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A Six Sigma approach to Integrated Business Planning (IBP) post-merger or acquisition

A structured methodology for implementing IBP

Contents

Lay of the land: Mergers and acquisition landscape

Globally, over the last few years there has been a steady increase in mergers and acquisition deals[1]. In 2012–13 over 35,000 M&A deals worth $2.8 trillion[2] were executed across various industry sectors (Figure 1). Despite the significant growth in M&A transactions during this period, less than 50% have been successful. While conflict in the corporate culture and poor due diligence are some of the typical reasons for failures, inability to realize potential supply chain synergies between the two merging companies has also been a key reason for M&A failures. Studies suggest that up to 50–60% of M&A synergy is linked to the supply chain performance[3] (Figure 2). However, supply chain managers are unable to fully leverage these synergies, which has forced them to ask some critical questions such as:

- Where should they focus their efforts to maximize supply chain performance?
- How can a successfully integrated business plan help accelerate supply chain synergies?
- How can they generate more value through robust integrated business planning post M&A?

Figure 1: M&A trends across industry sectors (2012–13)

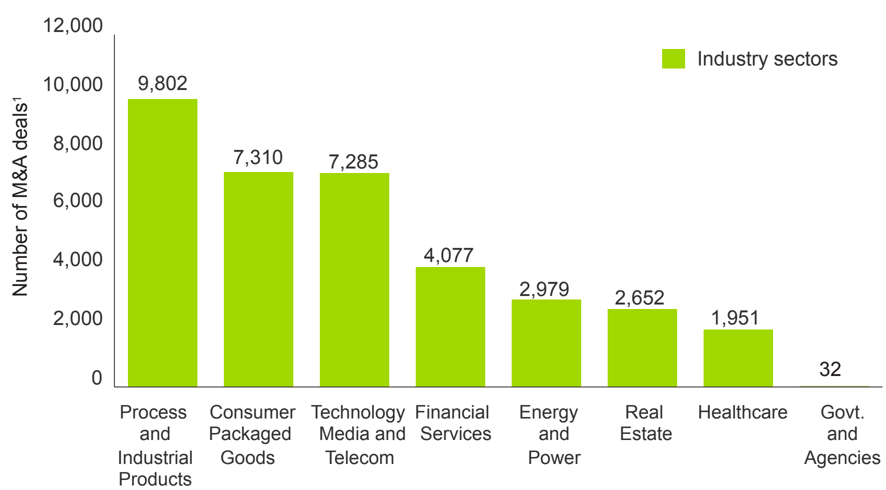
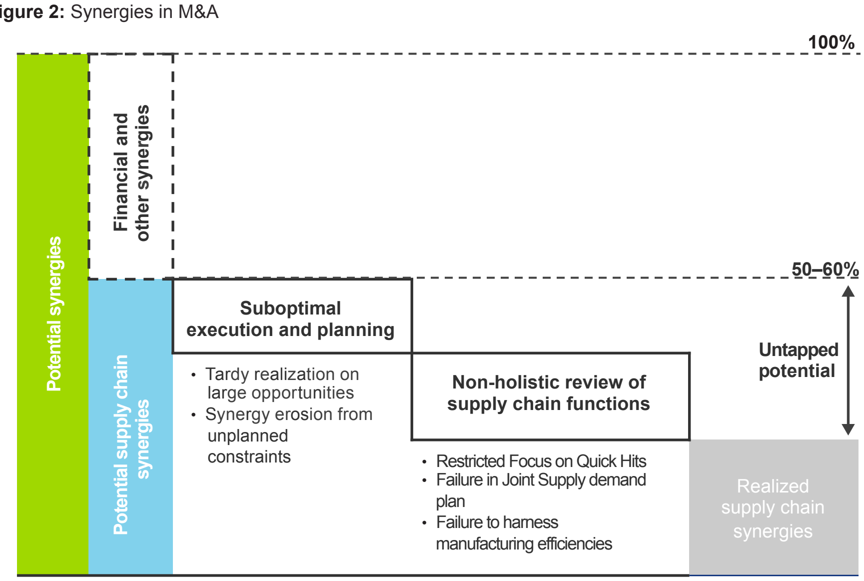


Figure 2: Synergies in M&A



Integrated Business Planning (IBP)—Impact, elements and dimensions

Often, organizations fail to identify the key priorities in a post-M&A environment and spread their efforts too thin across a plethora of initiatives. As a first step toward effectively prioritizing initiatives, companies should analyze the business impact of various supply chain improvement opportunities and assess their ease of implementation. A Deloitte study that characterizes business benefits from opportunity areas relative to their ease of implementation indicates that Integrated Business Planning has a potential for delivering significant benefits[4] (Figure 3). However, these benefits can only be realized if IBP is well executed—meriting a structured and disciplined approach.

