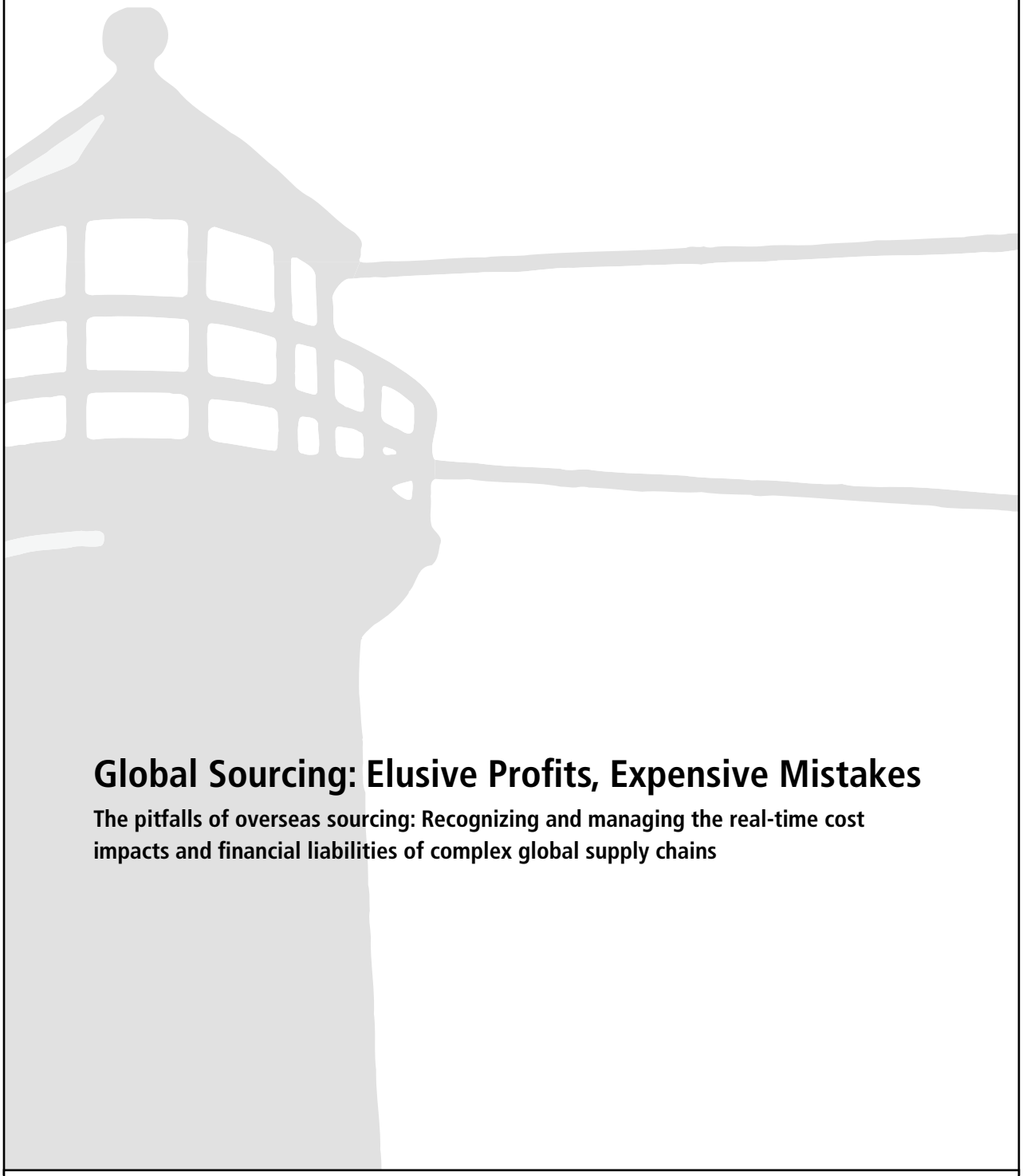


Global Sourcing: Elusive Profits, Expensive Mistakes

The pitfalls of overseas sourcing: Recognizing and managing the real-time cost impacts and financial liabilities of complex global supply chains

GT NEXUS™

A GT Nexus White Paper

Executive Summary

Global sourcing has become an essential element of enterprise strategies to reduce the cost of acquiring, building and selling products. Yet, extending supply lines overseas raises complex new commercial and operational challenges. These efforts expose the enterprise to an entirely new universe of investments, costs, partners, liabilities, resource acquisition issues, and management needs.

