

# The Impact of Supplier Base Consolidation on Procurement, Delivery, and Production Costs: Supply Chain Operations Optimization and Vendor Consolidation

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## Abstract

With all these mergers and acquisitions, it is particularly important to consolidate and manage the number of vendors inherited or absorbed via these acquisitions. This is also an avenue to build strong relationships with their selected suppliers because working with fewer vendors helps to optimize their entire supply chain and improves efficiency across procurement, delivery, production, assets management, and customer satisfaction. Another benefit will come from increased discounts due to preferential, scale, and volume pricing not to mention cost reduction in the areas of their supply chain management. Some companies have production plants in Texas, Tennessee, Florida, Ohio, Indiana, China, Canada, Mexico, and India, and the main aim is to identify suppliers close to those plants and streamline their logistics and distribution cost. There is also a high level of risk associated with this exercise, If the supply is interrupted for any re-organization will face lots of difficulties meeting up demand, the absence of healthy competition will diminish the ability to negotiate SLAs (Service Level Agreements), and pricing against a supplier competitor but the business goal is to: Invest in Innovations, research and develop new products to be able to remain competitive, this cannot be achieved without the optimization of Procurement, Sourcing and Vendor Management. Be able to automate Procurement and Sourcing operations to increase business dynamism. This consolidation will reduce costs and free up funds to achieve their broader business goal and a bloated suppliers portfolio scattered all over the world conceals a lot of opportunities to get more with less. There were lots of political issues uncovered and encountered during this project which was anticipated but was carefully managed. Companies should think ahead and move from strong market position, growth, and reaching critical customers to accelerating profitable growth. Push the organization from a push/OEM channels a to pull strategy a with focus on end users. Ensure their product offering moves from a specific specialized brand to global recognition. Strong technological know-how to become a true and trusted innovative leader. Move from presence in new markets to leader in all markets. It is also advisable for companies to consider Vertical Integration which is a different alternative to Supplier Consolidation, and conduct financial and regression analyses for better decision-making and recommendations that will give a very big boost to their bottom line. This integration will avoid any supply disruption and organizations will have full control of their supply chain. Since Suppliers are known to dictate terms, pricing, and availability of materials, with this Integration, costs will be reduced, and production slowdowns caused by negotiations and other internal tussles will be prevented. This does not go without some risks because there is always a huge capital investment to set this up, to buy the factories and, to ensure that the plant is running efficiently and effectively.

**Keywords:** supply chain management, strategy, vendor consolidation

## 1. Introduction

As generally themed, the small the better but it is a supply chain strategy that can be used by businesses to reduce the number of the supplier base, save a lot of time instead of managing the many relationships, profitability will be increased, the procurement process will be optimized and the overall business quality will be improved to give them an advantage. This exercise reduces supply chain processes costs and effectively reduces cost across the board, risks are also reduced by the reduction of the supplier's number. As large

volumes of shipments come in, shipping cost is significantly reduced thereby improving the company's profitability. Some other school of thought believes that supplier consolidation compromises the company's ability to negotiate a great price and Service Level Agreement with suppliers but my just concluded internship in a Manufacturing company proved otherwise. The business took advantage of large-scale and volume pricing, bottom-up and cost models, and regression analysis to achieve its desired aim.

#### *The improvement from Vendor consolidation*

1. Bulk orders: Getting bulk orders and economies of scale made us have a large discount price of the products by reducing the per unit cost of the individual part numbers
2. Logistics Costs: Shipping large volume of shipments from fewer suppliers that are strategically located around the world, close to their manufacturing plants cost lesser than shipment for all the suppliers to all locations. Choosing suppliers from closer locations made product lunch easier which improved profit margins and sales.
3. Improve efficiency: Any company that wants to embark on this will simplify their procurement and vendor acquisition process and understand their suppliers with the consolidation.
4. Partnership: When we have few suppliers to manage, there will be a strong-lasting relationship that will exist making them partners. Core Supplier's efficiencies will be focused on ensuring that the quality of products supplied, and their overall performance are being measured. The selected suppliers will have the chance to understand the business of the company
5. Time-Saving: Managing many suppliers requires a lot of valuable resources and time but fewer vendors will mean less time and resources following up on all. Defeats, returns, and managing payments issues will be reduced when you are dealing with a few suppliers.
6. Increased purchasing power: This increases as the supplier base reduces, few suppliers will be awarded large volume orders while ensuring that companies receive a better price on their order and additional discounts by allocating more orders to few suppliers. This will ensure that customers will, in turn, offer better prices and services to their customers which will, in turn, bring repeat patronage.