A structured approach for effectively implementing an IBP process in a post-merger environment first requires characterizing the key elements of IBP and then defining the dimensions through which they need to be analyzed (Figure 4). These key elements are: 1. Demand Planning, 2. Supply Planning, 3. Inventory Management, and 4. Finance. The gaps exist across these four elements in a post-M&A environment can be effectively analyzed through the lens of four dimensions: (A) Mission and Strategy, (B) Operating Model, (C) Organization and Talent, and (D) Technology and Tools.

Figure 3: Assessment of business impact and complexity of implementation

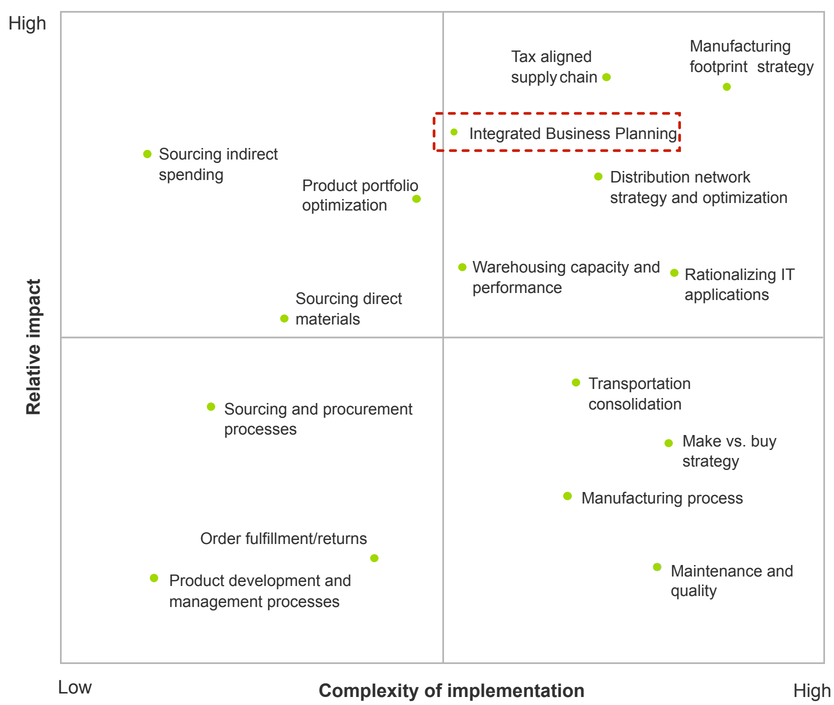


Figure 4: Elements and Dimensions of IBP

Dimensions

Mission and strategy
- Product
- Customer and Channel
- Geography and Market landscape
- Manufacturing and Supply Chain Strategy

Operating model
- Process and Policies
- Management, Metrics and KPIs
- Governance Structure

Organization and talent
- Roles and Responsibilities
- Capability Assessment

Technology
- IT Systems
- Business Intelligence Tools and Supporting Technologies

Applying Six Sigma to set up IBP post-merger or acquisition

While reviewing IBP elements of the merging companies, it is imperative that the current state gaps are appropriately assessed through quantifiable metrics to determine the future state. To that end, the supply chain leader should ask questions such as:

- What are the key disconnects in the planning process?
- How are these disconnects resulting in sub-optimal business operations, creating dissatisfaction among the customers?
- In which business areas are these inconsistent planning processes creating performance issues and bottlenecks?

Applying the Six Sigma Define, Measure, Analyze, Improve and Control (DMAIC) framework can provide a structured approach to address these questions and effectively set up the IBP process in a post-M&A environment (Figure 5).

