Frameworks in Operations Strategy
Strategy plays the role of a linkage between the external market requirement and internal organizational and technological resources, capability and competitive advantage. Without a proper strategy, the technological and organizational resources and capacities will be unfocused and very often misdirected.

Operations Strategy can be viewed as the effective use of production capability and technology for achieving business and corporate goals. These goals include profit, innovation, customization, product flexibility, quality, response, delivery reliability and after sales service. Numerous companies have discovered over the past two decades that an effective operations strategy can lead to an enduring competitive advantage. Manufacturing strategy refers to the competencies that a firm develops around the operations function. Manufacturing strategy is also expected to be one of the components of a firm’s business strategy or strongly integrated with a firm’s business strategies.

There is a significant positive relation between manufacturing–business alignment and the improvement of business performances. However, many companies do not see these relations/linkages and focus only on their business strategy, which is many a times not in line with their operation or manufacturing strategy. The alignment map helps to identify missing linkages and gaps in organizations strategies and helps to overcome them.

Now we will discuss each block of the alignment map framework in detail.

**Strategy:** Strategy or business strategy are the decisions at the strategic business unit (SBU) level that determine how the SBU will support organizational goals. A business strategy defines the SBU’s competitive direction, its scope, and how it will seek competitive advantage. The strategic fit between the internal aspects of an organization and the external environment determines competitive advantage. Strategies may be market-based and the resource-based. The market-led view proposes that firms gain competitive advantage through identifying external opportunities in new and existing markets or market niches and then aligning the firm with these opportunities. Alternately, the resource-based view of competitive advantage suggests that the firm should assemble and deploy appropriate resources that provide opportunities for sustainable competitive advantage in its chosen markets to maximize returns.

**Manufacturing Task:** Many researchers also put it as competitive priorities and it includes the following: Cost, Quality, Flexibility and Delivery. Company can check its competitiveness by comparing itself on these four parameters against other competitors in the industry.

**Other Functional Task:** This includes other functionalities which are present in a company like design, marketing, sales etc.

**Manufacturing Configuration:** Manufacturing configuration includes structural and infrastructural as the two dimensions. Structure includes: Capacity, Facilities, Technology and Vertical Integration while Infrastructure includes: Workforce, Quality, Production Planning and Organisation. Based on the Manufacturing task of the organization, they develop the manufacturing configuration.

**Manufacturing Performance:** Manufacturing performance can be measured by different metrics like productivity, impact on bottom line etc. Manufacturing configurations impacts the performance of the organization. If the configuration is not aligned to the manufacturing task, then the performance will be poor.
**Competitor Capability** - Performance: It shows the competitive performance of the company vis-a-vis a competitor. It will also help to identify what capabilities does the competitor have which the organization doesn't have. This will enable the company to identify gaps in its performance.

Once the gaps have been identified then the **manufacturing change programs** and **manufacturing action programs** can be created and implemented.

Manufacturing actions programs will help the company to identify the required **manufacturing capabilities**. Gaps can also exist between the manufacturing capability and business strategies.

**Intent** is what the organization wants to become or what changes it wants to bring in. Intent is what which supports the goal of the company. If cost leadership is the goal then efficiency improvement will be the intent.

There can be other **environmental factors** as well which include customers, industry, social, political, technological etc which might impact organizations strategy.

**Gaps and Linkages**: There can be gaps between any two factors. Identifying these gaps will help to identify inherent problems associated with the organization. there can be positives or negative linkages between different factors in the maps. Identifying the nature of linkages help to identify pain points of the organization.

An organization always needs to develop its business strategies which are in line with its operational/manufacturing strategies. For example a company having the capability of making only high end and innovative technical goods may not fare well in making mass market products. Using the map helps to understand the current position of the company and identify the gaps between its intended position and actual position. Post identification, the organization needs to develop the relevant capabilities and align all the department and tasks.
Stages of Manufacturing Effectiveness

(Source: Competing Through Manufacturing, Steven C. Wheelwright and Robert H Hayes, Harvard Business Review, January-February 1985)

This framework helps managers understand how their manufacturing organizations are contributing to the overall strategic goals, as well as other kinds of contributions whose organizations could be asked to make.