## **2. Project Description**

The main issue addressed in this project is Supplier base consolidation: To lead a Cost Reduction Project to support the Sourcing Team for a particular Category. To maximize profitability while reducing time spent on managing vendor relationships. Identify whom we want to keep as Partners while ensuring that they align with the company's objectives.

Assign each part if necessary to the appropriate supplier while ensuring that they have the capability, capacity, and competitiveness to manage the project. The best alternative is to strategically split and assign the selected vendors close to the manufacturing plant to reduce coordination, shipping, and handling costs; reduce lead time, quick response, and resolution of customers' issues, and streamline the entire supply chain management.

Assigning the total spend to a few suppliers will provide greater leverage for negotiation, and lower costs while managing the transition of the nonperforming suppliers.

Each one of the vendors must be investigated and selected based on their technical capabilities, ESG (Environmental, Social, and Governance), Quality, delivery locations, Innovation, cash flows versus their financial health, and strategic fit for any organization. Specifications, prints, and drawings will also be submitted while categorizing them into the HCC (High-Cost Country) and LCC (Low-cost country), lead time, and payment terms while managing their contractual agreement.

#### *The Main issue addressed in this project are:*

- Suppliers' consolidation to reduce cost, streamline Supply Chain and manage different suppliers they have across multiple manufacturing clusters
- Mastic struggles to maintain visibility over expenditure due to multiple suppliers. We have processed and updated lots of return invoices, price changes, cancellations of Purchase Requisitions, and Purchase orders.
- Identifying underperforming suppliers and using scorecards to appraise the selected ones.
- Standardizing Procurement across the board to minimize complexity.
- Navigating partnerships with Suppliers that will result in faster ROI

- How to improve Operational efficiency due to outdated ERP technologies and poor communication.

*An overview of the Challenges is:*

- The main challenge Mastic is facing is finding suppliers that have the total package and offer all the solutions the business requires. This is an arduous task because lots of Suppliers specialize in a narrow group of solutions, and it is particularly challenging to find a supplier with a strong depth and breadth of the required parts and materials

The opportunities to address the issue:

This project is a perfect opportunity to address these challenges by conducting a spend analysis of each supplier and all associated costs, and a SWOT analysis of each leveraging on their capabilities, competitiveness, core strengths, and expertise.

### 3. Project Objective

The business outcomes that are expected from the successful completion of this project are: Provide recommendations to Mastic Sourcing Team on the implementation of this Supply Chain Management Strategy of consolidating their supplier base on this product Category to achieve more than -5% \$100k cost savings and direct the savings into the company's goal of producing innovative products and automation of Procurement processes. These goals will be achieved by:

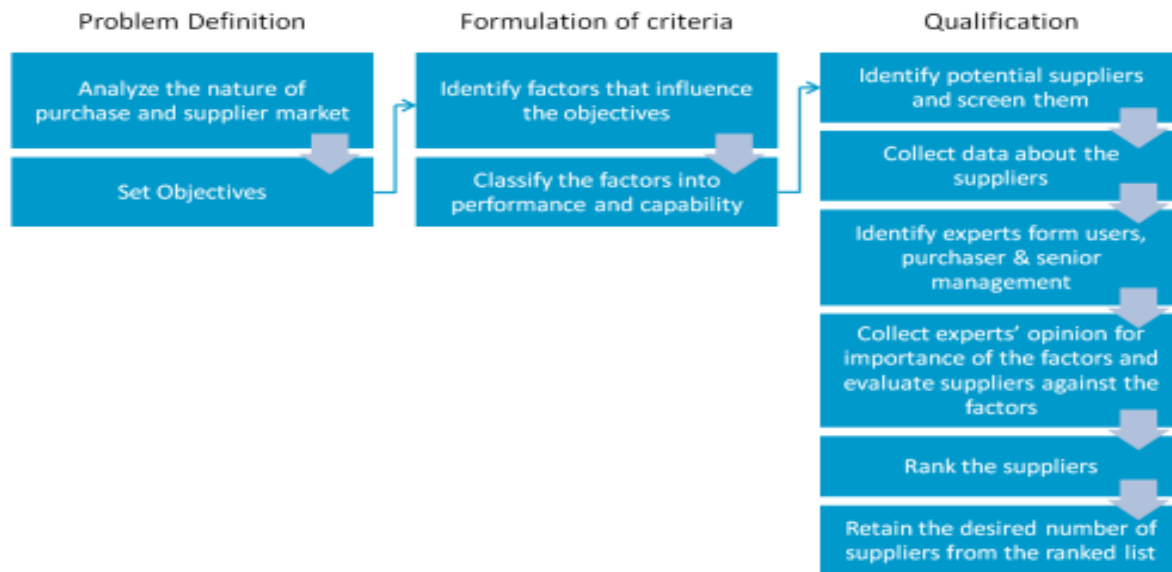
1. *Pursuing Cost reduction objectives:* Fewer global vendors mean less separate shipping-related costs and making use of vendors closer to Mastic manufacturing plants will even save more on freight cost, shipping, handling, taxes, and duty fees.
2. *Providing an opportunity to consolidate their suppliers:* Partnership with suppliers allows cooperation, shared benefits, and long-term relationships based on an important level of trust, service level will be improved because the suppliers will see the company's account to be more strategic.
3. More than \$100k cost reduction target.
4. \$0 Warranty Target.
5. Leverage spends analysis and overall control of the supply base.
6. Higher control of Suppliers and improved quality.