1. DEFINE

As a first step toward establishing a unified integrated business planning process, the organization should identify critical-to-quality (CTQ) factors that could make the IBP process successful. Within the four elements of the IBP process, some of the key CTQ factors that companies can adopt are as follows:

Demand planning

An effective demand management and forecasting process is one that is aligned across sales, marketing, supply chain and finance. The baseline statistical forecast is adjusted to determine the overall unconstrained demand plan with cross-functional alignment. This demand planning process should be modified to integrate leading practices between the two companies.

Figure 5: Six Sigma approach

DESCRIPTION	Define	Measure	Analyze	Improve/ implement	Control
General/ traditional	Define the problem	Map and assess current state and determine end state	Conduct gap analysis/Root cause analysis	Determine and implement solution	Monitor and maintain solution
As applied to IBP	• Characterize key questions and considerations in an IBP process • Define the Critical to Quality (CTQ) parameters to assess the success of IBP i.e., – Demand Planning – Supply Planning – Inventory Planning/ Management – Financial Planning	• Determine key challenges/issues in each element/ CTQ of the IBP process • Finalize and align the metrics/KPIs used to measure the success of the CTQs • Collect data to determine performance of these metrics/ KPIs	• Identify the root cause and the gaps across the IBP elements through the lens of four dimensions – Mission and Strategy – Operating Model – Organization and Talent – Technology	• Identify improvement opportunities based on the root cause and gap analysis • Identify do's/don'ts and pitfalls around solution implementation • Establish IBP process governance ("RACI" matrix) and structure for IBP meetings and forums	• Deploy IBP tools, enablers, accelerators to sustain the process • Integrate and standardize IBP tools post merger/ acquisition • Promote increased adoption of IBP process across the organization over time

Supply planning

Supply Planning assesses flexibility and reliability of an integrated supply chain to enhance the delivery of products to the customer. In the context of IBP post-M&A, an important factor for supply planning is alignment within the manufacturing and supply chain capabilities of the merging entities. The overall supply planning process should focus on providing end-to-end supplier visibility, capacity planning, and production scheduling—and leverage what's working well between the merging entities.

Inventory management

Inventory management is a strategic and central supply chain planning function that focuses on developing strategies and policies to minimize inventory investments and maximize customer service performance. A successful inventory management process can be measured by performance to targets for cycle stocks, safety stocks, in-transit, pre-build and obsolete inventory. Further, having a well-defined product segmentation is important for establishing effective inventory policies for the combined entities.

Financial planning

For the combined entity, post-M&A, it is essential that financial planning is aligned with a proper reporting structure and is linked to overall budgeting. There should be a single operating plan with close alignment from Finance and a mechanism in place to validate financial decisions during the IBP meetings.

2. MEASURE

Once the critical-to-quality factors are established for the IBP elements, the next step is to map and assess the current state and the desired end state of the overall IBP process. This requires aligning on key metrics that would be used to measure and manage the four elements. A regular review of key executive and operational IBP metrics are critical for efficient decision making[5] (Figure 6).

Demand planning

The demand planning process should be evaluated based on the measurable gaps between the current state and the end-state vision. To determine the same, the key areas to keep in mind are:

- Product strategy and planning for new product demand
- Level of product and customer overlap
- Demand Planning for "end of life" transition of products
- Demand Planning for SKUs for the combined organization post merger or acquisition

The organization should identify implications of the integrated forecasting, inventories and service levels for manufacturing and distribution strategy on the overall demand planning process. For a successful demand planning function, it is critical to have organizational alignment. Key stakeholders from Sales and Marketing should be involved to provide a view of demand forecast and also look for ways to optimize the new demand planning function as the merged organization matures. Communication and transparency around forecast assumptions, risks, and opportunities are critical.

Supply planning

Similar to Demand Planning, the Supply Planning process should be evaluated based on the measurable gaps between the current state and the end-state vision. The key focus areas around this are:

- Production, Locations and Capacities
- Supply Lead Times and Variability
- Production Scheduling
- Manufacturing and Distribution Strategy
- Supplier/buyer Relationship Management

It is imperative to understand that the key areas in the supply planning function of the two organizations coming together could be leveraged to improve results. Analysis on the key cost pools and synergy drivers in direct and indirect materials is critical to establishing a robust and sustainable supply planning function post M&A.