The result is that sourcing initiatives often do not deliver projected cost savings and profits, because the risks and costs of longer, more complex cross-border supply chains were not properly understood, tracked and managed.

This paper will expose the hidden pitfalls that organizations can encounter when they move sourcing and supply operations overseas and will examine historic practices for identifying and understanding the total costs and lead times required to bring products to market in this extended supply chain model. The paper will explore the weaknesses and shortfalls of these historic approaches, why they are ineffective, and why in some cases they are actually counterproductive — particularly in today's Internet-connected, security-conscious, demand-driven world.

The paper will also present a discussion of "next generation" global cost control methodologies and systems. This section will identify the key enablers that underpin these systems, will make a qualitative and quantitative assessment of opportunities to gain from dynamic, real-time global cost control practices, and will explain the fundamental technology architecture and differentiators that set these new systems apart from past solutions.

Finally, the paper will present "before" and "after" scenarios comparing historic landed cost practices with dynamic global cost control methodologies. The paper will conclude with a review of historical lessons learned and some thoughts on path to value utilizing today's advanced, Internet-based, network oriented global cost control systems.

Introduction

When a consumer pulls an item off the store shelf and heads for the checkout counter, the price of that product should accurately and completely incorporate all of the costs that went into its manufacture and delivery to the store, along with a reasonable profit for the maker and the seller and a premium or discount reflecting the level of market demand.

It's an easy decision for the consumer. If the perceived value of the product equals or exceeds its price, the consumer makes the purchase. The deal is done, funds change hands, the retailer books another transaction to revenue.

But for the retailer (or distributor) who just sold that product — which may have begun its life 75 days ago on a contract manufacturing line in China and then made a circuitous journey to that ultimate store shelf — the questions now begin:

- What were my actual costs to buy this product from the supplier?
- What currency was the product purchased in, and what impact did the exchange rate have?
- Did my global supply chain deliver the product efficiently? What were the actual costs for freight transportation and cargo handling fees?
- What were the costs for clearing the goods from Customs for entry into my country?
- What were the taxes and duties paid, when were they paid, and how much were they?
- What was my expense to finance and carry the inventory?
- What were my liabilities to the supplier and for all these other services and fees? When did they accrue? When were they paid? Were they paid on time?
- Were all these global costs captured and recorded accurately and promptly and then allocated properly to this particular product, so that pricing could be set correctly?
- Did the product actually make a profit?

Welcome to the world of cross-border supply chains and global cost management.

Hidden pitfalls of the rush to outsource

As companies come under increasing pressure to compete on price, the rush to "outsource" and embrace cheap overseas labor and low-cost manufacturing in developing countries has resembled a modern-day version of the California gold rush.

Almost a decade into the new millennium, tens of thousands of companies have moved sourcing and manufacturing overseas. Where in 2000 it was not uncommon for a US-based company to have 10 percent or less of its products provided by suppliers in another country, today those same companies are going overseas for 50, 70, even more than 90 percent of their products.

And while the purchasing departments in those organizations will point with pride to all the money they have saved their companies, a walk down the hall to the logistics and supply chain group reveals a far different

story. A logistics operation running from Austin, Texas to Buffalo, New York has far fewer moving parts, fewer and less complex cost components, and a lower impact on financial cash flows than a cross-border supply chain stretching from Osaka, Japan to Columbus, Ohio, where the risks and challenges are an order of magnitude greater.

Independent functions, disconnected systems

Logistics and procurement departments tend to be "siloed" functions. Because of their focus, how they are measured and how they are compensated, they often end up actually working at cross-purposes, with one gaining or losing at the expense of the other. The purchasing folks are measured by unit price. The logistics team is measured by transportation spend or total logistics cost as a percent of revenue.

