



For Immediate Release

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ADAPT Membership Yields Dividends for Reaction Systems

Certification of 3D printed prototype helps win contract extension

Golden, CO – [ADAPT, the Alliance for the Development of Additive Processing Technologies](#), a research consortium focused on developing technologies to accelerate the certification and qualification of 3D printed metal parts, has helped member company [Reaction Systems](#) win a two-year, \$750K SBIR contract extension.

“This early success shows the value of collaboration between ADAPT members,” said ADAPT Technical Director Aaron Stebner.

With a Phase II SBIR project with the [Air Force Research Laboratory \(AFRL\)](#) to develop a hypersonic jet engine part and a need for specialized additive manufacturing expertise, Reaction Systems turned to founding member company Faustson and ADAPT to create a prototype and keep moving the project forward.

David Wickham, Reaction Systems’ president and senior project manager, said, “The part has an intricate interior channel that can only be made this way. As it moves forward, our production volume will grow, and we’ll need ADAPT’s expertise to show the part can withstand rigorous conditions. They’ve already demonstrated they can provide useful data to help us do that, and membership helps us expand our capabilities and expertise in using catalysts on complex surfaces.”

Small manufacturers can’t justify the expense required to adopt emerging additive metal technology without a resource like ADAPT. Real-time monitoring costs hundreds of thousands of dollars they simply don’t have. ADAPT membership and access to shared resources, world-class expertise and peer organizations with complementary needs and services make it affordable for Faustson, Reaction Systems, and other small manufacturers to successfully invest in this emerging technology.

“We had no experience with additive manufacturing, and started looking around to find the expertise and resources we needed,” noted Reaction Systems COO Jeffrey Engel. “A contact at Mines connected us with founding member Faustson and ADAPT. That enabled us to quickly

manufacture the part with the internal geometry it requires, something we could not have done with traditional machining techniques.”

Heidi Hostetter, ADAPT Industry Board Chair and VP of Faustson, said, “AFRL was right when they asked it to be made additively. A complex part, accelerated schedule, and low volume was tailor-made for 3D metal printing.”

Faustson worked with Reaction Systems to make the part in a few days on its Concept Laser machine. The R&D team at Mines then used the ADAPT lab equipment to characterize the part to show it met design specifications. The result was a two-year extension of the Reaction Systems contract, worth \$750,000, to continue work on the part.

About ADAPT

The Alliance for the Development of Additive Processing Technologies (ADAPT) is a research and development organization dedicated to the creation of next-generation data informatics and advanced characterization technologies for additive manufacturing technologies. ADAPT uses these tools to help industry and government qualify, standardize, assess, and optimize advanced manufacturing processes and parts. Several levels of membership to the ADAPT consortium are available. Founding industry members include Ball Aerospace & Technologies Corp., Faustson Tool, Lockheed Martin, Citrine Informatics. Grant funding from the Colorado Office of Economic Development & International Trade (OEDIT) was provided to Manufacturer’s Edge and The National Institute of Standards and Technology’s Hollings Manufacturing Extension Partnership. For more information, find ADAPT on [the web](#), [LinkedIn](#), [Facebook](#), or [Twitter](#).

About Reaction Systems

Reaction Systems, located in Golden, Colorado, develops leading-edge technologies, creating new products and processes and turning them into real commercial products. Much of this work is done through the Small Business Innovation Research (SBIR) program and carried out by conducting research, securing patents, and cultivating commercialization partners. The company has developed a way to improve scramjet engine ignition; created a membrane that separates carbon dioxide from a spacesuit environment to enable longer space walks; and invented a way to map and remove coke deposits to improve rocket engine performance. For more information, visit www.rxnsys.com.

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