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1. DESIGN SUPPLIER NETWORK ARCHITECTURE:

DEFINITION: Design the size, structure and composition of the supplier network to ensure the efficient creation and delivery of value to all enterprise stakeholders, focusing on the customer.

Diagnostic Questions

- Does the size, structure and composition of the supplier network reflect the enterprise vision and make-buy strategy?
- Does the design of the supplier network reflect a proactive effort to balance in-house capabilities with supplier-based core competencies to optimize the creation and delivery of best value?
- Are cross-functional commodity teams established for streamlining and selecting suppliers?
- Is supplier process capability measured and effectively utilized?

Lean Indicators

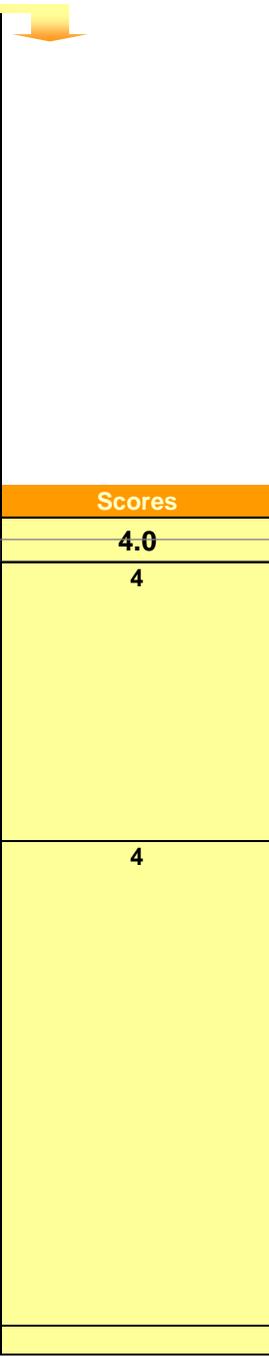
- Structure and composition of supplier network are linked to corporate vision and strategy.
- Make-buy and strategic sourcing decisions are firmly grounded in integrated set of criteria reflecting strategic corporate objectives.
- Supplier network strategy reflects a differentiated strategy designed to maximize value creation.
- Core competencies are aligned throughout the extended enterprise.

Potential Metrics

- Percent of direct suppliers selected on past performance or best value basis
- Ratio of total number of lower-tier suppliers to major suppliers
- Percent of direct purchase dollars placed to preferred or certified suppliers
- Percent of total end-product cost consisting of supplier-provided parts, components and materials
- Trends in the total unit cost of the enterprise's primary product (in constant dollars)
- Trends in the profitability of the supplier network (in constant dollars)