Add to this mix yet another separate management system and employee group, accounts payable, where the company's bills are received, checked, assigned to cost centers, and paid. The resulting picture is one where many operational processes that are running concurrently have little or no visibility into each other. Yet each has an impact on and a role in how an organization understands, manages and controls its global costs, cash flows and profitability, and should be connected.

These silos lack a common, integrated cost tracking, measurement and analysis system that would make this connection possible, so they are like ships passing in the night, mostly unaware of each others' presence. Without an overarching system that provides real-time intelligence into the global "financial supply chain," one that allows accurate and timely visibility into both global sourcing and logistics costs as they are incurred, disaster is nearly certain. And it's a disaster that typically does not show up on the company's bottom line until weeks or months after it occurs. Several industry reports provide examples:

- A European retailer looking at the landed cost of health and beauty care products on its shelves uncovers an astounding 3,500 of 5,200 products — a full two thirds — that make no contribution to or even have a negative impact on net profitability. This unprofitable majority is, at best, dead weight or is subsidized by the remaining profitable offerings
- A diversified Fortune 250 retailer embarks on an initiative to increase a number of material, component and service activities sourced in four low-cost countries from 5 percent to 30 percent, with a $200 million projected savings in cost of goods sold (COGS). With longer supply lines, the initiative also has to account for logistics costs that could potentially rise to as much as 40 percent of COGS, as well as to deal with the challenge of assigning these costs back to individual items for profitability analysis. The projected COGS savings is adjusted downward significantly
- A manufacturing enterprise successfully expands its global supplier base, saving $20 million, only to find that logistics costs have increased by $38 million due to increased trucking expenses

The historical landed cost concept — understanding shortfalls, weaknesses, disconnects

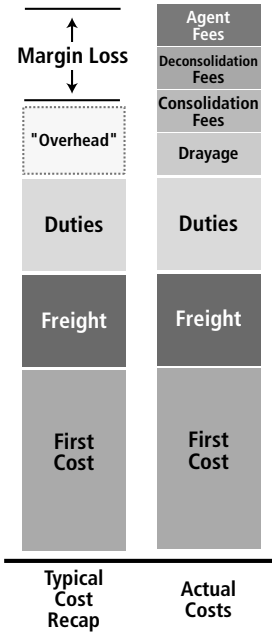
The concept of calculating the "landed cost" of a product has been around for many years. Simply defined, landed cost is the sum of all expenses to purchase, transport and import goods from one place to another, within a country or across continents, including border fees, duties, taxes, currency differentials, transport costs, insurance, consolidation and/or trans-loading costs, port handling fees, and local delivery charges.

A "landed cost" will involve the calculation of four primary categories of cost:

- Actual cost to purchase the goods
- Transportation fees and handling charges
- Government duties and fees assessed on the goods
- Other logistics expenses
    - Customs brokerage
    - Warehousing
    - Drayage
    - Consolidation
    - Packaging
    - Loss/Damage Insurance

Early attempts to build landed cost systems suffered from several fundamental design flaws and weaknesses. Data needed to feed the systems was scattered and isolated. For example:

- Shipment data came from the ocean or air carrier, via a website lookup or partially complete integrated shipment status message
- Other logistics cost data had to be obtained from forwarders, 3PLs and brokers
- Product purchase costs came from an ordering system or a supplier's invoice
- Import fee and government cost data came from error-prone third party content providers and/or customs brokers
- Other fees were left out or inaccurately assigned because they did not exist in an accessible system, they were not tracked, they had to be manually figured out, or they were merely assumptions or "rough cuts" that prorated a consolidated cost (such as a "lump-sum" bill for brokerage services over a month's time, with no specific assignment to PO, shipment or product)



Traditional approaches to determining landed cost often uncover "surprise" costs after the product is delivered — too late to make corrective adjustments.

