WHITE PAPER
Supplier Insights Discovery – Data and Analytics Approach
Introduction
An efficient and evolved supply process helps companies in several ways:
- Reduces procurement and excess inventory costs.
- Supports a customer-focused business that delivers product and service optimization.
- Delivers quality in desired time frame.
- Improves supply process.

Supply management includes sourcing, procurement and elements of the upstream supplier. Organizations engage the pool of suppliers for best practices and high-quality goods and services, while enhancing economic opportunities.

Supplier maturity assessments are carried out from a strategic perspective of enhancing the competitiveness of the organization. The maturity journey of supply management leaders involves dealing with people, processes and technology capabilities. This paper focuses on the technological needs of a maturing enterprise with respect to business intelligence and analytics.

Supplier management maturity stages
Supplier management can be categorized into five phases: supply chain maturity based on ease of business adoption, complexity of data analysis and tactical vs. strategic recommendation ability. Our clients are guided to reach stage three, which results in functional excellence and further helps them to achieve stage four and five which maximizes the value. Supply management maturity deals with managing and controlling spend and also leverage on savings appealing to different stakeholders.

Integrated supply management framework - moving from anticipate stage to integrate stage
Suppliers are critical partners in the value chain. Over the years, organizations have been encouraging their suppliers to implement systems management approach to environment, health, safety, labor rights, energy and water management, security and human rights. In the integration stage, the main objective of the enterprise would be to leverage spend and minimize leakage and maverick spend. Organizations aim at maximizing spend under management, which results in cost benefits.
Supplier segmentation
Supplier segmentation enhances action-ability by bringing out supplier discrimination based on purchase value, sourcing risk and complexity. It provides a holistic view of the supplier and enhances business relevance. The segmentation exercise can be started by understanding the business, exploring data, identifying key variables and profiling and finalizing the segmentation. This helps us understand our suppliers better.
Supplier relationship management
Supplier relationship management system is used to manage supplier activities based on the criticality of the sourced product and sourcing complexity. Some of the key barriers of collaboration are misaligned metrics and incentives causing gaming, internally focused culture, disparate systems with poor data quality and integration hurdles. Based on the sourcing complexity and value, organizations must follow different levels of relationship with suppliers.

Supplier performance management
Suppliers must be analyzed from a performance perspective, based on various factors including price, quality, delivery, service and management systems. We must define appropriate KPIs to prioritize and target the right suppliers. Based on the analysis of the supplier processes, an improvement model can be arrived at.

Supplier risk management
Analytics help organizations in identifying supplier risks based on the following factors:
- Early/late shipments or delivery to wrong location.
- Non-conforming/wrong product or quantity.

- Supplier processes.
- Supplier country political stability and undesirable events (storm, flood, earthquake, etc.).
- Contract, legal and regulatory non-conformance.
- Information system failure and compromises.

Supplier Relationship Management

1. Assess Supply Base Risk
- Shortlist critical supply base.
- Assess risk.
- Prioritize suppliers based on risk (high, medium and low).

2. Plan Mitigation
- Plan mitigation for prioritized group. (Short-term and long-term plans)
- Shortlist critical supply base.
- Develop execution plan.

3. Execute Mitigation Plan
- Re-source from existing supplier base.
- Find new source (LCC sourcing).
- Improve/develop existing supplier.
- Produce in-house.

4. Monitor Risk
- Set up supply base risk monitoring dashboards.

Transactions-Order-to-cash: PO, ASN, Payments, Invoices
Collaborative-Forecasted demand, Visibility, Scorecards
Shared Value Creation- Shared risk/capex, co-creating, innovation
Supplier Risk Management
Supplier processes.
Supplier country political stability and undesirable events (storm, flood, earthquake, etc.).
Contract, legal and regulatory non-conformance.
Information system failure and compromises.
Collaborative supply management framework - moving from integrate stage to collaborate stage

Though enterprises would have achieved cost benefits in stage 3, they would not have achieved value yet. We see a change in mindset of leaders from inside-out to outside-in. In stage 4, enterprises are looking for customer value proposition and about supply management needs. This leads to trade-off with other functions to optimize value for the customer. Enterprises will achieve governance and maturity to manage spends in stage 3, and in stage 4 they learn to manage the trade-off by collaborating with their supply partners. In order to collaborate with supply partners and optimize delivery costs, relevant data has to be shared with partners. Key impediments for effective collaboration are data availability and accuracy, integrated platforms with right technology, analytical capabilities, organization readiness and process complexities. Mutual trust is the foundation for effective collaboration. This collaborative framework will help optimize the total cost to deliver.

In this stage organizations need to have the following capabilities to optimize the total cost to deliver:
- Data accuracy and availability
- Integrated platform
- Analytic capabilities
- Change management

Data availability and accuracy
Organizations should have integrated supply management system in order to reach the next level of maturity and collaborate with partners. Data sharing is one of the key steps to create a common master data foundation and governance mechanism. Key impacted roles and resources have to be identified and team has to be equipped with the right skills.