Project Roles

Table 1. The Team's Role

Departments	Roles
Production and Planning	User and Influencer.
Marketing and Sales	User and Influencer.
Research and Development	User and influencer.
APAC (Asia- Pacific Region) Representative	Influencer.
EMEA (Europe, Middle East, and Africa) Representative.	Influencer.
Deactivation and Decommissioning	Influencer.
Purchasing and Sourcing	Buyer, influencer.
Director of Sourcing	Approver/ Decider.

## The Company's Role



## 4. Project Timetable

The project timetable is attached to this report.

### Approaches Taken

- Different alternatives that may be used to address the issues the company is facing are:
  - Tooling: The suppliers charge a remarkably high margin to use their tools in the production of those products, but the cost will reduce if Mastic buys the tools themselves.
  - Acquire the Sole Supplier and start in-house manufacturing of the products in all their factories. Make or Buy analysis was conducted.
  - Implementation of price book items, and long-term contracts, reducing delay in contract signing, longer transaction closure, and an RFQ process.
  - Suppliers retreat and reward/award for top performing: It will foster interaction between both parties, a better understanding of each other perspectives and it serves as feedback to others.
  - They should continue to source for other suppliers especially from Mexico and China because those locations have their biggest manufacturing/production facilities, Implementation of E Contract: Reduces the time it takes to finalize a contract
  - Shorten their payment terms in other to manage their cash conversion cycle while ensuring that their Suppliers are paid on time. The financial institution should be involved to manage early payments to suppliers.
- Provide a solid argument on why a certain approach is eventually taken in this project.

Table 2. Vertical Integration/Acquisition of their best supplier in Mexico (Ruga De) Make or Buy a comparison: The Buy or Make Decision

	Alternative 1 Make	Alternative 2 Buy	Differential Amount	Comparison
<i>Variable Costs</i>				
Costs to buy from Ruga De	-	12,849,225.00	(12,849,225.00)	
Direct materials	5,850,000.00	-	5,850,000.00	Higher
Direct labor	3,217,500.00	-	3,217,500.00	Higher
Manufacturing overhead	2,091,375.00	-	2,091,375.00	Higher
<i>Fixed Costs</i>				
Factory equipment lease	2,329,000.00	2,329,000.00	-	
Factory building rents	-	-	-	
Salaries of production staffs	2,140,000.00	1,170,000.00	970,000.00	Higher
<i>Total Production Costs</i>	15,627,875.00	16,348,225.00	(720,350.00)	Lower

Note: Domestic incurs the following annual cost in producing 4,000,000 converted foams for all the manufacturing segments

NPV/Payback period/profitability index calculation

**Recommendation: Make sensible suggestions to the company**

Since the goal is to become a higher competitor while cutting costs and expanding business success, a Vertical Integration will be a perfect fit for Mastic there are 18 pieces of the converted product in all their products and they can diversify into other segments/markets since Ruga handles other market segments, see below:

Automotive	17%
Appliances	55%
Agriculture	7%
Air Conditioning	3%
Other	18%

*Plan of action:*

With NPV: 32,596,058.84

PI: 2.16: PI greater than 1.0 is considered a sound investment and generates value

Expected Cash flows: \$60,596,058.84: This means that the discounted Present Value of all future cash flows related to this project will be positive and attractive.

Payback period: The investment will pay back in: Year 2: \$33,623,275.00

*Reasons why they should acquire Ruga:*

- Influencing and management of their supply chain to lower production costs and seek economies of scale.
- *Diversification:* They can diversify in other markets mentioned above which will give them a competitive advantage and increase their market share.
- *Synergies:* Overall performance efficiency will increase across the board and cost will decrease because Mastic will leverage the Supplier's strengths.

- *Increase supply chain pricing power:* With this Vertical Integration, there will be a lot of cost savings in the margins which Suppliers usually add to their pricing and the product will be shipped at a cheaper rate while managing the Lead Time
- *To reduce competition and localization:* Their factory is closer to Monterrey Mexico, Mastic's biggest manufacturing plant.

