Supplier Evaluation and Selection
Class Objectives

- Present supplier evaluation and selection as a key part of the strategic sourcing process
- Understand how supply base optimization relates to evaluation and selection
- Identify key financial ratios used to assess supplier health
- Present a continuum of supplier-buyer relationships
- Identify ways to reduce the cycle time associated with evaluation and selection
The Sourcing Process

Supplier Evaluation and Selection

What criteria and methods will we use to evaluate and select suppliers?

Supplier Management

What must we do to manage suppliers effectively and efficiently?

Supplier Development

What efforts should we put forth to improve supplier performance?
Supplier Evaluation and Selection

- **Discussion Question**: What is a process?

- Why is it critical to view supplier evaluation and selection as a process?
Supplier Evaluation and Selection

- Supplier evaluation and selection is one of the most important processes performed at industrial firms.
- A well-defined and rigorous supplier selection process relates to which principles of total quality management?
Supplier Evaluation and Selection

Supplier evaluation and selection is an eight-step process composed of sub-processes:

- **Step 1:** Recognize that a need exists to evaluate and select a supplier
- **Step 2:** Identify key purchasing/sourcing requirements
- **Step 3:** Determine appropriate sourcing strategy
- **Step 4:** Identify potential supply sources
- **Step 5:** Limit suppliers in selection pool
- **Step 6:** Determine method of supplier evaluation
- **Step 7:** Make supplier selection decision
- **Step 8:** Negotiate and execute agreement

*Whew! This seems like hard work!*
Supplier Evaluation and Selection

- **Step 1:** Recognize that a need exists to evaluate and select a supplier

- **Discussion Question:** How or when do we know that a need exists to evaluate and select a supplier?
Supplier Evaluation and Selection

- **Step 2: Identify key purchasing and sourcing requirements**

- **Discussion Question:** How do we know or determine these internal requirements?
Supplier Evaluation and Selection

- **Step 3: Determine purchasing or sourcing strategy**
  - No single strategy will satisfy the requirements of every purchase requirement
  - Firms often develop strategies around commodities using a **portfolio analysis approach** (to be presented later)
Supplier Evaluation and Selection

Step 3: Determine purchasing or sourcing strategy (con’t)

- Various purchasing strategy considerations exist--
  - Single versus multiple suppliers
  - Number of suppliers to maintain in the supply base
  - Domestic versus foreign
  - Short-term versus longer-term purchase contracts
  - Full-service suppliers versus non full-service suppliers
  - Potential collaborative relationships versus traditional relationship
  - Sources of power
Supplier Evaluation and Selection

- Step 4: Identify potential supply sources
  - Discussion Question: What are the various sources of information available when identifying supplier candidates?

I can’t believe how much information is out there!
Step 5: Limit suppliers in selection pool
- Purchasers often perform a first cut or preliminary evaluation of potential suppliers to narrow the list.
- Time and resources prohibit in-depth evaluation of all suppliers.
- Methods to reduce suppliers in the pool--
  - Financial risk analysis (discussed later)
  - Evaluation of previous performance
  - Evaluation of supplier provided information
    - What kind of information should we ask suppliers to provide?
Supplier Evaluation and Selection

- **Step 6: Determine method of supplier evaluation**
  - Major ways to evaluate suppliers:
    - From supplier-provided information (bids or product samples)
    - On-site supplier visits
    - Use of preferred supplier lists
    - Current supplier scorecards
    - Internal customer surveys
    - Combination of above methods
Supplier Evaluation and Selection

- **Step 6: Determine method of supplier evaluation (con’t)**
  - Cross-functional teams often evaluate suppliers directly through on-site visits
  - Possible areas to evaluate during a supplier visit--
    - Cost structure
    - Delivery performance
    - Quality systems and performance
    - Management capability
    - Workforce capability
    - Supplier agility and flexibility
    - Supplier’s supply chain management capabilities
Supplier Evaluation and Selection