Capability Levels

Key Enabling Practices						Scores
	LEVEL I TRADITIONAL	LEVEL II ADOPTER	LEVEL III PERFORMER	LEVEL IV REFORMER	LEVEL V TRANSFORMER	4.0
1.1 Assure supplier strategy linked to corporate vision, goals and objectives	<ul style="list-style-type: none"> • There is little or no evidence of a supplier strategy linked to well-defined corporate vision, goals and objectives. • Supplier strategy focuses mainly on reducing the cost of discrete procurement functions (e.g., order placement, invoicing, inventory management, materials handling). 	<ul style="list-style-type: none"> • There is limited linking of supplier strategy to corporate vision, goals and objectives. • Supplier strategy is seen as an enabler of improving cost and quality performance. • There is very limited sharing of a common vision or commitment across suppliers. 	<ul style="list-style-type: none"> • Supplier strategy is linked to corporate vision, goals and objectives. • Supplier strategy is seen as an important enabler of improving competitive advantage. • There is spotty sharing of vision and commitment across the supplier base. 	<ul style="list-style-type: none"> • Supplier strategy directly reflects corporate vision, goals and objectives. • Supplier strategy is seen as a crucial enabler of improving corporate competitive advantage. • There is some shared vision and commitment across the supplier base. 	<ul style="list-style-type: none"> • Supplier strategy represents a direct extension of corporate vision, goals and objectives. • Supplier strategy is seen as a central core competence to enhance corporate competitive advantage. • There is shared vision, goals and objectives throughout the supplier network. 	4
1.2 Design supplier network based on strategic mapping of core competencies internally and across suppliers.	<ul style="list-style-type: none"> • The design of the supplier network does not reflect a strategic mapping of core competencies internally or across suppliers. • Mapping of core competencies is confined to internal manufacturing processes. • There is little congruence between internal and external supplier-based core competencies. • The supplier network is characterized by a large number of direct production suppliers and a hierarchical structure with multi-tiered top-down control and management. 	<ul style="list-style-type: none"> • Supplier network design reflects limited consideration of core competencies internally and across specific suppliers. • Mapping of core competencies internally and across specific suppliers focuses on discrete manufacturing processes. • There is limited congruence between internal and external supplier-based core competencies. • Limited recognition is given to concurrent design of products, processes and supplier network 	<ul style="list-style-type: none"> • Supplier network design reflects some consideration of internal and current (or required) core competencies of selected suppliers. • Core competencies of selected suppliers in defined technologies or manufacturing processes are documented. • There is some congruence between current (or required) internal core competencies and those of selected suppliers. • Some recognition is given to concurrent design of products, processes and supplier network. 	<ul style="list-style-type: none"> • Supplier network design reflects an explicit consideration of current and required core competencies internally and across major critical suppliers. • Internal and external core competencies of suppliers in key technologies are well defined. • Core competencies internally and across suppliers are aligned. • Recognition is given to concurrent design of products, processes and supplier network. • Supplier network design is seen as an important enabler of corporate competitive advantage. 	<ul style="list-style-type: none"> • Supplier network design reflects a proactive comprehensive strategic mapping of current and required core competencies internally and across the supplier network. • Supplier network design strives to optimize portfolio of core competencies internally and throughout the supplier network. • Products, processes and supplier network are designed concurrently. 	4



<p>1.3 Select suppliers based on criteria optimizing core competencies internally and across suppliers .</p>	<ul style="list-style-type: none"> • Sourcing decisions are not linked to make-buy criteria based on evaluation of core competencies. • Supplier selection is based on a competitive, adversarial, process following a sequential multi-step procedure. • Suppliers are selected mostly on the basis of the lowest cost bid, reflecting the old maxim: "Three bids and a cloud of dust." • Multiple supplier sources are typically used for procurement of a given discrete item. • Supplier selection is made at the operating level, driven by lowest cost (price) considerations. 	<ul style="list-style-type: none"> • Sourcing decisions reflect make-buy criteria based on limited evaluation of core competencies. • Supplier selection is based on a competitive process weighing lowest cost bid and other criteria, where a relatively small percentage of contract awards are made on a past performance basis. • Multiple supplier sources are used for many discrete parts, along with selected use of dual sourcing and isolated use of sole sourcing. • Supplier selection is made at the facility or operating level focusing on reducing the cost of discrete purchased items. 	<ul style="list-style-type: none"> • Sourcing decisions reflect make-buy criteria based on evaluation of core competencies internally and across selected suppliers. • Some key suppliers are selected based on past performance and "best value," while a majority of suppliers of standardized items are selected using competitive bids. • Extensive multiple sourcing is used for highly standardized items, along with some dual sourcing and selected use of sole sourcing. • Dual sourcing is used for mature high-volume parts, while sole sourcing is used for selected complex high-technology specialty items. • Supplier selection is made by procurement organization, focused on reducing total program or product cost. 	<ul style="list-style-type: none"> • Sourcing decisions reflect make-buy criteria based on a thorough evaluation of core competencies internally and across major critical suppliers, focused on delivery of best value to the customer. • A relatively high number of major critical suppliers, and some subtler suppliers, are selected on the basis of past performance and "best value." • Multiple sourcing is used for standardized items, while dual sourcing is used for some technologically mature high-volume parts and sole sourcing is used for some complex high-technology components. • Supplier selection is made by enterprise-level cross-functional teams focused on delivering best lifecycle value to the customer. 	<ul style="list-style-type: none"> • Sourcing decisions reflect make-buy criteria based on a comprehensive evaluation of current and required core competencies internally and across suppliers, focused on creation of best lifecycle value for all stakeholders. • A majority of major critical suppliers and many subtler suppliers are selected on the basis of past perf. and "best value," focused on value creation. • Multiple sourcing is used for highly standardized items, while dual sourcing is used for selected technologically mature high-volume components, and sole sourcing is limited to selected complex high-technology subsystems. • Supplier selection is made by enterprise-level cross-functional teams focused on value creation for all stakeholders. 	<p style="text-align: center;">4</p>
<p>1.4 Segment suppliers into differentiated categories based on their relative strategic importance in creating value</p>	<ul style="list-style-type: none"> • Little evidence of an attempt to develop a differentiated procurement strategy. • Little or no effort made to segment suppliers into different categories, in terms of their relative importance and related criteria. 	<ul style="list-style-type: none"> • Limited effort is made to classify direct suppliers into different groups for the purpose of developing differentiated procurement strategies. • Supplier strategy is largely aimed at reducing transaction costs at program (product) level. • Direct suppliers grouped largely into such categories as major teaming partners and all others. 	<ul style="list-style-type: none"> • Direct suppliers are grouped into different categories for evolving differentiated procurement and supplier integration strategies. • Supplier strategy is aimed largely at reducing transaction costs at the business unit or enterprise level. • Supplier segmentation criteria consider a number of factors, such as relative economic importance and degree of criticality of procured items in terms of overall program (product) cost and performance 	<ul style="list-style-type: none"> • Direct suppliers are grouped into different categories on the basis of formalized supplier segmentation criteria for developing procurement and supplier integration strategies. • Supplier strategy is aimed at reducing internal and external coordination costs at the enterprise level. • Supplier stratification and segmentation criteria employ formalized methods considering such additional factors as transaction frequency and volume, and degree of complexity of purchased components. 	<ul style="list-style-type: none"> • Highly-differentiated supplier integration strategies and practices are implemented, based on formalized stratification and segmentation of the supplier network. • Supplier strategy is aimed at minimizing coordination costs and creating value. • Supplier stratification and segmentation criteria reflect such additional factors as mutual economic dependence and technology clockspeed. 	<p style="text-align: center;">4</p>