Then, once the bills started coming in, they were managed in a separate general ledger or accounts payable system. Reporting delays were a constant issue, data latency and accuracy were continual challenges. The ability to associate and "split out" particular supply chain costs for assignment to an individual product or purchase order was uncertain, manual, inefficient, and untimely. Any knowledge gained about excessive costs was learned well after the product was delivered, priced and sold — far too late to take any corrective actions.

Unfortunately, these "surprise" costs and extra fees came right off the bottom line, reducing the margin on the product, or even pushing it into a loss.

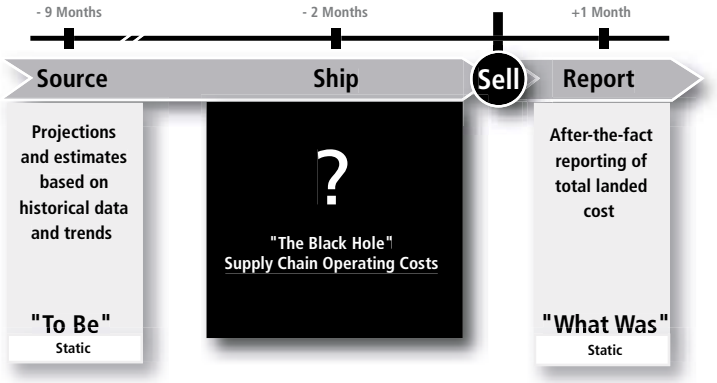
Traditional methodologies — calculating "to be" or "what was"

The most common methodologies for developing landed cost tools and information have generally taken one of two approaches:

1) A "to be" approach consisting of projections based on models, trends, historical experience, estimations, static data and industry averages. This relatively complex approach is typically used by sourcing or purchasing organizations in an attempt to "put a number" on the financial logistics expense that may be incurred in the form of freight costs, government duties and import fees for a product being sourced overseas.

2) A "what was" approach consisting of a roll-up of past charges associated with purchasing and importing a product. The buyer typically assembles the roll-up well after the product was delivered. It's an exercise that requires the deciphering of "batch" invoices or bills that contain a sum of charges over a period of time that are not reconciled or matched against a particular product, SKU or PO. Collecting the information is a laborious, mostly manual process of extracting data from innumerable phone calls, faxes, emails, FedEx pouches and web site searches. This "rearview mirror" approach is more of an analysis function, as companies try to figure out what went wrong in their global supply chain and why expected profits from the cheaper sourcing alternatives did not materialize.

Both of these approaches are flawed and ineffective, particularly in a world where the economic boundaries between countries have blurred beyond recognition, the pace of commerce has accelerated dramatically, the technologies used to execute it have evolved enormously, and a buyer is likely to purchase a product from someone half a world away, to sell to someone halfway across town.



There is a gap between "to be" landed cost projections and "what was" recaps. What's actually happening as the product makes its way through the supply chain?

Global Cost Control — The next generation, synching up the "physical" and "financial" supply chains in real time

New solutions are beginning to appear that are expressly designed and built for the intricacies and complexities of global trade cost management. These powerful new technologies use the Internet as a communications backbone and platform for delivering enabling software tools.

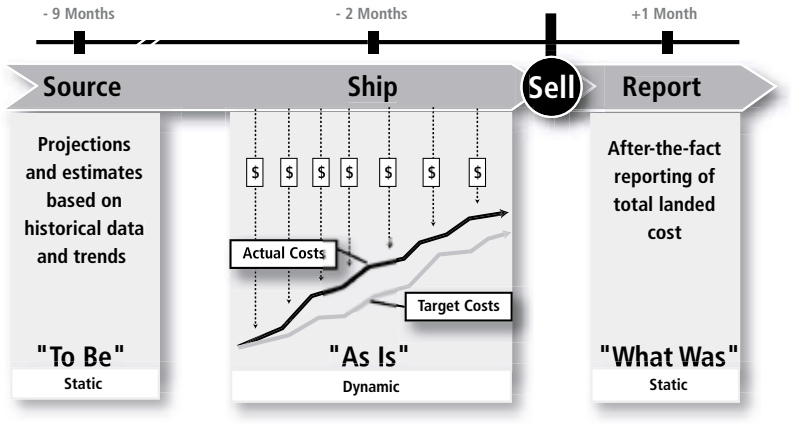
These next generation global cost control systems represent an opportunity to change completely how companies control, analyze and understand the true costs of globally sourced products — and to deliver real profits. What does this mean? For multinational companies — or any company with a classic inbound import supply chain — these new systems enable them to "synch up" their physical and financial supply chains with sourcing activities, gaining newfound visibility not only into costs as they occur, but also into how they occur and "build" in lockstep with physical supply chain flows.

