2016 Global
Electronic Manufacturing Services
Customer Value Leadership Award
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Background and Company Performance

Industry Challenges

There are abundant opportunities for Electronic Manufacturing Services (EMS) providers thanks to increases in complexity and evolving markets, such as the Internet of Things (IoT) space. Unfortunately, EMS providers are increasingly challenged with rising manufacturing costs and original equipment manufacturer (OEM) price pressures. This has forced them to look internally for smart, cost-saving strategies that also act as technology enablers.

Electronics design, functionality, and component sizes have evolved rapidly. These innovations will have a direct effect on manufacturing techniques. EMS providers, although known for their manufacturing prowess, must be diligent about maintaining flexible and responsive production. Volume forecasting mismatches and dynamic OEM orders also pose constant challenges to EMS providers’ resource planning and optimization strategies.

Plus, EMS service providers face ever-increasing pressure for fully automated manufacturing sites, zero-tolerance for defects, and converging OEM and contract manufacturing models. The future will have to be adaptive, flexible, have scalable manufacturing with smaller production runs, and have increased dependence on robotic technology and artificial intelligence. Many manufacturers have learned hard lessons from carrying too much inventory or having long lead times. Neither situation bodes well for EMS providers’ competitive positioning or profit margins. Because of this, smart factories and increased automation are becoming common in the EMS market. Many EMS providers are automating and using robotics to lower labor costs and to create smart factories.

EMS providers also need to prove that they can meet stringent financial business requirements in order to compete effectively in an increasingly competitive environment. Given the competition, EMS providers are looking to demonstrate growth strategies and to offer a variety of smart services for the constantly changing needs of its customer base.

According to Frost & Sullivan’s extensive research in this space, customer loyalty is established best by gaining OEM trust. OEMs in these markets in particular are seeking EMS providers with strong financial models. EMS providers with the necessary skills and expertise, not just in the manufacturing process but also with regard to financial stability, will be in the best possible position to meet OEM needs.

Visionary Innovation and Performance and Customer Impact

Superior Customer Service Strategies and Experience

SMTC Corporation’s (SMTC) acute focus on superior customer service and excellent quality has been paramount in acquiring a good mix of large, medium, and small customers from 2013 to today. SMTC Corporation has shown that it can work with high
volume as well as with low-to mid-volume production and still achieve superior performance. With the upcoming needs from key markets like IoT where the volumes are expected to be high, Frost & Sullivan’s research shows SMTC to be the ideal choice high, mid, and low-volume customers. The company ensures complete satisfaction at every stage of engagement, from inception all the way to product delivery.

By providing value-based services, such as early supplier involvement, DFx, new product introduction (NPI) and quick-turn prototyping, not to mention that SMTC is uncompromising when it comes to delivering high quality, the company has found success in both new business and existing customer retention. SMTC’s new customers represent 20% of its total revenues so far for 2015. This was achieved through its “Manufacturing Partner to Innovators®” plan along with its partnership model that provides not only manufacturing, but also engineering and design solutions. This strategy ensures true integration and long-term relationships with its customers. In a market characterized by an abundance of competition, SMTC Corporation has grown, but more importantly, it has helped its customers grow.

SMTC Corporation’s Technical Services Group combines key expertise in design, value engineering, transition management, global supply chain management and procurement engineering provides seamless integration to SMTC’s global manufacturing footprint.
SMTC Corporation’s vision is to simplify the lives of its customer by delivering extraordinary Customer Service, Responsiveness, Quality, Technology Solution and Value to fuel its customer's success and growth. The company's engagement model is designed to engage, deliver and enable value to its customers at any stage of the product lifecycle.

