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 companies are part of large supply chains, AM will be critical in maintaining their competitiveness among OEMs. Share the following opportunities, resources and information with your manufacturers to help them understand where AM could play a role in maximizing their processes and output.

Webinars, Videos or Podcasts to Share

Upcoming Manufacturing 4.0 webinar on Additive Manufacturing/3D Printing:
- Tuesday, June 21, 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

Cut & Paste Text for Your Next Newsletter

Additive Manufacturing (AM)
The utility of AM application is limitless and is being used to positively impact every stage of a product’s life cycle. While the adding of layer-upon-layer approach is simple, there are many applications of AM technology:
- a visualization tool in design
- a means to create highly customized products
- as production tooling
- to produce small lots of production parts
- in MRO – Maintenance, repair and operations – recreating old parts
For more information about Additive Manufacturing and the advantages of using the technology, check out this blog post from PTC.

BREI Discussion Starters for Your Visits with Local Businesses

1. Are you having trouble finding legacy parts for any of your equipment?
2. Would your process be simpler if you could combine multiple small parts into a single component?
3. Do you find supply chain issues affecting your ability to fill your need for small batches production parts?
4. Have you thought about additive manufacturing as a way to:
   - Speed up your prototyping?
   - Handle some small production runs?
   - Reduce spare parts inventory?
   - Recreate legacy parts?
   - Reduce material waste?
   - Help you customize your product?
Additive Manufacturing Referrals to Share

Useful follow up resources:

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

Public sector service providers for your businesses:

- 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

Additional Resources and Reading for You or Your Businesses

✓ 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