



Proud Partner within the



THE UNIVERSITY OF TEXAS AT EL PASO

Enhancing Member Benefits through New America Makes Model

Located at The University of Texas at El Paso, the W.M. Keck Center for 3D Innovation (Keck Center) is a unique multidisciplinary research facility focused on the use and development of additive manufacturing (AM) technologies with primary focus areas in AM Technology Development (large area and hybrid processes), AM-Enabled Materials Science (metals, polymers, and ceramics), and Advanced AM Applications (3D-printed electronics, biomedical, aerospace, defense).

Established in 2000, the Keck Center is home to more than 65 AM systems and more than 60 students, faculty and staff from various engineering disciplines. In 2015, UTEP became the first satellite center of America Makes as a result of the growing relationship between the Keck Center and the National Center for Defense Manufacturing and Machining (NCDMM). In addition to its 13,000 square feet of on-campus research space, the Keck Center recently expanded its operations to a 17,000-square-foot off-campus facility, providing additional space for research, economic development, and training.

HOW THE MODEL WORKS

1. An organization can contract UTEP's Keck Center to produce parts or prototypes. Service fees incurred can be submitted as cost share to America Makes.
2. Test coupons, using the same material and build parameters, will be built alongside the contracted parts for testing, to include characterization, dimensional, or mechanical.
3. A set of data arising from each build (not considered confidential proprietary information) will be provided to the organization.
4. The data will be compiled in a database and will be made available to the general America Makes membership. Should an organization wish to pursue proprietary work and not desire to share the performance data, UTEP and America Makes will evaluate the situation on a case-by-case basis.
5. Additionally, equipment or material manufacturers can donate or house their equipment at the Keck Center to obtain cost share.

3D PRINTING AND MANUFACTURING SERVICES

3D Printing - Polymer, metal, and ceramic printing using state-of-the-art AM technology

Design - 3D modeling and design optimization using design for AM concepts

Reverse engineering - Laser 3D scanning for creating a 3D model when only a physical model is available

Mechanical testing - Top of the line equipment for tensile, compression, flexural, or cyclical testing

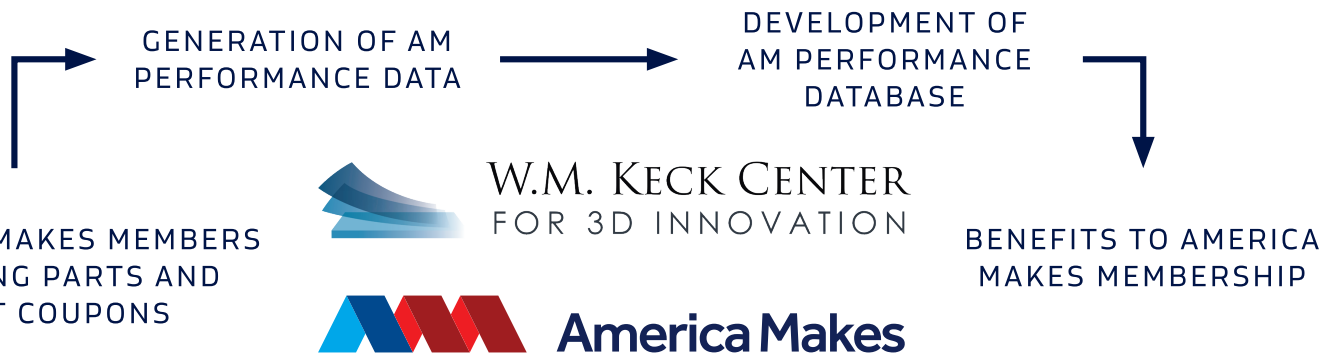
Characterization - Microscopy, metrology, or metallography for validation of materials or printed parts

Post-Processing - Gives parts a final touch to enhance visual appearance or mechanical properties

Low volume production - AM, CNC machining, or injection molding for small-scale parts or prototypes

Parameter development - Ideal for new materials with non-commercially available parameters





MODEL WILL BENEFIT 227 CURRENT MEMBERS OR ORGANIZATIONS SEEKING NEW MEMBERSHIP:

- Small to medium sized manufacturers
- Large manufacturers
- Academic institutions
- Government agencies

NEW ENHANCED BENEFITS

- Service fees applied towards cost share for membership
- Certified testing according to ISO, ASTM, ANSI, SAE, Nadcap, NIST, or other appropriate standards or committees
- OEM equipment and materials partnerships
- AM database available to membership
- Advanced AM workforce
- Economic development



FOR MORE INFORMATION, PLEASE CONTACT:

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