Stage 1: Minimize Manufacturing’s Negative Potential: “Internally Neutral”

This lowest stage represents an “internally neutral” orientation toward manufacturing: top managers regard the function as neutral—in capable of influencing competitive success. Consequently, they seek only to minimize any negative impact it may have. They do not expect manufacturing (indeed, they tend to discourage it from trying) to make a positive contribution. Stage 1 organizations think of production as a low-tech operation that can be staffed with low-skilled workers and managers.

- Outside experts are called in to make decisions about strategic manufacturing issues
  - Internal, detailed management control systems are the primary means for monitoring manufacturing performance
- Manufacturing is kept flexible and reactive.

Stage 2: Achieve Parity with Competitors: “Externally Neutral”

Second stage also represents a form of manufacturing “neutrality,” but Stage 2 companies seek a competitive or “external” neutrality (parity with major competitors) on the manufacturing dimension rather than the internal neutrality of Stage 1.

- “Industry practice” is followed
- The planning horizon for manufacturing investment decisions is extended to incorporate a single-business cycle
- Capital investment is the primary means for catching up with competition or achieving a competitive edge

Top managers of Stage 2 companies regard resource allocation decisions as the most effective means of addressing the major strategic issues in manufacturing. Offensive investments to gain competitive advantage are usually linked to new products; manufacturing investments (other than those for additional capacity to match increases in the demand for existing products) are primarily defensive and cost-cutting in nature.

Stage 3: Provide Credible Support to the Business Strategy: “Internally Supportive”

Stage 3 organizations expect manufacturing actively to support and strengthen the company’s competitive position. These organizations view manufacturing as “internally supportive” in that its contribution derives from and is dictated by overall business strategy.
• Manufacturing investments are screened for consistency with the business strategy
• A manufacturing strategy is formulated and pursued
• Longer-term manufacturing developments and trends are addressed systematically

Stage 3 companies want manufacturing to be creative and to take a long-term view in managing itself. They view technological progress as a natural response to changes in business strategy and competitive position. Their manufacturing managers take a broad view of their role by seeking to understand their company’s business strategy and the kind of competitive advantage it is pursuing.

**Stage 4: Pursue a Manufacturing-Base Competitive Advantage: “Externally Supportive”**

In Stage 4 manufacturing managers take a broad view of their role by seeking to understand their company’s business strategy and the kind of competitive advantage it is pursuing. The role of manufacturing in Stage 4 companies is “externally supportive,” in that it is expected to make an important contribution to the competitive success of the organization.

• Efforts are made to anticipate the potential of new manufacturing practices and technologies
• Manufacturing is involved “up front” in major marketing and engineering decisions (and vice versa)
• Long-range programs are pursued in order to acquire capabilities in advance of needs.

Stage 4 organizations are generally of two types. The first whose business strategies place primary emphasis on a manufacturing-based competitive advantage such as low cost. The other type of Stage 4 company seeks a balance of excellence in all its functions and pursues “externally supportive.” In addition, there are extensive formal and informal horizontal interactions between manufacturing and other functions that greatly facilitate such activities as product design, field service, and sales training.
Linking Outsourcing to Business Strategy


Methodology for outsourcing

This methodology provides:

- alignment of outsourcing with business strategy of the enterprise
- clarification of the core capabilities and competencies
- identification of strategic gaps and specific strategies for cost saving and asset shedding
- recognition of the enterprise’s significant dependencies and vulnerabilities

The planning guide is in the form of two dimensional matrix to assess the activities and to suggest appropriate actions.

Key Activities

Cell 1: Get Capability
If an enterprise’s capabilities are weak in an area that is discovered to offer significant competitive advantage to its competitors, it should move to obtain full ownership and control by acquiring the capability in-house. That is it should seek to move towards Cell 2 and Cell 3.

Cell 2: Build strength
As in Cell 1, if an enterprise’s capabilities are moderate in an area that is discovered to offer significant competitive advantage, it should invest to build internal strength and move toward Cell 3.
Cell 3: Do in-house
If an enterprise has strong capability relative to its competitors and the activity clearly provides significant competitive advantage, the enterprise should be performing the activity in-house under tight control.