Inventory management

The Inventory Management process should be measured keeping in mind the supply chain capabilities of the integrated organization. It is important to periodically assess whether the inventory management policies are aligned to operate in the new environment and to course correct as needed. Inventory targets should be refined as the organization capability matures. Given that inventory is a key component of working capital, specific measures should be taken to improve overall inventory turns and minimize excess and obsolete inventory, enabling free cash-flow to fuel growth, furthering the potential for a successful M&A integration.

Figure 6: Key Metrics for IBP

		Metric/KPI	Definition	Executive metrics		Operational metrics	
				Foundational	Advanced	Foundational	Advanced
Business performance		Inventory Dollars	What is the dollar value (at cost to produce) of the inventory being held in the supply chain?	✓			
		Customer Service — Order Fill %	How well did we serve our customers? How many orders were completed as % of total?			✓	
		Customer Service —OTIF	How many orders were fulfilled on time and in full?	✓			
		Return on Assets	How efficiently are we managing our assets to generate earnings?	✓			
Process performance	**Demand planning**	Forecast Accuracy	How accurate was our forecast (mean absolute percentage error)?	✓			
		Forecast Bias	Do we have a tendency to overforecast or underforecast?				✓
		Forecast Volatility	How much did the forecast change over time?				✓
	Inventory planning	Inventory Days/ Turns	How quickly do we move our inventory?	✓			
		Obsolete/Slow Moving Inventory	What is the amount of excess or slow moving inventory, i.e., inventory at risk of write-off?				✓
	Supply planning	Capacity Utilization	To what extent is our production capacity actively used?	✓			
		Production Changes within Lead Time	How much did the production plan volume change within lead time from the previous to current plan?			✓	
		Production to Plan	How close was the actual production to the IBP plan?			✓	
		Schedule Adherence	How well did the plant perform in producing to the day schedule?	✓			
Key process parameters		Planning Cycle time	How frequently are we running the planning cycle? Is there a need to change frequency?	✓			
		Supply lead time	What is the supply lead time for critical components? Are these at risk due to supplier variability?			✓	
		Production frequency	How many times in a year or month is the order placed to the supplier?			✓	
		Minimum batch sizes	What is the minimum batch size that can be ordered? What is the associated days of supply?			✓	

Finance

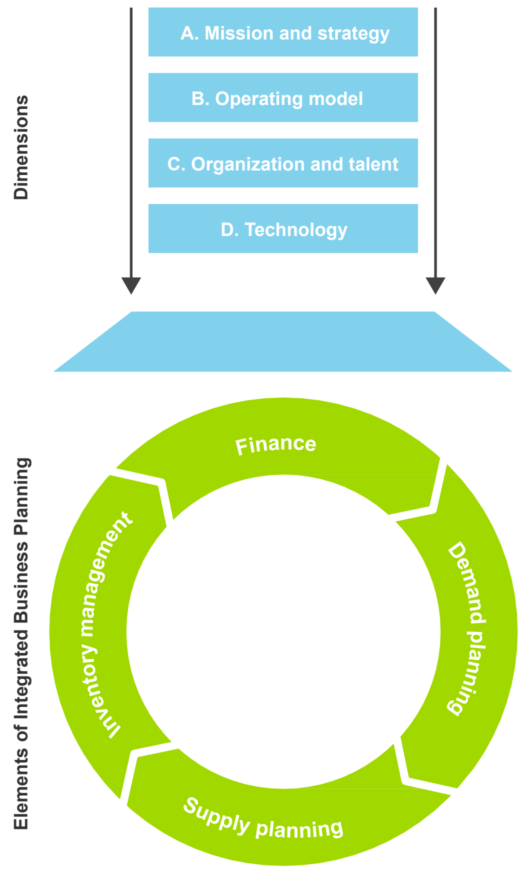
To understand the critical success factors with respect to the Finance Planning, companies should evaluate whether their financial plan is aligned to overall business operations and leverage leading practices across the two organizations.

