

September 2022

Additive Manufacturing

Additive manufacturing (AM) is revolutionizing the way things are made. The term AM includes many technologies such as 3D Printing, Rapid Prototyping (RP), Direct Digital Manufacturing (DDM), layered manufacturing and additive fabrication. There are many reasons a company may want to consider additive manufacturing methods from waste reduction to prototyping to recreating machinery parts that are no longer available. If your company is part of a large supply chain, AM will be critical in maintaining your competitiveness among OEMs.

Webinars, Videos or Podcasts to Check Out



Upcoming Manufacturing 4.0 webinar on Additive Manufacturing/3D Printing:

- September 22, 2022 | 7:30 a.m.
Sign up to attend by clicking [HERE](#).

CIRAS Industry 4.0 Brief Video:

- [3D Printing](#)

Technically Iowa Podcast (Technology Association of Iowa (TAI): [Additive MFG & 3D Printing with Protostudios, University of Iowa](#)

Useful Information from Iowa:

- Check out the Quad Cities Chamber [Additive Manufacturing Playbook](#), pull out some tips to share with your businesses.

Public sector service providers for your business:

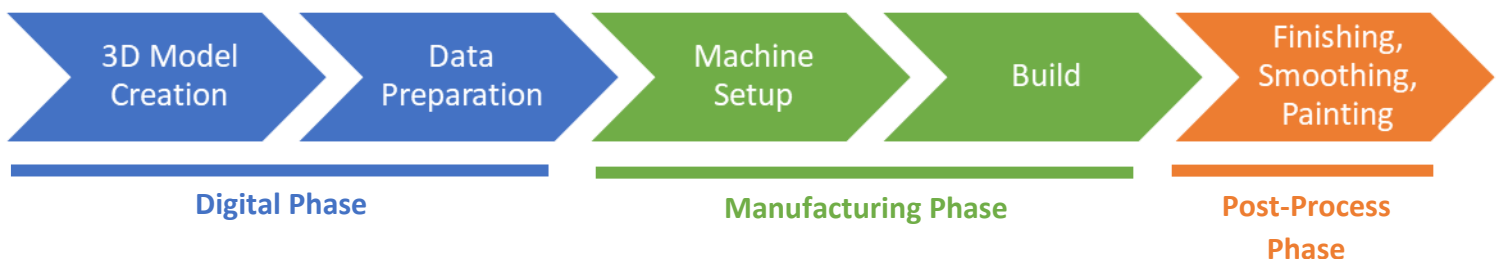
- [CIRAS](#) offers assessments and assistance with cost benefit analysis, process improvements and integration planning, among other services. For Additive Manufacturing, CIRAS provides basic to advanced training and evaluation support – [click here learn more about CIRAS' work in Additive Manufacturing](#).
- [UNI Foundry 4.0 Center](#) provides demonstration, education and consultation services in additive manufacturing.

Iowa Additive Manufacturing Vendors & others:

- [Mid-West 3D Solutions](#) (reseller in Boone)
- [Sciaky Inc.](#)
- [AddUp Global Additive Solutions](#)
- [AdvancedTek](#) – an Iowa vendor of [Stratasys](#) and other 3D systems
- [Trumpf](#)
- [B9Creations](#)

Disclaimer: This is not meant to be a comprehensive list of service providers

Main Steps of the Additive Manufacturing (AM) Process



Articles and Websites

- ✓ [Additive Manufacturing Users Group \(AMUG\)](#) – offers resources for users and hosts the Additive Manufacturing Users Group Conference.
- ✓ [AM Powered by ASME](#) – offers multiple articles, blog posts, webinars, podcast episodes, an internet talk show and videos about AM in multiple industries. Hosts the [AM Industry Summit](#).
- ✓ [Videos from America Makes - National Additive Manufacturing Innovation Institute](#)
- ✓ [Additive Manufacturing News](#) – an online news portal with trends and stories about industrial 3-D printing and additive manufacturing. Visitors to the site can sign up for the Additive Manufacturing Newsletter.
- ✓ [Assembly](#) – an online website for Assembly Magazine. Includes articles, blogs on a range of topics, including AM.
- ✓ Renishaw’s [AM Guide](#) – includes articles, videos and case studies about AM in practice.
- ✓ [3Dnatives](#) – interesting website with printing guides by material, a business directory and articles about 3D printing.
- ✓ [The Additive Report](#) – news about company adoptions of additive manufacturing and informational articles about additive manufacturing technology.

Adopting Additive Manufacturing

1. Form your team – provide your engineering teams or R&D team with AM test equipment
2. Start and excite – start using AM for prototyping; explore whether AM could create some assembly tools; identify current pain points for parts
3. Experiment – try different parts and materials
4. Build – start small-scale in-house production for proven parts
5. Scale and sustain – focus investments to scale AM production, assess business model

Excerpted from “[The Mainstreaming of Additive Manufacturing](#)” from McKinsey & Company

Prototyping is still the most common 3D printing use case in aerospace and defense manufacturing, but others are growing quickly.

In what ways is your company currently utilizing additive manufacturing?



Repair and
Maintenance

44%



Research and
Development

43%



Production
Parts

39%



Jigs, Fixtures
and Tooling

36%



Bridge
Production

35%

JABIL



BREI at a Glance is Produced by a Partnership of the University of Northern Iowa EDA University Center - Institute for Decision Making • Hawkeye Community College Corporate & Business Solutions • Cedar Valley Regional Partnership • Iowa Manufacturing 4.0 Consortium • Iowa Northland Regional Council of Governments EDD