Emerging Activities
In Cells 4, 5, and 6, where the activity is categorized as emerging, the firm can rely on some form of relationship to obtain its competitive advantage. Relationships can be short-term, followed by bringing the capability in-house, or long-term, or even permanent. The deciding factor on whether these activities should be brought in-house is their contribution to competitive advantage.

Cell 4
Competitive advantage has become more certain, or downward, which implies less certainty. The result of this movement will determine the strength of the relationship needed or whether the activity should be brought in-house.

a) **Partner:** When there is weak internal capability in an activity that has a significant probability of being a source of competitive advantage, the enterprise should seek to partner with a more capable group in order to remain competitively viable. *If possible, the partnership should provide a definitive ownership posture, while positioning to acquire more ownership if the activity truly becomes a key source of competitive advantage.*

b) **Collaborate:** When there is weak internal capability and only a possibility of competitive advantage, collaboration with a more capable group or groups is warranted. In this situation, a less definitive ownership posture is needed than in partnering. The goal of the collaboration is to strengthen the enterprise's position while limiting the risks inherent in a commitment, until the possibility of competitive advantage becomes more certain.

Cell 5
Activities in this cell need to be monitored for movement either upward or downward, depending on the evolution of their potential for competitive advantage. The result of this movement will determine the strength of the relationship needed or whether the activity should be brought in-house.

a) **Partner:** This situation resembles Cell 4(a), except that the enterprise's position is stronger because of moderate internal capability. As in 4(a), the recommendation is to partner with a more capable group. Here, however, the partnership agreement can be structured more to the enterprise's favor because of its stronger internal knowledge base and capabilities. *As the level of certainty for gaining competitive advantage increases, the enterprise should be prepared to shift the work in-house and/or under more direct control.*

b) **Collaborate:** With a less certain potential for competitive advantage than Cell 5(a) and a moderate position in the capability, the enterprise can be less definitive in its relationships.

c) **Share risk:** As the level of potential for competitive advantage diminishes, the movement should be toward sharing risk and investment with others. Sharing risk means the enterprise recognizes that it might not ever need full ownership in-house for this activity. Sharing risk
also allows the enterprise to maintain a level of involvement in the activity, while conserving its resources for application elsewhere.

**Cell 6**
This is a strong position to be in for activities that are emerging sources of competitive advantage. Activities in this cell need to be monitored for movement either toward or away from becoming key.

a) **Do in-house:** If the enterprise has strong in-house capability relative to competitors, and the potential for competitive advantage is high, the enterprise should continue to do the work in-house with full control and ownership.

b) **Share risk:** As in Cell 5(c), when the potential for competitive advantage is less, the movement should be toward sharing risk and investment with others rather than trying to retain a strong position. This will allow the enterprise to maintain a level of involvement with the activity, but to conserve its resources for application elsewhere, or for when this activity shows clearer potential for competitive advantage.

**Basic Activities**
As in the emerging activities depicted in Cells 4, 5, and 6, the enterprise can rely on relationships to acquire the basic activities found in Cells 7, 8, and 9. For historical reasons, the enterprise may be strong in some of these activities. In that case, the guide suggests moving toward relationships rather than keeping the activity in-house. However, the firm might wish to take advantage of its strength to generate income from others, even competitors in its industry, without fear of harming its competitive position.

**Cell 7: Buy**
If the potential for competitive advantage is low, and little internal capability exists, the activity should be bought in the marketplace. Relinquishing a weak in-house capability avoids any further drain on the enterprise's resources.

