

Additive Manufacturing: A Reality Check



Abstract: Additive manufacturing comprises a range of incredible technologies that have revolutionized the way we design and bring new products to market, and have become an entirely new catalyst for innovation. Over the last 10 years, it has become a hot-topic that has received an inordinate amount of media coverage and hype. This presentation examines some of this hype and attempts to redress some of the myths that have grown from it in a positive way by looking at real industrial application examples, including some from the world of robotics and mechatronics, which demonstrates the true advantages that additive manufacturing offer if used in the most appropriate way.

Biography: Professor Olaf Diegel is Professor of Product Development, Lund University, Sweden. He is both an educator and a practitioner of product development with an excellent track record of developing innovative solutions to engineering problems.

In his role as professor of product development, in the department of design sciences of the faculty of engineering at Lund University, in Sweden, he is heavily involved in all aspects of product development and is widely published in the areas of additive manufacturing and rapid product development. In his consulting practice he develops a wide range of products for companies around the world. Over the past three decades he has developed over 100 commercialized new products including innovative new theatre lighting products, security and marine products and several home health monitoring products and, for this work, has received numerous product development awards.

Over the last 20 years, Olaf has become a passionate follower of 3D printing (additive manufacturing). He believes it is one of the technologies that has been a real godsend to innovation as it allows designers and inventors to instantly test out ideas to see if they work. It also removes the traditional manufacturing constraints that have become a barrier to creativity, and allows us to get real products to market without the normally high costs that can become a barrier to innovation. In 2012, Olaf started manufacturing a range of 3D printed guitars and basses that has developed into a successful little side-business (and gives Olaf the therapy he needs in allowing him to make things that are a blend of high-technology and traditional hand-crafting).