Best Practices in Supplier Management Benchmarking Study

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Supplier Relationship Benchmarking and Best Practices

• Thoratec Corporation in cooperation with Booz & Company performed a benchmarking study

• Purpose of study was to understand
  – Current Best Practices in R&D and Supplier Management
  – Risk Mitigation Strategies

• 13 companies were interviewed

• Industries covered
  – Medical: Start up, Class I, II and III
  – Aerospace
Benchmarking Summary

Supplier selection is critical to get right up-front and mitigates many of the post-launch risks.

Multifunctional teams led by program managers and supported by R&D, operations, and procurement are responsible for fully commercializing products.

Supplier management teams work across all levels in the organization and are driven by procurement.
# Categories and Topics

<table>
<thead>
<tr>
<th>Study Topics</th>
<th>Example Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Talent Management</td>
<td>▪ What is the process today for how you select suppliers?</td>
</tr>
<tr>
<td>Supplier Selection</td>
<td>▪ When do you identify whether suppliers will be just design contributors or production partners?</td>
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<tr>
<td>Design Collaboration</td>
<td>▪ How does the design process incorporate manufacturability constraints?</td>
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<td>Production Ramp-up</td>
<td>▪ During development, what kind of quality inspections do you perform?</td>
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<tr>
<td>Intellectual Property</td>
<td>▪ As you approach the handoff to operations, how do challenges start to appear?</td>
</tr>
<tr>
<td>Alignment on Inspection Criteria</td>
<td>▪ How do you prioritize IP during product development?</td>
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<tr>
<td>Willingness to Supply</td>
<td>▪ What types of risk do you have in your supply base?</td>
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<tr>
<td>Supplier Viability</td>
<td>▪ What actions do you take to ensure supply continuity?</td>
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<tr>
<td>Supply Disruptions</td>
<td>▪ Do you support suppliers during difficult times – for example, financial hardship?</td>
</tr>
<tr>
<td>Parts Obsolescence</td>
<td>▪ How do you manage supplier quality?</td>
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<tr>
<td>Using Supplier Data for Inspection</td>
<td>▪ As you get deeper into the product lifecycle, how do you manage parts obsolesce?</td>
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<tr>
<td>Supplier Relationship Management</td>
<td>▪ Do you have a formal supplier partnership program?</td>
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<td>▪ What types of incentives do you offer to participating suppliers?</td>
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<td>▪ What kind of people manage your supplier relationships?</td>
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<td>▪ How do you determine the importance of each supplier?</td>
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- **Pre-Launch (Design Collaboration)**
  - What is the process today for how you select suppliers?
  - When do you identify whether suppliers will be just design contributors or production partners?
  - How does the design process incorporate manufacturability constraints?
  - During development, what kind of quality inspections do you perform?
  - As you approach the handoff to operations, how do challenges start to appear?
  - How do you prioritize IP during product development?

- **Post-Launch (Risk Mitigation)**
  - What types of risk do you have in your supply base?
  - What actions do you take to ensure supply continuity?
  - Do you support suppliers during difficult times – for example, financial hardship?
  - How do you manage supplier quality?
  - As you get deeper into the product lifecycle, how do you manage parts obsolesce?
## Supply Chain Risk Management Process

### Increasing organization size and complexity

<table>
<thead>
<tr>
<th>Organization Size &amp; Complexity</th>
<th>Small Companies 1-50 Employees</th>
<th>Mid-Market Companies 50 – 2,000 Employees</th>
<th>Large, Regional Producers 2,000 -20,000 Employees</th>
<th>Global Institutions &gt;20,000 Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk Management Processes</td>
<td>Ad-Hoc risk identification and mitigation</td>
<td>Key personnel engage in risk reviews periodically</td>
<td>Risk is managed systemically at the department-level</td>
<td>War-gaming / Simulations by firm leadership</td>
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<td>Capabilities</td>
<td>Agile, flexible workforce</td>
<td>One-off risk analyses</td>
<td>Documented risk management processes</td>
<td>Instills active risk mitigation into culture</td>
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<td>“Putting out fires”</td>
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<td>Trained risk management personnel</td>
<td>Training management to respond to crisis scenarios</td>
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<td>Communicating risks company-wide</td>
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<td>Example Industries</td>
<td>Start-ups</td>
<td>Luxury auto brands</td>
<td>Medical device companies</td>
<td>Global financial firms</td>
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<td></td>
<td>Building Contractors</td>
<td>Small aircraft manufacturers</td>
<td>Automotive suppliers</td>
<td>Governments</td>
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<td>Household electronics</td>
<td>Defence contractors</td>
<td>Automotive OEMs</td>
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<td>Big Pharma</td>
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Increasing organization size and complexity