**Cell 8**
In this cell, the enterprise has a moderate capability in an activity that might not be a source of competitive advantage. Depending on the likelihood for competitive advantage, the enterprise should move toward more or less in-house capability, as discussed below, to minimize its investment as well as its operational risk.

a) **Develop second source:** Dependency on the internal capabilities could be reduced through development of one or more external sources. Because the possibility of competitive advantage still exists, the internal capabilities should be maintained to help the enterprise be a smart buyer in the marketplace.

b) **Buy:** If competitive advantage is not likely, and only moderate internal capability exists, the activity should be bought in the marketplace to avoid any further drain on the enterprise's resources. Once a stable external supply system is established, internal investments should be withdrawn and movement to the left in the matrix encouraged. If competitive advantage
is not likely, and only moderate internal capability exists, the activity should be bought in the marketplace to avoid any further drain on the enterprise's resources.

**Cell 9**

While it might be attractive to be strong for its own sake, those activities categorized as basic should be carefully considered. Activities in this cell can tie up resources that could be devoted instead to generating competitive advantage. One must be certain, however, that these are truly basic activities.

a) **Make it a profit centre:** When the potential for competitive advantage is less likely, yet in-house strength exists, the need to limit the activity to support only internal requirements is diminished. The enterprise should consider reducing the level of investments in this area, as appropriate for an activity with a low potential for competitive advantage.

b) **Consider selling/buying:** When an enterprise has a strong capability that is unlikely to yield competitive advantage, it should consider selling off the capability and reinvesting the proceeds elsewhere. Since the capability is still needed, the newly sold capability, which is strong could continue as a source for divesting company.

**Commodity Activities**

Cells 10, 11, and 12 are categorized as Commodity. The firm should buy these activities in the marketplace. If, for historical reasons, the firm is strong in one of these activities, then it should consider ways of exiting that activity while getting value for its past investments.

**Cell 10: Buy**

If there is neither competitive advantage nor significant internal capability, any in-house activity should be stopped as quickly and cleanly as possible to avoid any further drain on the enterprise's resources. Instead, the enterprise should buy what it needs in the marketplace.

**Cell 11: Exit/Buy**

If an enterprise determines that it has moderate resident strength in an area where no competitive advantage exists, we recommend an exit strategy wherein the capability is abandoned or allowed to weaken—with ultimate movement toward Cell 10, Buy. Once again, the enterprise should buy what it needs in the marketplace.

**Cell 12: Consider Selling/Buying**

Where an enterprise has strong capability, but can gain little or no competitive advantage, it should consider selling off the capability and reinvesting the proceeds elsewhere. As with the preceding two cells, the enterprise should buy what it needs in the marketplace.
A Conceptual Synergy Model

(Source: A conceptual synergy model of strategy formulation for manufacturing, Kit Fai Pun
Emerald Group Publishing Limited)

In an attempt to integrate the various strategy models and frameworks into a holistic system, the
author proposes a conceptual synergy model of strategy formulation for manufacturing firms. It
attempts to synthesise various frameworks and methodologies from the organizational strategy,
operations strategy and information strategy traditions. A diagrammatic representation of the
synergy model is shown in figure below. It is composed of ten building blocks including the Porter's
(1980, 1998) competitive forces model, Benjamin et al.'s (1984) strategic opportunities framework,
alignment model, Mill et al.'s (1995) contingency framework, Venkatraman's (1991) and Burn's
(1997) IT-induced reconfiguration model, Pun et al.'s (2000) strategy configuration process model,
and Swamidass et al.'s (2001) alternative strategy development process model.

Build upon skeleton of the strategy configuration process model, the synergy model applies the
competitive forces model to provide a basis for examining a firm's current and future position.
Strategic prerequisites (e.g. company mission, organizational resources and technology level)
competitive priorities (e.g. cost, quality delivery and flexibility) are examined using the strategic
opportunities framework. Both competitive advantages framework and strategic alignment model
are used to examine the strategic decision areas that may potentially produce competitive
advantage, emphasising the determination of strategic directions (e.g. cost leadership, product or
service differentiation, market niche, and strategic alliance). Moreover, the strategic grid and the alternative strategy development matrix are employed to reaffirm the firm’s position, while the impact model is used to evaluate the strategic choices and options. The synergy model makes use of the IT-induced reconfiguration to embrace the conceptualisation for the technology-strategy connection. Besides, it adopts the principles of the contingency framework to achieve a set of desired process outcomes.

The synergy process of strategy formulation and configuration.