SMTC's early involvement in the design cycle can provide customers with a product that is more cost effective, increased manufacturability and quality, has higher reliability and a longer overall lifecycle. During its involvement in design reviews, SMTC Corporation will focus on key areas throughout the cycle and provide critical feedback to address potential issues and ensure a successful new product introduction. DFx engagements and its ability to impact value target costed development activities and focus on identifying risk and delivering value through material (design for supply chain), test (design for testability), fabrication (design for fabrication) and assembly (design for manufacturability) solutions.
SMTC's technical services provide customer value by realizing:

- Reduced lead time and material costs (DFSC)
- Improved PCB yield and cost (DFF)
- Improved Assembly yield and reduced labour content (DFA)
- Improved Coverage and Final yield, reduced RMA and field failures. (DFT)
- Reduced engineering development and resources, improved time to market (Development)
- Improved Production Stability and Predictability (DFM)
- Continuous Improvement (Post-DFM, ROI)

Concurrent Product Development throughout the product lifecycle enable customers to optimize product manufacturability and quality performance. SMTC focus on every aspect of design and manufacturing processes assessing all impacts on cost, function, program schedule and overall requirements. SMTC works closely with customers to find appropriate opportunities for cost reduction. The company examines every element that doesn't contribute to the value and performance of a product.
SMTC Corporation’s value engineering group works collaboratively with customers to identify, prioritize and implement opportunities for cost reduction every step of the way. Design reviews can uncover valuable opportunities to reduce costs, whether it’s related to new component and layout applications, new technologies or functional enhancements.

SMTC also works shoulder to shoulder with its customers to develop future product plans and manufacturing strategies that save costs. Where it makes sense, this enables SMTC to provide a proven migration path to one of their low-cost manufacturing solutions in Mexico or China.

SMTC Corporation understands the stringent requirements of niche markets, such as the Medical industry, as well as varying end user demands in high volume markets, such as the Consumer Electronics space. The company has also been successful in emulating best practices that have been established in other participating markets and applying them across various segments. The company also leverages its supply chain expertise and local manufacturing facilities to ensure complete support from design to manufacturing. This is all done while concomitantly ensuring cost savings and a faster time-to-market for its customers.

**Domain Expertise**

SMTC Corporation’s specialization is that it partners with its customers for the design, engineering, printed circuit board assembly, production, fabrication of enclosure, system
integration, and testing of the production. This continuous support through product development and introduction as a 'one-stop shop' helps its customers with both cost savings and time to market, not to mention that it eliminates the hassles of working with multiple providers for each stage of production. As a result, SMTC Corporation is able to gain a true understanding of its customers' needs and is able to offer mutually beneficial growth opportunities that its global clients can take advantage of, built-to-order. The company's best practices are a vital tool for its continued growth.

SMTC Corporation's end-to-end EMS services provide its customers with flexibility and responsiveness to the dynamics of today's Electronics industry. The company's efficient processes have allowed it to meet the growing demand for outsourcing in newer markets, such as the Medical Device and Aerospace & Defense markets. In Frost & Sullivan's opinion, SMTC Corporation's customers benefit from the comprehensive service offerings, but also from the company's aftermarket services. According to Frost & Sullivan's competitive benchmarking, SMTC Corporation has set the bar for superior customer service.

Through innovative means, such as its Manufacturing Partner of Innovators® program, in conjunction with its well-planned growth strategies that revolve around customer satisfaction, SMTC Corporation has build inroads within the industry, positioning itself for further growth in 2015 and beyond.

**Branding Power**

Against tough competition, SMTC Corporation has built a sterling brand name as a quality EMS provider thanks to both its executive and engineering staff, which have several years of engineering and manufacturing experience from Tier I companies. The company also emphasizes stringent internal quality control that often surpasses customer expectations. By successfully understanding and emulating customers' business operations and maintaining open communication channels, SMTC Corporation has built rock-solid partnerships with its customers, both existing and new.

**Conclusion**

Frost & Sullivan's extensive research clearly shows that SMTC Corporation provides the best value to customers, hands down. By employing best practices, end-to-end services, excellent and timely customer service, superior quality, and by clearly understanding its customers' unique needs, SMTC Corporation has achieved true excellence. Because of its strong overall performance, Frost & Sullivan recognizes SMTC Corporation with the 2016 Customer Value Leadership Award in Electronic Manufacturing Services.
Significance of Customer Value Leadership

Ultimately, growth in any organization depends upon customers purchasing from your company, and then making the decision to return time and again. Delighting customers is therefore the cornerstone of any successful growth strategy. To achieve these dual goals (growth and customer delight), an organization must be best-in-class in three key areas: understanding demand, nurturing the brand, and differentiating from the competition.

