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Midsize Manufacturers Hold Own in Configuration Management

Market Segment

Aberdeen Group's *Configuration Management Report* identifies the approaches that leading companies take to manage their bills of material (BOMs) and product configurations. An analysis of respondents from midsize companies indicates that they are performing at the same levels as larger organizations, on average, in managing their product configurations. These mid-tier companies share the same opportunities as larger manufacturers to improve their configuration management performance – and ultimately improve their ability to deliver profitable products to market.

Best in Class

Best in Class manufacturers share several commonalities in regards to configuration management (CM). These leading companies, who hit their product development and product lifecycle targets an average of almost 90% of the time, maintain a significant advantage over average performers who hit these targets only about 70% of the time. These targets – including revenue, launch date, cost, and quality targets – are the factors that drive profitability.

The first best practice identified in the benchmark was formalizing configuration management processes. As seen in Table 1, average midsize manufacturers are almost on par with the average across all enterprises, but still significantly lag best in class levels. This provides an opportunity for midsize manufacturers to adopt more formal, standardize approaches to configuration management such as the CMII process promoted by the Institute of Configuration Management.

Table 1: Midsize Enterprises use of Formal Configuration Management Processes

Formal CM Processes	All Company Average	Best in Class	Midsize Company Average
Developing and maintaining product data (e.g., BOMs)	32%	44%	24%
Analyzing and approving changes	26%	47%	22%
Communicating changes downstream to affected parties	29%	45%	26%

Source: Aberdeen Group, February 2007

Announcement

Click here to view the *Configuration Management Benchmark Report.*

In addition to standard practices, leading manufacturers have extended configuration management beyond mechanical bills of material. This extension of CM involves three primary areas:

- Extending CM to cross-discipline designs, or "mechatronics," that include elements of mechanical, electrical, and software design
- Extending CM into earlier phases of the product lifecycle, such as marketing (requirements) and conceptual design
- Extending CM to cover more aspects of the product, providing a richer product definition beyond bills of material (BOMs)

As seen in Table 2, midsize companies trail the Best in Class companies in all of these areas, but are relatively close to the average across all company sizes. Again, this provides an opportunity for these smaller companies to adopt leading practices and surpass even larger companies in CM capabilities – and the resulting benefits of hitting product profitability targets.

Table 2: Midsize Enterprises Expansion of Configuration Management

CM Best Practice	All Company Average	Best in Class	Midsize Company Average
Central management of cross-discipline designs (mechatronics)	45%	57%	43%
Extending CM to include more product data (Example: manufacturing processes)	45%	66%	47%
Extension into earlier lifecycle phases (Example: conceptual design)	27%	41%	21%

Source: Aberdeen Group, February 2007

Finally, Aberdeen benchmarks indicate that Best in Class manufacturers have enabled configuration management with technology. Leading technology approaches included centralizing product data and the use of specialty CM tools that incorporate best practices for managing product configurations and change management. As seen in Table 3, midsize companies are significantly behind in the adoption of centralized product data. In addition, midsize companies are also lagging the average for all companies, indicating that best in class companies have room to grow in regards to adopting these specialized tools, or adopting product lifecycle management (PLM) solutions that may have these capabilities as a part of the solution.

Table 3: Midsize Enterprises Use of Technology to Enable Configuration Management

CM Best Practice	All Company Average	Best in Class	Midsize Company Average
Centralized product data	37%	59%	36%
Use of specialty CM tools	35%	53%	28%

Source: Aberdeen Group, February 2007

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Recommendations for Action

- √ Midsize companies, like their larger counterparts, should formalize and standardize their configuration management processes.
- √ Midsize companies should extend their product definitions beyond mechanical bills of material, including a richer product definition and non-mechanical design elements (electrical, embedded software) as applicable.
- √ Midsize companies should extend their use of CM further upstream in the product lifecycle, to conceptual design and potentially marketing and presales.
- √ Midsize companies should close the gap in the use of centralized data management as compared to larger companies, taking advantage of this Best in Class capability.
- √ Likewise, midsize companies should adopt specialty configuration management applications that can delivery best practice CM processes.

Related Research

The Configuration Management Benchmark Report; February 2007

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