- **Step 6: Determine method of supplier evaluation (con’t)**
  - Possible areas to evaluate during a supplier visit (con’t)-
    - Process and technological capability
    - Environmental compliance
    - Financial capability and stability
    - Information systems capability
    - Production scheduling and control systems
    - Longer-term relationship potential
    - Supplier’s supply chain management capabilities
    - Capacity
    - Other?
Supplier Evaluation and Selection

- Step 6: Determine method of supplier evaluation (con’t)
  - Develop and conduct supplier audits
    - Firms are increasingly willing to commit the resources to develop a supplier performance audit and then use that audit to evaluate suppliers directly

*What resources are required to develop and administer an audit?*
Supplier Evaluation and Selection

- Step 6: Determine method of supplier evaluation (con’t)
  - Supplier audit development process (con’t)
    1. Identify key supplier evaluation categories
    2. Weight each evaluation category
    3. Identify and weight subcategories
    4. Define scoring system
    5. Evaluate supplier directly
    6. Review evaluation results
    7. Make selection decision
Supplier Evaluation and Selection

**Straightforward:** Easy to calculate

**Reliable:** Measures are well understood by evaluators

**Comprehensive:** Considers important categories or criteria

**Objective:** Uses a quantitative scoring system

**Flexible:** Can be used with different purchase categories

**Effective Supplier Audit Characteristics**
Step 7: Make supplier selection decision

- Activities associated with this step vary depending on the purchase requirement
- Routine items may simply require notifying the supplier and awarding a purchase contract or blanket order

And the selected supplier is....
Supplier Evaluation and Selection

- **Step 7: Make supplier selection decision (con’t)**
  - Other selection issues
    - Size relationship
    - Distance
    - Competitors as suppliers
    - Countertrade requirements
    - Corporate social objectives
Supplier Evaluation and Selection

**Step 8: Negotiate and execute agreement**

- Major purchases may require a cross-functional team negotiating with the supplier to reach agreement about specific contract issues
- Load contract into corporate systems
Supply Base Optimization

Supply base optimization or rationalization is the process of determining the right mix and number of suppliers to maintain.

A continuous process that strives for the ideal number and mix of capable suppliers.

- Optimization does not only mean adding or reducing suppliers. It can mean switching suppliers, also.
- Optimization does not mean supply base reduction, although historically North American firms have too many tier one suppliers.

As companies continue to rely on fewer total suppliers, the selection process takes on even greater importance.
Supply Base Optimization

**Why is optimization critical?**

- The costs associated with multiple suppliers for each purchased good or service usually outweigh any perceived reduction in supply risk.
- Optimization is a critical prerequisite to the development of a world-class supply base.
- Some leading-edge activities and strategies are simply not feasible with too large a supply base:
  - Supplier integration
  - Collaborative agreements
  - Supplier development
  - Joint total quality/cost reduction efforts
Supply Base Optimization

- **Adjustment activity over the last five years** --
  - 74% of firms surveyed *decreased* their total number of tier one suppliers
    - Average reduction was in the 21%-30% range
  - 7% said the size of their supply base *remained the same*
  - 19% *increased* the size of their supply base
    - Average increase was 10%
  (Trent and Monczka 1998)
Supply Base Optimization

- *Adjustment activity expected over the next several years* --
  - 84% of firms surveyed expect to *decrease* their total number of tier one suppliers
  - Average reduction expected to be in the 21%-30% range
  - 7% expect the size of their supply base to *remain the same*
  - 9% expect to *increase* the size of their supply base
  - Average increase expected to be less than 10%

(Trent and Monczka 1999)
Supply Base Optimization

- **Expected benefits of an optimized supply base** --
  - Opportunity to work with world-class suppliers, which leads to improved value-chain performance
  - Lower transactions costs--many suppliers creates overhead
  - Leverage leading to lower purchase costs
  - Ability to pursue value-added activities
  - Reduced supply base risk (how can that be?)
Supply Base Optimization

**Discussion Question:** What are the potential risks of a reduced supply base?

* Dazzle us with your answers!
Supply Base Optimization

- **Formal Approaches to Supply Base Optimization**

  - Requires an analysis to identify the 20% of suppliers receiving the majority of purchase dollars.
  - A firm can also identify the minority of suppliers causing the majority of problems.
  - This approach often assumes the best suppliers receive the majority of purchase dollars—is this really the case?