This model utilizes a Web-hosted business process platform to dynamically collect, assemble, track and measure global supply chain cost actuals as they occur — and then accurately assign those costs to SKU's, product line items or purchase orders. Manual data acquisition is replaced with automated, electronic feeds. One-off connections are replaced with a central data "hub" through which the enterprise integrates with its global partners and their systems. All costs are directly linked to elements and events in the supply chain.

Next-Generation Global Cost Control

What's different?

- On-demand technology, provisioned over the Web
- Integrated network of suppliers, logistics partners
- Dynamic, real-time cost analysis, liability tracking, "watch the meter build"
- Decisions based on visibility into true cost "actuals" as they occur
- Costs in context of supply chain
- See "physical" and "financial" supply chains in parallel



New systems "synch up" physical and financial supply chains with sourcing activities, providing visibility into costs as they occur and showing how they build with physical supply chain flows.

At the heart of these new solutions are several key enablers that contribute to a more effective, demand-driven and accurate global cost management process. These include:

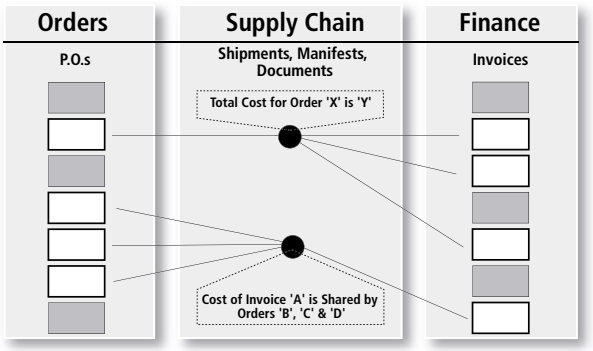
Network Platforms. This Web-based network of pre-integrated service providers and logistics partners exists today. An enterprise does not have to tackle the challenges of funding, building, launching, operating and maintaining the complex infrastructure for multi-party electronic data interchange, partner collaboration and workflow control. Key players are already "wired" to the network, dramatically speeding implementation. The ability to "share the network" significantly reduces the cost for any one participant, making it economical to switch supply chain transactions to electronic from paper means.

Timeliness. Network platforms improve timeliness by legislating — and managing — connectivity standards and providing the structure within which supply chain cost elements can be captured and presented as they are incurred. Moving to electronic "actual charge" tracking from manually input data or costing systems can dramatically improve the accuracy and timeliness of global supply chain cost values, enabling the enterprise to adjust targets and margin projections before it's too late. These systems also can improve the accuracy with which costs are allocated at a shipment, product line, or SKU level.

Data in context. Central to the network is a "unified data hub" that collects, normalizes and associates cost components into common data objects — a "single version of the truth" that joins product purchase, import logistics and transportation activities. Data is obtained through real-time integrated feeds from partner systems, or through the use of Web forms when a system-to-system connection isn't feasible.

On-demand delivery. Web-hosted software applications are delivered as on-demand services built on top of the integration platform and data hub. These sophisticated, enterprise-class software applications and data management tools aggregate, analyze and present a true global cost picture on a much more timely basis than prior means. Since the applications are hosted by the technology vendor, with the functionality delivered over the Internet, the system also can be implemented faster, exposes the enterprise to less risk, and requires a smaller investment to get started than conventional on-premises software does.

The takeaway: With these new network platforms, unified data hubs and on-demand software services, the notion of "as is" reporting or "actual" cost tracking is far easier to achieve with greater accuracy than it was using past practices, which "kluged" together disparate pieces of latent information from different systems and content providers.