Understanding Customer Value Leadership

Customer Value Leadership is defined and measured by two macro-level categories: customer impact and business impact. These two sides work together to make customers feel valued, and confident in their products’ quality and long shelf life. This dual satisfaction translates into repeat purchases and a high lifetime customer value.
Key Benchmarking Criteria

For the Customer Value Leadership Award, Frost & Sullivan analysts independently evaluated two key factors—Customer Impact and Business Impact—according to the criteria identified below.

**Customer Impact**
- Criterion 1: Price/Performance Value
- Criterion 2: Customer Purchase Experience
- Criterion 3: Customer Ownership Experience
- Criterion 4: Customer Service Experience
- Criterion 5: Brand Equity

**Business Impact**
- Criterion 1: Financial Performance
- Criterion 2: Customer Acquisition
- Criterion 3: Operational Efficiency
- Criterion 4: Growth Potential
- Criterion 5: Human Capital

**Best Practice Award Analysis for SMTC Corporation**

**Decision Support Scorecard**

To support its evaluation of best practices across multiple business performance categories, Frost & Sullivan employs a customized Decision Support Scorecard. This tool allows our research and consulting teams to objectively analyze performance, according to the key benchmarking criteria listed in the previous section, and to assign ratings on that basis. The tool follows a 10-point scale that allows for nuances in performance evaluation; ratings guidelines are illustrated below.

**RATINGS GUIDELINES**

The Decision Support Scorecard is organized by Customer Impact and Business Impact (i.e., the overarching categories for all 10 benchmarking criteria; the definitions for each criteria are provided beneath the scorecard). The research team confirms the veracity of this weighted scorecard through sensitivity analysis, which confirms that small changes to the ratings for a specific criterion do not lead to a significant change in the overall relative rankings of the companies.
The results of this analysis are shown below. To remain unbiased and to protect the interests of all organizations reviewed, we have chosen to refer to the other key players as Competitor2 and Competitor3.

<table>
<thead>
<tr>
<th>Customer Value Leadership</th>
<th>Customer Impact</th>
<th>Business Impact</th>
<th>Average Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMTC Corporation</td>
<td>9.1</td>
<td>9.1</td>
<td>9.1</td>
</tr>
<tr>
<td>Competitor 2</td>
<td>8.1</td>
<td>7.9</td>
<td>8.0</td>
</tr>
<tr>
<td>Competitor 3</td>
<td>7.4</td>
<td>7.6</td>
<td>7.5</td>
</tr>
</tbody>
</table>

**Customer Impact**

**Criterion 1: Price/Performance Value**  
Requirement: Products or services offer the best value for the price, compared to similar offerings in the market

**Criterion 2: Customer Purchase Experience**  
Requirement: Customers feel like they are buying the most optimal solution that addresses both their unique needs and their unique constraints

**Criterion 3: Customer Ownership Experience**  
Requirement: Customers are proud to own the company’s product or service, and have a positive experience throughout the life of the product or service

**Criterion 4: Customer Service Experience**  
Requirement: Customer service is accessible, fast, stress-free, and of high quality

**Criterion 5: Brand Equity**  
Requirement: Customers have a positive view of the brand and exhibit high brand loyalty

**Business Impact**

**Criterion 1: Financial Performance**  
Requirement: Strong overall financial performance in terms of revenues, revenue growth, operating margin and other key financial metrics

**Criterion 2: Customer Acquisition**  
Requirement: Customer facing processes support the efficient and consistent acquisition of new customers, even as it enhances retention of current customers

**Criterion 3: Operational Efficiency**  
Requirement: Staff is able to perform assigned tasks productively, quickly, and to a high quality standard

**Criterion 4: Growth Potential**  
Requirements: Customer focus strengthens brand, reinforces customer loyalty and enhances growth potential
**Criterion 5: Human Capital**

Requirement: Company culture is characterized by a strong commitment to quality and customers, which in turn enhances employee morale and retention.

