Additive Manufacturing

ManuVation
Driving Improved SME Performance

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Additive Manufacturing

How to Use This Guidebook

Each Additive Manufacturing Guidebook is created with the business growth needs of small and medium manufacturers in mind. By utilizing the information in this guidebook, you are taking the first steps to creating a competitive advantage for your company by innovating in the face of disruptive technologies.

This guidebook follows a logical flow to guide you as you learn more about additive manufacturing (see Fig. 1). Review the sections as they apply to your individual opportunities and resources, either in the order they’re presented or jump around to fit your immediate needs.

![Figure 1: Additive Manufacturing Guidebook Information Flow](image)

This is your toolkit for plugging into the additive manufacturing innovation network.

Together, all of our guidebooks work to uplift manufacturers through increasing digital readiness; working together to accelerate the understanding and investment in emerging technologies; and foster a culture of innovation in the manufacturing industry. We encourage you to also review the future guidebooks in this series.

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Additive Manufacturing at a Glance

What is “Additive Manufacturing?”
Additive Manufacturing (often referred to as simply “AM”) is the process of adding layers of material (plastic, metal, concrete, etc.) upon one another to create a product. You may also hear it referred to as “3D printing” though that term only encompasses some of the processes that can be used in Additive Manufacturing.

Why does Additive Manufacturing matter?
Additive Manufacturing has the capacity to complement and augment current manufacturing processes in the future. In three to five years, manufacturers will plan for Additive Manufacturing opportunities from product inception through design and production, in order to increase efficiencies, save money, and rapidly prototype.

What are the biggest opportunity areas?
Traditional tooling, small weldments, low production runs, complex parts, and repair parts will see significant disruption. Learn more about opportunities on following pages.

What are the business benefits of Additive Manufacturing?
Rapid innovation and prototyping, increased speed-to-market, lower tooling costs, unique designs, reduced part quantities, ability to embed sensors, multi-material designs, and a breadth of equipment to cover multiple applications. See more benefits in the Metrics section.

Where can I find help to get started?
See the IMS contact information on the proceeding page and visit IMS.org. We are here to help you.
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All those residing in the United States, South Africa, and Mexico (Pending) are eligible to create an account.

For more information on IMS membership please email dnagy@ims.org.