



The Power of DFMA to Reduce Operational Costs

With the publication of our DFMA Survey Roundtable, "The Power of DFMA to Reduce Operational Costs," the case for applying DFMA has become even more tangible and compelling. This was the first time we asked our customers to systematically examine their broader productivity metrics and report back to us about where they thought DFMA had the greatest effects. I'd like to wholeheartedly thank all of you who devoted your time and energy to helping us develop a larger view of the role of DFMA in your industries.

One thing that became clear from our survey is the ongoing need for DFMA users to expand the range of measurements that they track. Whether those measurements are engineering wait days, as user Mike Shipulski recommends, or touch points, labor and logistics as described by user Brad Keup of Dell—find an area of profitability in your company and use DFMA to improve against that benchmark. DFMA provides powerful secondary benefits and can help you meet your extended design goals. Whether these are in lean manufacturing, quality, and/or PLM, design simplification improves nearly every aspect of product development.

The roundtable discussion that follows the survey delves deeply into organizational cost issues and strategies in a very frank manner. It's worth reading!

Best regards,
John Gilligan
President

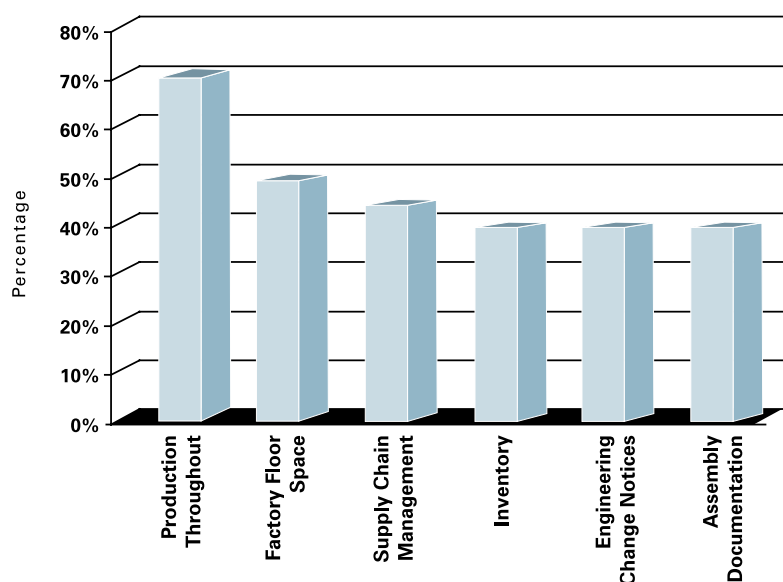
Survey Overview

Does increasing design efficiency result in an increase in total manufacturing returns? You can count on it. Our new DFMA survey showed that 68% of respondents – from leading North American companies like Dell, Motorola, TRW Automotive, Raytheon, MDS Analytical Technologies, and Magna Inter Automotive Seating – saw an increase in production throughput, and 47% an increase in profit per unit of factory floor space, after applying DFMA techniques to their supply chains.

These results and others underscore the fundamental DFMA message that part-count reduction, leading to simplified designs, provides not just labor and materials cost reduction but has a positive, and pervasive, downstream influence on manufacturing overhead.

The roundtable discussion that accompanies our survey underscores an interesting caveat to these positive findings: many organizations still need to recognize the full impact of implementing DFMA, to capture its effects with measurement so they can document and track performance clearly. To view a pdf of the full survey and roundtable, [click HERE](#).

Where Companies Measured Operational Savings From DFMA®



Source: Boothroyd Dewhurst Oct. 2007

"We achieved a 300 percent increase in profit per square foot of factory floor space by using DFMA tools. Since we know the relationship between floor space, labor time and product cost, this is a tangible and powerful metric." Mike Shipulski, Hypertherm

"Costs need to be tracked and monitored carefully. It takes effort to document, but it's worth it." George Valaitis, MDS Analytical Technologies

"All along Dell has recognized product-development costs as an issue, but there wasn't a uniform program or process until DFMA." Brad Keup, Dell



Engage Product Design in DFMA now –

Achieve 30-50 percent savings later

A participant in the recent DFMA survey and roundtable, Mike Shipulski, Ph.D., director of engineering for Hypertherm, is one of today's most articulate proponents of the software. Perhaps you've read his insights in SME's "Lean Directions" e-newsletter. In his most recent piece, Shipulski (who is not part of the SME staff) details the company's lean product-design efforts as he issues a "call to action" for manufacturers everywhere to involve their product-design teams. An excerpt from Shipulski's article appears below:

It is clear that the design community must lead the DFA/DFM efforts since product designers are the ones who establish functionality, change the design and design in the cost. The 30 to 50 percent cost reductions from DFA/DFM are achievable only when the design community leads the efforts.

Even with this understanding, there are few companies that allocate design-engineering resources to DFA and DFM. The reasons? The design engineers are booked at 150 percent utilization, the product development projects are late and there is risk associated with changing the design.

Usually companies run the DFM activities out of the manufacturing or purchasing functions and don't even bother using DFA. Because manufacturing and purchasing don't have the ability to change the design, the so-called DFM activities are really programs to take margin from suppliers by formally defining the costs of the suppliers' processes, and negotiating even lower margins. The so-called DFM activities are not sustainable because the margins are finite; activities are not used company-wide because the suppliers eventually figure out what is really going on. These so-called DFM activities have given DFM a bad name and have made suppliers fearful of DFM programs, and rightly so.

Effective alternative

There is a better way. The first and most important step is to educate company leadership in three important areas: the magnitude of savings from DFA and DFM (up to 50 percent), the leadership role of the design community, and the importance of the DFMA management system to make it sustainable.

The second step is... [for the complete article, [click HERE](#)]

For more on SME, visit www.sme.org

Minimum Part Count

Call for Papers for Upcoming Forum

Wanted: highly qualified professionals to document and present their experiences with DFMA at the 23rd annual International Forum on Design for Manufacture and Assembly (DFMA) to be held June 10 and 11, 2008, at the Crowne Plaza Hotel in Providence-Warwick, Rhode Island. The focus of this conference is the review of implementations of DFMA including the challenges, procedural and technological innovations, and financial rewards. For full details about submitting abstracts, please [click HERE](#).

DFMA News Briefs

Our release of the DFMA Survey and Roundtable generated considerable interest in the business, manufacturing, and design engineering press. Here are some samples:

Building manufacturing competitiveness on tomorrow's production floor will require strategic conceptual foresight, writes **IndustryWeek** editor John Teresko. His article in the December 2007 issue, titled "Fitting Product Design to Production Efficiency," included a bar chart, based on the survey results, showing where companies measured operational savings from DFMA. To read the full text, [click HERE](#).

After reading the survey roundtable, **Automotive Design & Production** editor-in-chief Gary Vasilash interviewed John Gilligan at length for an article titled "When Design Meets Assembly Good Things Can Happen," published in the December 2007 issue. Vasilash notes that addressing part design predicated on functionality and assembly provides distinct competitive advantages for those who do it right. To read the full text, [click HERE](#).

Product Design & Development editor Jeff Reinke wrote an opinion piece citing the downstream survey titled "Focusing on the How Instead of the Where." He was surprised to learn from the survey that one-third of respondents didn't track overhead costs related to product development – something which he felt should be a leading concern. To read the full text, [click HERE](#).

Desktop Engineering. A news article based on the downstream survey, titled "Survey Reports Early Design Decisions Are Critical to Profitability," appeared in the "Briefings" section of the December 2007 issue.