Any "quick-win" asset reduction opportunities (e.g., liquidation of duplicate and/or underperforming assets) should be identified. Likewise, improving payment and receivable terms by leveraging vendor and customer relationships between the merging organizations can go a long way toward improving cash management.

3. ANALYZE

The third step towards implementing a successful IBP process is to analyze elements of the IBP and identify key challenges to achieving the end state. These challenges can be identified in a structured and methodical manner through the lens of four dimensions: (A) Mission and Strategy, (B) Operating Model, (C) Organization and Talent, and (D) Technology and Tools (Figure 7).

Figure 7: Elements and Dimensions of IBP



A. Mission and strategy

The key strategic challenges around product, customer, channel, manufacturing and geographies need to be identified for a broad IBP assessment.

Product

There are challenges in the IBP process involving managing products of the merging entities; for example, complexity in forecasting, and identifying the right product portfolio/mix and approach to SKU rationalization. Disconnected product strategy could result in non-aligned product retirement or obsolescence policies and higher investment costs in new product design.

Customer and channel

Different distribution channels of the merging companies could lead to channel conflict. Likewise, conflicts in customer segmentation of the merging entities impacts the planning processes.

Hence, it is important to align with the overall channel and customer strategy post merger or acquisition prior to rolling out the IBP program.

Manufacturing and supply chain strategy

Different corporate priorities are reflected in different manufacturing philosophies of the merged entities. For example, the merged entities may differ on whether the manufacturing process is build to stock or build to order. Different suppliers may have different response times, different flexibility or different throughput. The merged entities may have different levels of integration between suppliers and their manufacturing units.

Geography

Merging entities operating in different geographies pose challenges around increased logistics and distribution costs. Additionally, cross-border operations merit tax and regulatory considerations that need to be planned for.

B. Operating model

Processes and policies

The merged entities may vary in their standards of planning horizon, forecasting processes and IBP meetings cadence, potentially leading to a conflict. There may be lack of consensus on planning and minimal cross-functional collaboration and sharing of information. There may be disparate and disjointed supply planning processes. Dissimilar financial planning and reporting processes between the companies may also pose a significant challenge in implementing a unified IBP for the merged entities.

Metrics and KPIs

Disparate, limited and inconsistent information sharing from top management creates conflict in IBP. As the companies come together, there is a critical need for metrics to be harmonized.

Governance structure

Different governance structures create different priorities for the entities in the merger. One may give priority to growth whereas the mandate for the other may be profitability. Different decision-making processes reflecting different company cultures (e.g., top-down decision making, management openness to challenge and debate) can also hamper a unified IBP. As such, it is imperative to establish the appropriate governance structure to work toward a successful end-to-end planning process.

C. Organization and talent

Roles and Responsibilities

Dissimilar organization structures and titles can lead to differences in accountability for decisions. Organizational functions tend to operate in silos, hampering IBP, as it requires cross-functional alignment. Different levels of discipline around standard processes, decision-making and follow-through also create ambiguity in implementing a unified IBP. Clear ownership of key processes through a RACI matrix can help create a consistent understanding of roles and responsibilities under the construct of IBP.

Capability

The merging organizations bring in different capabilities with respect to human capital. Individuals have different experiences and levels of comfort with the IBP process. Hence, doing a skills and capability maturity assessment is helpful before laying out a detailed IBP roadmap for implementation.

D. Technology

Tools and systems

As data is maintained on multiple applications, integration of legacy systems is required across the merged entities. The two companies may have different reporting capabilities (e.g., ability to support ad hoc queries, drill-down capabilities); different levels of IT flexibility, and ability to respond to requests for change (e.g., new reports). Establishing consistent systems is of primary importance.

Information management

Merged entities may have different definitions of common data elements (planning hierarchy, product margin, on-time performance), and product hierarchy, different levels of detail and maturity in planning processes, and different architectures reflecting organizational differences. They may also lack data integrity when data moves from one system to another. This makes information management extremely difficult and complex post merger. Information management should be a main focus on the IBP roll-out charter.

Illustrative case[6]:

In 2006, a US based leading specialty coffee making company acquired one of the major manufacturers of coffee brewing machines. However, as the two organizations started integrating, several pain points surfaced—lack of accountability, unclear roles and responsibilities, redundant and complex business processes and multiple technology platforms led to rising operating costs, capability gaps, and poor customer service. A lot of these pain points could have been mitigated had a robust and structured planning mechanism to manage the combined entity been established upfront. Here's what this meant along each dimension.