*Corresponding business impact:*

- Create better administration and supply chain operations by combining the successes of each company while working on the troubles area.
- *Sole supplier, safeguard their property and copyright:* Mastic will acquire the supplier's patents, resources, and developing technologies, this adds to their competitive edge and increases their future viability and growth
- Diversification will allow Mastic to make use of surplus cash flows, mitigate risks in the case of industry downturn, and gives room for more variety and options for their products and services.
- *Gain greater control over their supply chain:* This will provide strategic benefits by making them more competitive while increasing their market share.
- Since the supply chain is now controlled, it allows them to lower their prices which in turn gives them an edge over their competitors
- It will provide Mastic an opportunity to offer higher quality products and take control of their products in-house while eliminating the risk associated with relying on a third-party vendor.
- Mastic will have a greater understanding of its products and how it is produced which will help them to increase its innovations in other product offerings.

*Implementation Plan:*

A brief outline of how my recommendation should be implemented is stated in the attached spreadsheet:

*Anticipated Issues:*

- Diverse cultures, self-interests, and leadership styles will be a great issue since the companies are not located in the US.
- Some of the key personnel from the Supplier side might leave the company and work with their competitors.
- Human capital issues: The workers might be in Union which might be an issue if not effectively managed.

*Anticipated Risks:*

- Overlapping jobs because of the increase in operations will bring lower productivity.
- There might be tight government regulation because the integration will block competitors from assessing raw materials.
- Substantial capital requirement, a lot of money will be required to pull this through.
- Lack of supplier competition and flexibility.
- The intended synergies might not be realized.

*Open Issues and Next Steps:*

Describe issues that you uncovered but are not addressed in this project.

- *Interest in choice of Supplier:* Some top managements preferred a certain Supplier to be retained against the best-fit choice.
- *Delay in decision making:* It takes weeks before approval is gotten because top management are in various parts of the world with different time zone, and they are always touring around the world.
- *Longer RFQ process,* this takes longer time because of duplications but we were able to streamline the process.
- *Lack of motivation and interest in the Team Members,* some of the people collaborating with me keeps resigning because their morale was low. They all have different conflicting ways of handling transactions

which is very confusing.

- *With Teams working remotely*, globally, in different time zone, and across various cultures and languages, communication and time management became more critical.
- Articulate why these should be addressed as well as any suggestions for addressing them.
  - If not addressed, the project will be delayed and there will not be parts/inventory for Manufacturing to use.
  - Factories might shut down and workers/machines will be ideal, salaries will be paid, and end users (Customers) will be disappointed which can push them to their competitors.

*Suggestions to address them:*

Before starting this project, it is necessary to ask what could go wrong and write down issues that might negatively impact the project, being ahead and foreseeing them before they happen is the best way to address the issues faced. To have a communication and meeting plan which is objective to foster better communication amongst all stakeholders. To articulate how to communicate and the frequency. This helped to ensure systematic information sharing and two-way timely communication between us all. The learning experience during the project and how it can be useful for my future academic and career development. Working in the Procurement/ Sourcing department before coming to the United States but this learning experience exposed me to a whole new level of Procurement and Strategic Sourcing process.

- *Supplier Management*: Managing a global considerable number of suppliers per category was a huge task, you must provide them with the right specification and communicate constantly. The cost control and risk management made me drive the best value out of the suppliers and reward their performances while forming a mutual bond between the two parties.
- *Multitasking*: Three Category Managers moved to another company and delegated to take over their duties, sometimes it becomes extremely overwhelming which started affecting the quality of my deliverables, prioritizing, and managing/outlining those multiple items on my to-do list and started working out. And set out a specific time (early in the morning or close of business) for work on the analytical aspect of the job.
- *Profound knowledge of Strategic Sourcing*: Being able to learn how to fulfill tasks that are relevant to my desired career in procurement and sharpening the skills we already possessed which is the main reason for pursuing this program. The researchers were able to evaluate out all the skills developed at Purdue University and see how they work in real life. The biggest strength was revealed and areas of improvement to work on which will help me in my future career.
- *Communication*: The most valuable skill developed at Mastic was being able to communicate effectively in a professional setting, thanks to the communication course which sharpened the team's presentation skills because discussions with co-works and top Management are far different from Professors and fellow students.
- *Networking*: The opportunity to collaborate with different representatives of Planning, Manufacturing, Supply Chain, Engineering, Product Development, Logistics, and Quality Management. It created great memories, and those relationships widened my professional network which is a plus for my future endeavors.
- Finally, it is okay to make mistakes: Perfection is an impossibility and mistakes are our inherent way of training which pushes us to try again and do better

## References

Mastic Outdoor USA - Compact solutions for Outdoor living | Mastic.com

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