Network platforms can efficiently capture information from different systems and/or providers to round out the total cost profile of a global sourcing initiative.

EXAMPLE: SCENARIOS WITH AND WITHOUT DYNAMIC GLOBAL SUPPLY CHAIN COST CONTROL

- Hypothetical $5 billion retailer
- Sources 50% of products globally
- Introducing new product line
  - Forecasted quarterly sales: $250 million
  - Sourced globally: 100%

Scenario 1: What happens *without* dynamic global supply chain cost control:

- Procurement uses spreadsheets to "put a number" on TCO target
- Orders written and financed through L/C
- Marketing kicks into gear and sets retail price at TCO (landed cost + inventory + distribution cost) + sales cost + 30% margin
- Asia manufacturing finishes full 12-week selling season, production commences; shipping, receiving into DCs, distribution to stores for initial store inventory
- Market launch. Sales take off. Celebrations
- Projections show mid-season shortages
- Additional orders placed at factory
- Airfreight authorized based on great margin
- Sales start falling off
- Retailer deploys store-level discount promotions for last 6 weeks of selling season
- Margin down to 15%
- Landed cost report is finally assembled
- True TCO is 150% of target for initial shipments. Will be even higher for express replenishment shipments — but who knows by how much
- True margin is barely positive. After discounts and airfreight, the retailer will lose money but does not know how much. New product line produced a net loss of $20M… $40M…$50M? Who knows?
- Crisis meetings…

Scenario 2: What happens *with* dynamic global supply chain cost control:

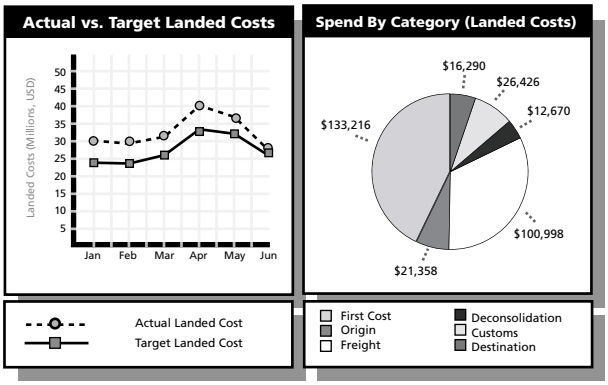
- Procurement uses experience values from the global supply chain cost management system to set cost targets; reviewing actual cost of similar products guides targets
- Orders written, sourced, financed through open account payments with pre- and post-shipment supply chain financing
- Marketing sets the retail price based on target cost data + 30% margin
- Overseas manufacturing produces full 12-week selling season, begins initial shipping
- After one week of shipments, global cost control system flags higher than expected freight charges for goods from Bangladesh. Logistics investigates; finds ineffective consolidation, agent fees not considered in targets
- Routing reset through better consolidation point. Target cost updated with agent fees
- Three weeks later, global cost control system flags higher than expected duties and inland transportation costs. Research discovers wrong product classification used by broker. Error corrected, excessive duties recovered. High inland transport costs due to congested West Coast ports and surging fuel prices. Targets adjusted again
- Goods distributed to stores for initial inventory. Market launch commences with updated (higher) prices, revised margin expectations (20%), and adjusted marketing budget. Sales are solid. Demand projections show inventories sufficient through end of selling season. No additional manufacturing orders placed
- Sales begin easing halfway through season. Global cost control system shows updated figures, total margin of 21%. Targeted supply chain cost savings measures were successful. Marketing devises discount campaign to clear inventory toward end of season — at positive 5% margin
- Total margin for new line over the full selling season: 18%. New product line produces $45 million net profit
- Celebrations…

Advantages of dynamic global cost control systems

Integrated global cost control systems present significant advantages and can be the source of qualitative as well as quantitative differentiation for a global enterprise. Major opportunity areas include:

Improve target costing. Accurately understanding target costs — the expected full cost to purchase goods from an overseas supplier and get them to market — is the key to profits. Dynamically tracking actual costs against previously set targets quickly uncovers targets that are unrealistic or inaccurate. Early visibility into the delta between targets and actuals allows shippers to quickly adjust targets and modify plans for downstream product pricing and marketing campaigns. By reducing the lag in discovering unrealistic targets from months to weeks or even days, companies can save millions in lost margins.