Mission and Strategy: Post acquisition, the planning infrastructure faced significant challenges due to increase in number of SKUs. The sales forecast accuracy was consistently low across business units and there were frequent instances of inventory stock-outs and obsolescence. There was limited visibility on production planning and distribution processes. The lack of an end-to-end planning process resulted in misalignment of various aspects such as product portfolio rationalization, generating appropriate consensus forecasts and ensuring organizational alignment on overall business plan.

Operating Model: Each business unit planned and operated independently post acquisition. However, soon it was realized that inconsistent planning policies, processes and metrics resulted in poor business performance and posed challenges in presenting one face to the customer. This also drove a lot of redundancies into the organization—once again underscoring the need for a holistic integrated business planning process.

Organization and Talent: Acquisition created duplication of roles and responsibilities in the business planning organization. There were redundancies in activities around demand planning, inventory management, supply planning and alignment with financial planning. There was a need for a strong governance by rationalizing roles and responsibilities and eliminating duplication of efforts. Certain new capabilities were also needed to run the combined organization, requiring a renewed focus on the type of talent that was hired.

Tools and Systems: Two companies coming together created multiple tools and technology platforms around business planning. For example, different tools were used for developing demand forecast across business units. There were about 20 different product categories but no common database across them. Similarly, different CRM systems were used to record customer information, resulting in inconsistencies in customer data. There was a critical need to harmonize planning tools and systems for consistent and efficient business planning and S&OP post-acquisition.

4. IMPROVE

The Measure and the Analyze phases provide a list of challenges that should be addressed for implementation of the integrated business process. After performing the root cause analysis on them, a set of initiatives can be identified to address them. These initiatives can be prioritized on the basis of ease of implementation. A set of 25 key improvement activities have been identified and categorized into short-term, medium-term and long-term (Figure 8) based on:

a. Time needed to initiate their implementation post "day 1" of a merger or acquisition

b. Completion status of activities required to be completed prior to starting the initiative

Short-term activities

These activities should be initiated within the first four months post a merger or acquisition and should be considered prerequisites to medium-term and long-term activities. The short-term activities are primarily assessments of the current state and efforts to understand the gap between the current state and the desired end state.

Key short-term activities (0–4 Months):

1. *Assess data availability for current planning process:* Collect data and documentation pertaining to Demand Planning, IBP, Production Planning, Material Resource Planning (MRP) and Distribution Requirements Planning (DRP) to analyze current planning processes.

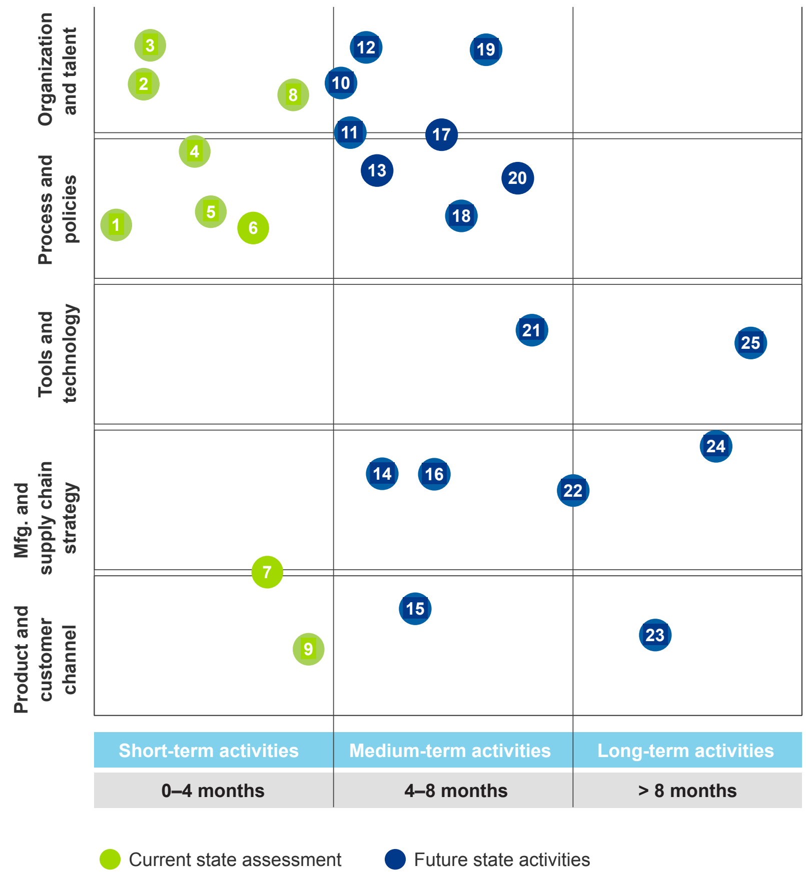
2. *Identify key capability needs and gaps*[7,8]*:* Assess level of capability and maturity that exists between the merging entities. Focus on proficiency of the supply chain organization and availability of skill set to execute planning processes.

