

Process developed for integrating technical data from external sources

Ninety-nine data sets were integrated with DSF and made available to America Makes members



PROBLEM

America Makes represents a fraction of activity ongoing in AM research and development (R&D) across the nation. Continued research across the AM technology landscape can offer incredible insight surrounding the current state of additive manufacturing, as well as identify the highest potential opportunities for R&D while avoiding duplication of effort. To date, there is no existing platform to integrate data from various federal investments for AM research. A common data model with a method to identify, characterize, and integrate AM data, that can be readily accessed and consumed by America Makes members is needed.

TECHNICAL APPROACH

A business intelligence tool was leveraged to scour publicly available sources of AM data including the Defense Technical Information Center (DTIC), the National Aeronautics and Space Administration (NASA), the National Institute of Standards and Technology (NIST), and the Solid Freeform (SSF) symposium project. A manual review was conducted of the identified sources to determine if they contained technical data and those that did then underwent a characterization evaluation to align the source to the America Makes AM Technology Roadmap data model before integration with DSF.

OBJECTIVE

The objective of this effort was to identify, characterize, and integrate publicly available data from various federal investments for AM research according to its relevance to the America Makes AM Technology Roadmap data model in the Digital Storefront (DSF).



**AMERICA MAKES
TECHNOLOGY
DEVELOPMENT
ROADMAP**

This project aligns to:



PROCESS

**ASTM PROCESS
CATEGORY:**
N/A

EQUIPMENT:
N/A

MATERIAL:
N/A



ACCOMPLISHMENTS

The tools and workflows developed by the team identified various sources containing technical data including 15 from DTIC, 19 from NASA, and 66 from SFF 2019. The data have been uploaded and are available to the America Makes membership. The data can be readily accessed and discovered according to its relevance according to the America Makes AM Technology Roadmap data model.

PROJECT END DATE

December 2021

DELIVERABLES

- Data pedigree assessment
- Data integration form
- Final report

FUNDING

\$688,495 total project budget

PROJECT PARTICIPANTS

Project Principal:

NCDMM/America Makes

Other Project Participants:

Association for Manufacturing Technology (AMT)

Public Participants:

U.S. Department of Defense