowest possible cost and optimize levels of inventory.

BSI uses services oriented architecture (SOA) and spiral development methodology to deliver integrated solutions that can be rolled out incrementally or as an all-encompassing global commerce management solution. BSI provides the highest levels of integrated supply chain information infrastructure extending and leveraging existing systems. No other solution currently available is able to deliver the depth and range of integrated global solutions inherent in 3rdwave GCM.

BSI consultants support clients in developing strategic approaches for global commerce management and improvement in their business processes and substantive ways to increase corporate value. BSI's consultative experiences include global commerce business design, business process design and implementation, information systems design supporting global commerce management processes, global logistics management, and inventory management control.