3. *Conduct interview on management priorities post merger/acquisition:* Conduct supply chain leadership interviews and workshops to identify management priorities, KPIs and the most effective operating model.

4. *Determine current performance metrics for IBP:* Gather information on KPIs and metrics used to measure planning performance. Validate whether the incentives are linked to these performance metrics.

5. *Assess current demand and supply processes:* Assess implications of the integrated sales, manufacturing and distribution strategy on demand and supply planning. Identify the current forecasting methodology in both the organizations post merger or acquisition.

Figure 8: Activities and Priortitization Matrix



1. Assess data availability for current planning process
2. Identify key capability needs and gaps
3. Conduct interview on management priorities post merger/acquisition
4. Determine the current performance metrics for IBP
5. Assess current demand and supply processes
6. Quantify planning process gaps
7. Analyze current inventory performance
8. Assess organizational impact due to conflict in operating model and culture of merging entities
9. Assess current product lifecycle management
10. Establish consensus on top priorities
11. Determine leading practices and metrics
12. Develop "To-be" planning process
13. Establish SKU rationalization
14. Establish Supplier relationship management to match supply chain strategy
15. Develop customer and channel strategy for products
16. Develop high level procurement process and options for new procurement organization
17. Assess new demand and supply planning option
18. Establish unified financial projection and reporting system
19. Define the governance model for IBP
20. Establish IBP meeting framework and cadence
21. Establish planning hierarchy in MDM system
22. Integrate suppliers and commodities common to merging entities
23. Set uniform product development plan across the organization
24. Consolidate manufacturing footprint
25. Design and develop long-term IT strategy

6. *Quantify planning process gaps:* Map the current state planning process with the industry leading practices. Quantify process shortfalls based on impacts such as loss of sales, increase in working capital, customer service levels, etc.
7. *Analyze current inventory performance:* Conduct an inventory Days on Hand (DOH) assessment across all major BUs/brands to identify the highest potential improvement areas.
8. *Assess organizational impact due to conflicting operating models and cultures of merging organizations:* Assess whether the cost to deliver supply chain services has increased due to conflicting operating models, inconsistent processes and unclear roles and responsibilities.
9. *Assess current product lifecycle management:* Compile a list of all programs around existing products, new products to be introduced and products planned for end of life. Perform a comparative analysis (e.g., customer segment, product features, price, etc.) to set the stage for improving product life-cycle management.

Medium-term activities

This is the second phase of activities. After the initial assessment is done and gaps identified, these medium-term activities pave the way for integration of processes and policies, and impact the medium-term strategy for manufacturing, supply chain, organization and talent.