<p>1.5 Create internal organizational structures and basic infrastructure systems for efficient management of supplier network</p>	<ul style="list-style-type: none"> • Procurement is centralized into a materiel or purchasing organization supporting engineering and production operations. • One set of uniform processes and procedures govern procurement operations. • Procurement operations focus on discrete functions (e.g., order placement, inventory control, inspection procedures, materials handling). 	<ul style="list-style-type: none"> • Procurement is typically centralized at the enterprise level and serves as a service center supporting engineering, production and post-sale customer support functions. • There is limited integration between the procurement organization and engineering, manufacturing, quality, contracting and related functions. • Limited use of Electronic Data Interchange (EDI) focuses on routine exchange of business information with specific suppliers. 	<ul style="list-style-type: none"> • Procurement operations are typically centralized at the business unit level to achieve economies of scale in purchasing. • Matrixed relationships are established between procurement operations and key functional organizations (engineering, manufacturing, quality). • Basic EDI and related IT/IS infrastructure systems are developed to support enterprise's ERP system and to enable some capability for technical data exchange with selected. 	<ul style="list-style-type: none"> • Procurement operations (organized at the business unit level for large multi-divisional enterprises) are aligned internally and across major critical suppliers. • Matrixed relationships and incentives are put in place to align procurement operations across business units, programs (product platforms) and major critical suppliers. • Basic IT/IS infrastructure supports integrated ERP system, assures database commonality, and enables technical data exchange internally and across major critical suppliers. 	<ul style="list-style-type: none"> • Procurement operations (organized at the business unit level for large multi-divisional enterprises) are integrated internally and across the supplier network. • Matrixed relationships and incentives are created to integrate procurement operations across business units and programs (product platforms), as well as across the supplier network. • Basic IT/IS infrastructure systems are developed to ensure seamless information flow internally and across the supplier network. 	<p>4</p>
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