Dynamically report and manage costs. Implementing a global platform that automates and centrally manages global logistics data collection and consolidation can substantially reduce cost reporting delays. Traditional reporting solutions suffer from latency problems and are good only for post-audit or "after the fact" analysis. Issues that may be uncovered relate to logistics activity that's long since been completed; retroactive resolution is not possible. With dynamic cost reporting, lead-time for actuals can be cut from days or weeks to hours. Supply chain issues are exposed early. Enterprises can takes steps to respond quickly and correct problems before excessive costs are incurred.



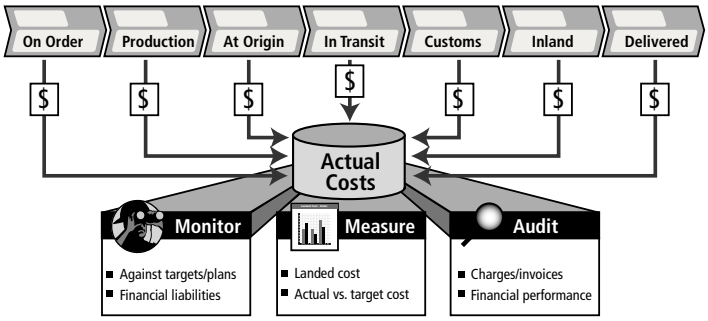
With cost data centralized and standardized, it is possible to run a range of reports and gain critical intelligence based on what's actually happening in the supply chain

Track the liability pipeline. As globally sourced goods are manufactured and then start their journey to market, the enterprise incurs liabilities for payment for goods and services. With actual global cost tracking, financial managers can literally "watch the meter build" as sourcing and supply chain milestone activities are executed and costs are incurred. This intelligence can be used to better assess obligations, as well as to calculate current and future cash flow needs. The integrated global cost control system also supports key financial management processes that underpin accurate total cost management. These include:

- **Cost allocation —** Costs can be automatically allocated by the system in the proper proportion to the right shipment, order, product line item or SKU. No "orphan" costs are left out and the resulting global landed cost calculation is accurate
- **Cost audit —** Costs can be automatically audited in the system. For example, freight costs can be matched against transportation contracts, duties against item classifications, first costs against commercial invoices or original purchase orders
- **Cost timing —** The time in which a certain liability (cost) was incurred can be audited or matched by the system against a corresponding event in the physical supply chain. For example, transfer of title to goods (and resulting payment) can be associated with or triggered by related events in the "physical" supply chain, such as Forwarder Cargo Receipt, Vessel On-Board or Vessel Arrival

Conclusion

Experience has taught us that outsourcing and strategic relocation of manufacturing and supply bases to lower cost countries can help enterprises reduce cost of goods sold. However, history also proves that the savings from these sourcing initiatives can quickly evaporate without effective technology platforms and systems capable of managing longer and more complex supply lines, and the larger, more extended financial commitment required to operate them. These platforms and systems are the Holy Grail of global supply chain management.



As goods move through the supply chain, a global cost control platform captures costs dynamically as they are incurred, aggregates them and then provides the tools needed to leverage that information.

Tangible benefits in global sourcing and cross-border supply chain performance, as well as measurable improvements in bottom-line profitability, can be obtained by investing in and deploying today's advanced, Internet-based global cost control systems. These systems herald the next generation of landed cost management, introducing new measures of value and benefit through connected networks that synch up the physical and financial supply chain and deliver new-found visibility and control over a broad swath of global sourcing, trade and logistics operations.

> "As more companies are competing on price, it is becoming even more important to know our true inventory costs accurately and immediately. This gets complicated by varying costs like freight, the duty imposed on imported products, and of course the exchange rate. The trick is to know our real costs at the time of selling ... "
>
> President of a Tier 1 Japanese automotive supplier

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