Are you seeking to achieve the full potential of Additive Manufacturing? With the GRANTA MI:Additive Manufacturing™ Package, you can capture the right information from your AM projects and analyze it for insight that helps get solutions to market faster.

Improve understanding of critical property/process relationships. Future-proof your AM research and development, for example, by ensuring that you are prepared for product or part qualification.

Key benefits

- Ensure traceability and future-proof your AM projects
- Capture the full picture: any test type for powders, materials, and parts
- Consolidate, control, and share AM data across your organization
- Manage key AM workflows
- Understand your process parameters and the effect on part performance

The problem

Additive manufacturing promises to transform manufacturing, but only if we understand process parameters and their effect on materials, so that we can control part performance, consistency, and quality. A pre-requisite is a strategy to capture, and then mine, material and process information in order to gain this understanding. Progress depends on having the right strategy to meet the challenges of scale-up and implementation, and to maximize return on investment.

AM programs generate vast amounts of data on material properties, process parameters, test data, simulation, and qualification of parts. This raises many questions—what data should we retain, how should we use it, and what is best practice? How do we audit our processes? How do we know which parameters or relationships are critical? How can we avoid significant investment into parts that will not get certified, or having to repeat work for certification purposes? How do we choose from the hundreds of industrial AM machines and materials?

GRANTA MI:Additive Manufacturing can help you to answer these questions.

Read in machine data, including from Renishaw (pictured), EOS, Arcam, and SLM Solution (image courtesy of Renishaw plc).
The MI: Additive Manufacturing Solution

Traceability: Capture and manage vital AM data

GRANTA MI™ is the leading materials information management system. Apply this proven software to capture vital AM data for your team, enterprise, or research project in one place, with full traceability. The GRANTA MI: Additive Manufacturing Package includes a data structure ('schema') based on extensive experience from world-leading AM projects. Flexible admin tools let you tailor this template to your specific requirements, so you get up and running quickly.

- Import ‘logfiles’ directly from AM machines (including Renishaw, EOS, Arcam, and SLM Solution)
- Manage complete process info: powders, builds, machine parameters, parts
- Ensure controlled workflows for the lab and the enterprise
- Capture test and inspection results and feed this data into statistical analyses that determine mechanical properties
- Consolidate your AM data, browse it through a fast, easy-to-use web interface, and share it across your organization with controlled access.

Analysis: How do process parameters affect part performance?

With all of your critical data in one place, you can mine the resulting rich information resource to extract crucial understanding. Use the GRANTA MI: Mat Analyzer app to visualize and understand vital relationships between material properties and process parameters.

- Compare and analyze data to deepen your understanding of parts and processes
- Export data for input to simulation; capture and share simulation results to help optimize part design and production.

Certification: Qualify parts and certify processes

With GRANTA MI you can ensure that you capture all of the data that might be needed in one place, creating an ‘audit trail’ for future qualification or certification. Input data can be captured according to standards (e.g., ASTM F42) and you can configure the system to generate automated qualification reports.

Senvol Database™: Select machines and materials

The Senvol Database™ is the leading reference resource with details of over 550 AM machines and over 700 compatible materials. Browse and search based on material type, property, or compatible machines. Compare machines based on supported processes, manufacturer, part size, cost, or materials. Focus on the most likely routes to achieve project goals, save time, and generate new ideas.

Sharing industry best practice

The MI: Additive Manufacturing Package has been developed based on experience gained from Granta’s participation in several leading AM projects.

For example, the AMAZE project involves 28 corporations and research institutions in developing rapid production of large defect-free AM metallic components. Granta captures and securely shares project data. This enables: data comparison, better production knowledge, process refinement, simulation integration, and R&D coordination.

What do you buy?

Core database system:
MI: Server, MI: Toolbox

Data structures and tools:
MI: Additive Manufacturing Template Database

Reference data:
Senvol Database™

Browse, search, analyze:
MI: Viewer, MI: Explore, MI: Mat Analyzer

Getting started services.

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