*These approaches adapted from Monczka, Trent, and Handfield, “Purchasing and Supply Chain Management,” and K.R. Bhoi, “Strategic Supply Management”*
Supply Base Optimization

*Formal Approaches to Supply Base Optimization*

- All suppliers, regardless of history, have a chance to remain in the supply base.
- Suppliers have a specified period to meet stringent performance requirements in cost, quality, delivery, etc.
- Suppliers who fall short may soon become ex-suppliers.
- Suppliers may perceive this approach as heavy handed.

**Improve or Else Approach**
Supply Base Optimization

Formal Approaches to Supply Base Optimization

- Requires careful evaluation of the performance record of each supplier to place suppliers into one of three categories.
- First category (and likely the largest) includes those suppliers incapable of meeting current or future performance requirements.
- Second category includes suppliers falling short but demonstrating performance potential.
- Third category includes near-perfect suppliers requiring no improvement assistance.
Supply Base Optimization

- **Formal Approaches to Supply Base Optimization**

  - Requires suppliers to pass a successive series of cuts to remain in the supply base
  - Suppliers must pass a series of hurdles similar to climbing a staircase
  - Purchaser defines the hurdles--possible areas include quality, delivery, technical capability, willingness to share information, supplier size
Supply Base Optimization

Supply base optimization critical success factors

- Time
- Cross-functional teams
- A supplier measurement system and data warehouse
- A strategy development process that considers optimization goals
- Overall supply base vision with management support
Buyer-Supplier Relationships

- **Developing closer relationships** with suppliers is often an objective of the supplier evaluation and selection process.
- The traditional supply model featuring multiple suppliers, short-term contracts, and mutual mistrust can create undesirable consequences—
  - Supplier profit maximization
  - No incentive to invest in assets to support the relationship
  - Limited joint innovation and improvement efforts
  - Higher transaction and maintenance costs
  - Limited opportunity to pursue value-creating activities with suppliers
Buyer-Supplier Relationships

Spectrum of Buyer-Supplier Relationships

**Antagonistic**
- Parties work actively against the needs of the other
- Neither party takes responsibility for anything that happens in the relationship

**Adversarial**
- Parties are engaged in competitive struggle
- Parties attempt to capture the maximum value for their side

**Cooperative**
- Parties realize the benefit of working together
- Closer relations are a result of mutual goals
- Supplier input and involvement begins to increase

**Collaborative**
- Congruence of goals exists
- Parties work together to satisfy the needs of each other and create new value
- Parties search for creative solutions jointly

**Lose/Lose**

**Win/Lose**

**Win/Win**
For new suppliers
For purchase requirements involving significant dollars
For critical items
When pursuing longer-term agreements

To manage business risk
To eliminate marginal suppliers early in the evaluation process
Financial Ratio Analysis

Sources of Supplier Financial Information

- Company-published annual reports
- Company-supplied 10-K and 10-Q reports
- Dun and Bradstreet reports
- TRW credit reports
- Trade and business journals
- Supplier provided data
Financial Ratio Analysis

Liquidity Ratios
- How capable is the supplier of meeting short-term cash needs?
  - Current ratio
  - Quick ratio

Leverage Ratios
- Is the supplier over-leveraged and capable of paying long-term obligations?
  - Debt to assets
  - Time interest earned
  - Fixed charge coverage

Activity Ratios
- How effectively is the supplier managing assets?
  - Inventory turnover
  - Average collection period
  - Return on net assets

Profitability Ratios
- How profitable is the supplier? What rate of return is the supplier earning?
  - Gross and net profit margin
  - Return on equity
  - Return on investment
Improving Selection Cycle Time Exercise

- Each step of the supplier evaluation and selection process has an associated cycle time.
- Creatively identify ways to shorten the time required to successfully satisfy supplier evaluation and selection requirements.

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