



Sandy Munro

CEO

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Bio

Sandy Munro began his career in the automotive and aircraft industry, and has since benefited from extensive work with global corporations of all types along with their suppliers. Sandy's experience and insight cuts across virtually every segment of the manufacturing industry, from Barbie to the Space Station. In 1982 Sandy met Dr E. Deming, and he became a zealot in reducing variation stemming from design. Sandy was nominated for the Henry Ford Award twice for helping Ford utilize DFA to save billions of dollars, improve quality and reduce development cycles during the early 1980's. One of the pioneers in the application of design for assembly (DFA) Sandy founded his consulting firm, Munro & Associates, Inc., in 1988 and developed an enhanced process calling it design for manufacturability or DFM®. Since that time, Munro & Associates, Inc. has helped manufacturers of all types of products -- from airplanes to toys, appliances to medical devices, and automobiles to electronics -- to harness the power of concurrent engineering to reach new levels of global competitiveness.

Abstract

The Hand-off From Concept to Reality: Lean Design® to Delmia

Whether you are in Automotive, Aerospace, Defense, Medical, or any type of manufacturing, you are painfully aware that these are truly

competitive times. You also know that Delmia is a tremendously powerful tool that can help reduce the time to market by perfecting the processes that will be used before the factory floor is poured and long before the machine tools are installed or the people trained. And that is good because in today's marketplace speed and "first time right" are everything!

The problem is that manufacturability is directly translated from product design. The total cost of the product and potential produce ability are established at the CAD stage and no amount of lean manufacturing can undo a bad design. For years Manufacturing Engineers have been told to be "Lean and Mean" when in actuality they have too often been Emaciated and Disheartened through over complicated, over engineered designs that have too many parts with too little thought for manufacturing and ease of assembly!

But what if you could refine the design? What if you could eliminate half the parts at the design phase or even the concept stage? How much faster would you be able to deliver your first customer ship? By leveraging the power of Lean Design® and taking a strategic and holistic team approach, manufacturers of all kinds have developed creative products which blow away competition with customer delighters which have little or no extra cost while making manufacturing easier! How? All we need to do is apply manufacturing know how to the design at the sketch stage.

Can this be true? For the past 20 years Munro & Associates, Inc. has been quietly making things happen and Sandy's presentation is nothing but FACT! All the examples are real, documented and implemented. These examples run the gambit of every industry large or small, high production or a one-off. This process works on everything.

Working as a team and playing smarter is the only way to succeed in today's market, and the only way to work smarter is to move up stream into the design concept stage to get the right design, upfront,

and on time. Like the athletes in the Olympics we need a smooth hand off between Engineering and Manufacturing, likewise Lean Design® to Delmia is the best way to achieve everyone's goal of profitability.

In a fast paced, interactive, presentation that gets the audience involved whether they are ready or not, Sandy's many project experiences in Aerospace, Defense, Medical, and Automotive allows him the unique ability to talk, not only in theory, but also from an in the trenches perspective.