### Example Industries

- **Small Companies (1-50 Employees)**: Start-ups, Building Contractors
- **Mid-Market Companies (50 – 2,000 Employees)**: Luxury auto brands, Small aircraft manufacturers, Household electronics
- **Large, Regional Producers (2,000 -20,000 Employees)**: Medical device companies, Automotive suppliers, Defence contractors
- **Global Institutions (>20,000 Employees)**: Global financial firms, Governments, Automotive OEMs, Big Pharma

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# Strategic Supplier Risk Identification

<table>
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<tr>
<th>Supplier Segment</th>
<th>Description and Capabilities</th>
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</table>
| **A** Commodity Suppliers | - Suppliers that are currently or can readily be multi-sourced  
- Cost reduction is prioritized and supply markets should be exploited  
- Traditional sourcing levers apply:  
  - Active bidding to ensure market pricing  
  - Leveraging buy to enable better supplier fixed cost coverage  
  - Purchasing forward contracts, LTAs, supplier raw material  |
| **B** Risk-Holding Suppliers | - Supplier-unique strategies are necessary to manage risk in the supplier relationship, e.g.:  
  - Monitoring and supporting the financial health of high fixed cost suppliers  
  - Ensuring capability redundancy at niche suppliers  
  - Protecting IP and priority to supply under consolidating supply markets  
  - Engaging product development to diversify sources of supply  |
| **C** Value Chain Partners | - Suppliers manufacturing high-risk components and/or holding critical IP  
- Relationships with suppliers need to be strengthened; vertical integration should be considered  
- Suppliers critical to competitiveness, and specific SRM capabilities are needed, such as:  
  - Leveraging innovation in the supply base  
  - Maintaining supply exclusivity and rights to IP  |
| **D** Unnecessary Suppliers | - Supplier power in relationship is unbalanced  
- Supplier incentives are difficult to align  
- Diversification strategies should be pursued, e.g.:  
  - Designing out powerful, non-critical suppliers  
  - Engaging procurement early in product development |
# Supplier Selection Mitigation

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<th>Best Practice</th>
<th>Observations</th>
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| Supplier quality is audited routinely and inspection is aligned up-front | - Best-in-class companies run quality audits prior to inclusion on approved supplier lists  
- Quality audits include an assessment of the supplier’s supply chain stability  
- Inspection criteria are aligned upon up-front |
| Scalability of supplier manufacturing processes is monitored | - Switching suppliers deeper in the product lifecycle is more costly  
- Prototype shops and quick-turn houses are avoided |
| Intellectual property rights are negotiated up-front | - A thoughtful approach to IP early avoids problems later in the product lifecycle  
- IP in the supply base increases switching costs |
R&D Involvement in Supplier Selection

**Best Practice**

Supplier selection decision rights are shared between R&D & procurement

**Observations**

- At healthy companies, purchasing and R&D both conduct supplier assessments
  - R&D identifies and chooses technology suppliers
  - Procurement assesses the business risk associated with suppliers
- Procurement and R&D collaborate on the supplier selection decision, with each organization holding a veto over the final decision

- Procurement’s involvement in and control over supplier selection decisions has increased
  - Ten years ago at most medical device companies, R&D controlled supplier selection, with procurement serving to validate R&D decisions
  - FDA field actions forced companies to improve supplier management practices
  - Now, procurement feeds business and quality information into the design process, preventing supplier selection decisions risky to the greater business
Up-Front Involvement

Design Collaboration Best Practices

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| Manufacturing & procurement involved early in design process | ▪ Procurement needs to own the supplier relationship up-front  
▪ Best for suppliers to know early that long-run quality and inspection criteria must be satisfied to receive payment |
| Procurement owns supplier relationship from the get-go | ▪ The first interaction with a supplier has a very different dynamic when procurement is in the room  
▪ Helps set the expectation that procurement’s needs are met up-front |
# Supplier Relationships

## Supplier Relationship Management Best Practices

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| Supplier relationships should be open book | - Outside-in risk monitoring (e.g., D&B, supplier self-reporting) does not help you to anticipate potential problems  
- Commodity managers should have deep understanding of their supplier’s operations |
| Personal relationships build trust with suppliers | - Personal relationships with suppliers engender trust and lead to open dialog about potential risks  
- ‘Boots on the ground’ operating knowledge of suppliers helps solve issues quick |
| ‘One size fits all’ SRM tools are ineffective | - The emphasis on scorecards, supplier portals and reporting can distract from focusing on more important risk management issues  
- Tools should be tailored to managing the unique risks faced by individual suppliers |