Required capabilities
- Integrating
  - Data acquisition (Customer, syndicated data, etc.)
  - Data consolidation and aggregation
  - Integration across multiple sources and formats
- Cleansing
  - Data cleansing
  - Data translations
  - Data standardization
  - Data normalization
- Enriching
  - Data mapping
  - Data reconciliation, exception handling and correction
  - Quality assurance
- Maintaining and supporting
  - Regular updates of product hierarchy, organization, channel partners, and other dimensional datasets
  - Periodical analysis and maintenance of new channel transactional data
**Integrated platform**

Business unit-based tools and silos of custom solutions often miss the complete picture and lack the functionality of utilizing downstream and upstream data. The right technology backbone required for collaboration has to be assessed and implemented. It is also vital to participate actively with standards bodies and align technology investments with emerging standards.

**Analytical capability**

Organizations must build a culture of analytics and align teams to complement each other and optimize resources. Different reporting tools for each business partner has to be avoided.
Change management
Organizations must build a culture that nurtures collaboration - stagnation after initial partnering efforts must be avoided. Enterprises must communicate information and objectives across all relevant business groups along with the involvement of senior management.

Orchestrated supply management framework - moving from collaborate stage to orchestrate stage
After achieving maturity in the collaborative model, enterprises must orchestrate or lead their entire supply chain to optimize costs and to serve consumers. Sometimes we may be paying a higher price for an item because of our need for speed or service configurability that satisfies the business proposition. Enterprises must understand the unique requirements of different customers and identify clusters of demand for value chain capability through customer segmentation. With customer segmentation, they must align demand requirements with supply constraints. Differentiated capability for end-to-end supply chain has to be created to deliver on unique demand requirements. With customer and supply segmentation, the cost for business decisions and test trade-offs of customer value attributes and cost of creation must be allocated. Therefore, the profitability of products, customers and routes to market has to be calculated and the total cost to serve must be optimized.
Maverick spend analysis
In supply chain management parlance, the term ‘maverick buying’ is often referred to procurement transactions committed outside the standard procurement processes. The objective of this analysis is to analyze the trend in maverick spend at a business unit-supply type level. Maverick spend is analyzed by plotting the trend to find any predictable change or pattern in a time frame that recurs or repeats over a one-year period.

Supplier analysis
Objective is to analyze existing supplier base in terms of spend value and their ratings. Supplier base can be further drilled-down in terms of three key performance parameters:
- On-time (%) - Percentage of instances where good fulfillment has been 100%.
- Acceptance ratio – Ability to cater to demand fluctuations.
- Shipment accuracy – Delivering the right raw materials.

Item analysis
Objective is to analyze raw material spend for individual items. It can be further drilled-down in terms of percentage maverick spend and budgeted Vs. actual spend.

Category analysis
- Forecasting of raw material/supplies requirement for next 3 months/1 year.
- What-if scenario - Impact on product cost/profitability due to change from supplier A to B.

Contract analysis
- Optimization of supplier compliance e.g. cost, lead time, quantity.
- Contract management i.e. optimization of duration of contract for single source vs. multi-source contracts.

Indicative diagnostic and predictive scenarios detailed

Root cause analysis
Objective is to conceptualize supplier related KPIs For example, order fulfillment compliance, improve market serviceability and trim inventory fat. This analysis helps in:
- Improving procurement performance.
- Reducing supplier management cost.
- Evaluating scenarios to optimize supply chain objectives and make decisions.

Raw material forecasting
Objective is to estimate baseline demand for raw material / supplies required in the next three months to one year and to demand forecast at business unit and product level. This analysis helps:
- Devise product specific strategies across established and emerging vendors.
- Optimize cost for inventory management, resource planning and operations planning.

Supplier switching
Objective is to analyze and quantify impact of supplier switching on profitability and on-time delivery. This analysis helps in:
- Evaluating the risk exposure of the supply network.
- Consolidating suppliers to ensure sourcing optimization.

Conclusions
Growing competition has been driving enterprises to reduce costs for many years now. Supply management assessments should be facilitated through management interviews and can be used to baseline sourcing and analytical capabilities of organizations. During executive interviews, the individual perspectives on priorities emerge and enable a forum on aligning priorities.

These assessments help understand the current maturity level of organizations and ways in which we can help them to reach the desired level of maturity. Enterprises, who reach the desired maturity level will achieve:

*Enhanced spend visibility:* This would enable single view across all ERP and legacy systems, financial systems. Enterprises would also get visibility into vendor, category, item, business unit and region spends.

*Accelerated savings:* Granular insights on what has been bought from which vendor helps enterprises save on their sourcing spend.

*Vendor consolidation:* Accurate and aggregated information on vendor-spend enables enterprises to rationalize the vendors they work with, and optimize deals through better terms and discounts.

*Consumer satisfaction:* Sourcing the supplies based on consumer needs and expectations will lead to enhanced consumer satisfaction and experience.

**About the author**

Andrew Stephen is Consultant, Data and Analytics, Mindtree. He has over five years of experience in Analytics, Business Intelligence, Consulting and Solutions. He has worked across the Retail/CPG value chain for leading clients across the globe.

**About Mindtree**

Mindtree [NSE: MINDTREE] delivers technology services and accelerates growth for Global 1000 companies by solving complex business challenges with breakthrough technical innovations. Mindtree specializes in e-commerce, mobility, cloud enablement, digital transformation, business intelligence, data analytics, testing, infrastructure, EAI and ERP solutions. We are among the fastest growing technology firms globally with more than 200 clients and offices in 14 countries.