



**3DEXPERIENCE®**

# DIGITAL ADDITIVE MANUFACTURING



## PRINT TO PERFORM

Dassault Systèmes **3DEXPERIENCE®** platform, backed by digital process planning and multiphysics-based simulation, transforms Additive Manufacturing (AM) with solutions that bring additive parts to market faster than ever before possible.

DELMIA® digitization of the additive process, combined with the power of SIMULIA® physics behavior and performance analyses, allows manufacturers to bring quality additive production parts into service. This digital thread that connects, integrates, and intuitively captures the additive process and parameters—as well as the materials—is key for achieving first-time right for additive parts to be placed in service.

*Dassault Systèmes delivers a unified solution for process planning and simulation to support the production of additive parts to be deployed in service.*

## INDUSTRY CHALLENGES

- How to minimize trial and error runs
- How to predict overall part-level material properties
- How to validate the process will work as expected
- How to discover the proper machine parameters and material
- How to close the gap between the “as-designed” and the “as-manufactured” part
- Reliability concerns; material properties, cracking & failure, distortion
- Maximize output and quality

## SOLUTION HIGHLIGHTS

- Process planning based on manufacturing constraints and structural requirements
- Create reusable rules for every process step
- Output files can contain geometry, supports, slicing, scan path, and machine parameters
- Use the virtual machine concept to best leverage the real asset
- Predict potential process hazards; residual stress cracking, excessive distortion, recoater collisions
- Variate materials and incorporate batch scatter
- Optimize the build tray usage

## SOLUTION VALUES

- Fast-track designs into production, by creating a digital projection of the physical reality
- Unlock the true power of additive manufacturing, with increased accuracy and output
- Engineer best additive practices, to maximize ROI on AM investments
- Validate – then reuse best practices to capitalize on IP
- Single source of truth for all stakeholders from design to manufacturing

## USERS

- Manufacturing Engineer
- Additive Technicians

For more information, please visit [www.3ds.com/DELMIA](http://www.3ds.com/DELMIA) and [www.3ds.com/SIMULIA](http://www.3ds.com/SIMULIA)

## Our 3DEXPERIENCE® platform powers our brand applications, serving 12 industries, and provides a rich portfolio of industry solution experiences.

Dassault Systèmes, the 3DEXPERIENCE® Company, provides business and people with virtual universes to imagine sustainable innovations. Its world-leading solutions transform the way products are designed, produced, and supported. Dassault Systèmes' collaborative solutions foster social innovation, expanding possibilities for the virtual world to improve the real world. The group brings value to over 220,000 customers of all sizes in all industries in more than 140 countries. For more information, visit [www.3ds.com](http://www.3ds.com).



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