Key medium-term activities (4-8 Months):

10. *Establish consensus on top priorities:* Identify the top demand and supply planning priorities for the management and obtain alignment across the supply chain leadership.
11. *Determine best practices and metrics:* Assess the current capabilities across BUs with industry benchmarks. Establish targets for key metrics as described in the 'Measure' phase.
12. *Develop "To-be" planning process:* Develop high-level future planning processes and organizational governance and validate with division and business unit management.
13. *Establish SKU rationalization strategy:* Assess product strategy of the merged entities and level of product and customer overlap between the two organizations. Rationalization strategy should be based on customer needs and strategic direction of merged entities.
14. *Establish Supplier relationship management to match supply chain strategy:* Identify the strategic suppliers for the major commodities. Determine the most relevant performance metrics on supplier performance. Evaluate potential risks linked to the transition of common suppliers.
15. *Develop customer and channel strategy for products:* Develop a unified customer and channel strategy based on expected demand, by geographic market and potential revenue opportunity. Devise options to extend the product lines, bundling, extending market reach and approval.
16. *Develop high level procurement processes and options for the new procurement organization:* Assess options for the new procurement organization and develop high level procurement processes for the combining entities. Validate with key stakeholders.
17. *Assess new demand and supply planning option:* Focus on optimizing the new planning function. Establish the impact of the integrated manufacturing and distribution strategy on the demand and supply planning processes.
18. *Establish unified financial projection and reporting system*[9]*:* Set a common financial projection process and reporting mechanism across BUs. Use key metrics such as EBIT, ROC, and EPS to quantify synergies.
19. *Define the governance model for IBP:* Identify participants for pre-IBP, IBP and Executive level IBP meetings. Establish roles and responsibilities (RACI) for executing the process.
20. *Establish the IBP meeting framework and cadence:* Establish IBP meetings/forums, agenda structure, IBP checklist and calendar.
21. *Establish planning hierarchy in Master Data Management system:* Conduct workshops with supply chain teams and heads of BUs to identify the planning hierarchy. Set the hierarchy in the ERP/Planning system.

Long-term activities

The last set of activities are among the most challenging to implement, but they can help drive the long-term strategy of the organization. These activities should be undertaken after the successful implementation of the short-term and medium-term activities. Attempting to implement these without the prerequisite systems, policies and processes in place may yield poor results.

Key long-term activities (>8 Months):

22. *Integrate suppliers and commodities common to merging entities:* Perform and validate a detailed specification assessment by commodity to identify opportunities for consolidation and standardization. Determine which suppliers are common to the merging entities.
23. *Set uniform product development plan across the organization:* Promote a shared understanding of the market, trends and competition, and a consolidated product strategy. Define a common transition plan for "end of life" products.
24. *Consolidate manufacturing footprint:* Establish a consolidation strategy based on manufacturing network, capacity requirements and long-term impact on quality. Assess impact of facility closure on "soft " areas such as impact on employee motivation, morale, etc. Identify leading practices for the integrated organization.
25. *Design and develop a long-term IT strategy:* Identify existing IT systems and linkages across the supply chain and invest in sustainable systems, ERP packages, advanced planning systems (example—Kinaxis, JDA, SAP APO, etc.)

5. CONTROL

The last step in setting up an effective integrated business planning process is to monitor and maintain the solution. On a broad level this might include:

- Deploying various IBP tools, enablers, and accelerators to help sustain the process
- Integrating and standardizing IBP tools post merger/acquisition
- Promoting increased adoption of IBP process across the organization over time

In order to sustain the long-term benefit, it is essential to drive an effective organization wide adoption of IBP processes and gradually move the organization up the commitment curve (Figure 9). Periodic surveys/interviews with key IBP stakeholders can help assess the movement in IBP process adoption.

Figure 9: IBP adoption/commitment curve

Bringing it all together

Often an M&A deal looks attractive on paper, however, lack of attention to integration plans leads to failure. Success in a post-merger environment requires a robust supply chain integration plan before the deal closes. Identify a supply chain leader aligned to the unified vision for the merging entities with a clear and well-defined mandate to successfully execute the integration plan.

The supply chain leader should evaluate and address the existing gaps in the IBP process, and consider:

- Focusing initial efforts on achieving an accurate current-state assessment
- Investing time to simplify the planning processes so that they are easy to understand and feature a well-defined set of roles and responsibilities
- Adopting the principle of "first integration, then optimization." Trying to transform a combined supply chain function without a proper integration plan introduces high risk to customer services and financial performance
- Keeping your supply chain partners well informed and aligned with overall planning strategies

The Six Sigma approach described in this paper can help the supply chain leader develop a structured mechanism that can be applied as he/she prepares to execute an effective Integrated Business Planning process post merger or acquisition.

Endnotes

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