**Decision Support Matrix**

Once all companies have been evaluated according to the Decision Support Scorecard, analysts can then position the candidates on the matrix shown below, enabling them to visualize which companies are truly breakthrough and which ones are not yet operating at best-in-class levels.
The Intersection between 360-Degree Research and Best Practices Awards

Research Methodology

Frost & Sullivan’s 360-degree research methodology represents the analytical rigor of our research process. It offers a 360-degree-view of industry challenges, trends, and issues by integrating all 7 of Frost & Sullivan's research methodologies. Too often, companies make important growth decisions based on a narrow understanding of their environment, leading to errors of both omission and commission. Successful growth strategies are founded on a thorough understanding of market, technical, economic, financial, customer, best practices, and demographic analyses. The integration of these research disciplines into the 360-degree research methodology provides an evaluation platform for benchmarking industry players and for identifying those performing at best-in-class levels.
Best Practices Recognition: 10 Steps to Researching, Identifying, and Recognizing Best Practices

Frost & Sullivan Awards follow a 10-step process to evaluate award candidates and assess their fit with select best practice criteria. The reputation and integrity of the Awards are based on close adherence to this process.

<table>
<thead>
<tr>
<th>STEP</th>
<th>OBJECTIVE</th>
<th>KEY ACTIVITIES</th>
<th>OUTPUT</th>
</tr>
</thead>
</table>
| 1    | Monitor, target, and screen | Identify award recipient candidates from around the globe | • Conduct in-depth industry research  
• Identify emerging sectors  
• Scan multiple geographies | Pipeline of candidates who potentially meet all best-practice criteria |
| 2    | Perform 360-degree research | Perform comprehensive, 360-degree research on all candidates in the pipeline | • Interview thought leaders and industry practitioners  
• Assess candidates’ fit with best-practice criteria  
• Rank all candidates | Matrix positioning all candidates’ performance relative to one another |
| 3    | Invite thought leadership in best practices | Perform in-depth examination of all candidates | • Confirm best-practice criteria  
• Examine eligibility of all candidates  
• Identify any information gaps | Detailed profiles of all ranked candidates |
| 4    | Initiate research director review | Conduct an unbiased evaluation of all candidate profiles | • Brainstorm ranking options  
• Invite multiple perspectives on candidates’ performance  
• Update candidate profiles | Final prioritization of all eligible candidates and companion best-practice positioning paper |
| 5    | Assemble panel of industry experts | Present findings to an expert panel of industry thought leaders | • Share findings  
• Strengthen cases for candidate eligibility  
• Prioritize candidates | Refined list of prioritized award candidates |
| 6    | Conduct global industry review | Build consensus on award candidates’ eligibility | • Hold global team meeting to review all candidates  
• Pressure-test fit with criteria  
• Confirm inclusion of all eligible candidates | Final list of eligible award candidates, representing success stories worldwide |
| 7    | Perform quality check | Develop official award consideration materials | • Perform final performance benchmarking activities  
• Write nominations  
• Perform quality review | High-quality, accurate, and creative presentation of nominees’ successes |
| 8    | Reconnect with panel of industry experts | Finalize the selection of the best-practice award recipient | • Review analysis with panel  
• Build consensus  
• Select winner | Decision on which company performs best against all best-practice criteria |
| 9    | Communicate recognition | Inform award recipient of award recognition | • Present award to the CEO  
• Inspire the organization for continued success  
• Celebrate the recipient’s performance | Announcement of award and plan for how recipient can use the award to enhance the brand |
| 10   | Take strategic action | Upon licensing, company may share award news with stakeholders and customers | • Coordinate media outreach  
• Design a marketing plan  
• Assess award’s role in future strategic planning | Widespread awareness of recipient’s award status among investors, media personnel, and employees |
About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, enables clients to accelerate growth and achieve best in class positions in growth, innovation and leadership. The company's Growth Partnership Service provides the CEO and the CEO's Growth Team with disciplined research and best practice models to drive the generation, evaluation and implementation of powerful growth strategies. Frost & Sullivan leverages almost 50 years of experience in partnering with Global 1000 companies, emerging businesses and the investment community from 31 offices on six continents. To join our Growth Partnership, please visit http://www.frost.com.