

# ROUSH®

## ADDITIVE MANUFACTURING

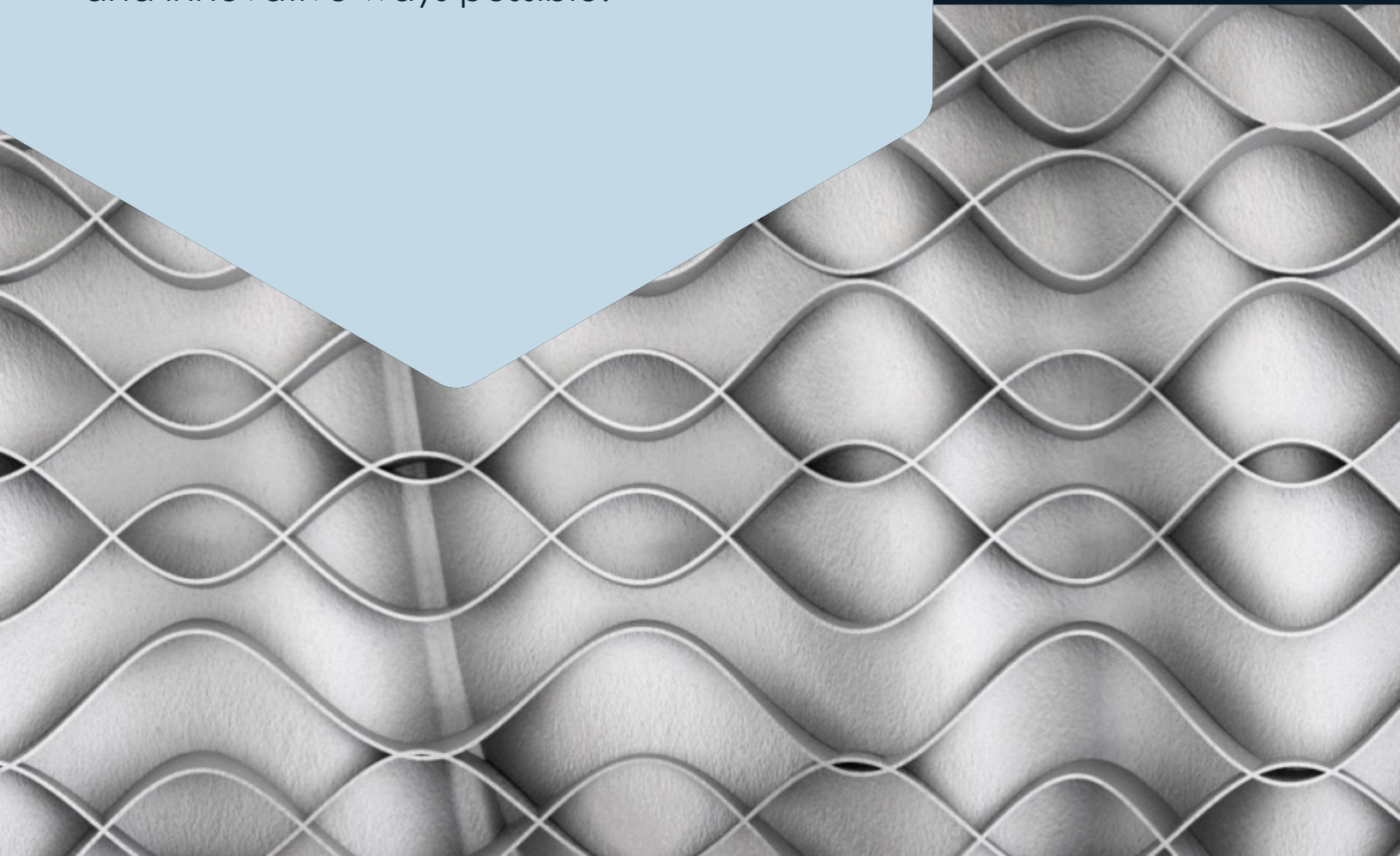
Roush is uniquely qualified to meet all your additive manufacturing needs. With investments in leading technologies, we have the capability of producing functional prototypes and high-performance production components across the aerospace, automotive, consumer products, defense, entertainment, alternative energy, and oil & gas markets.

Our expertise in providing integrated solutions allows us to bring your ideas from concept to production in the most efficient and innovative ways possible.

[www.roush.com](http://www.roush.com)

We're focused, we're efficient, and we're at our best when we're challenged to think outside the box — critical traits when our customers' success depends on how quickly we can take their visions from the sketchpad to the marketplace.

For more information, please [click here](#).



## MATERIALS USED:

- Aluminum, titanium, steel, stainless steel, Inconel
- ABS, polycarb, polypro, ULTEM™
- Nylon, glass-filled nylon, carbon fiber-filled nylon
- Rubber-like, and many others



## FUSED DEPOSITION MODELING (FDM)

Build areas up to 914mm x 609mm x 914mm. Offering production-grade thermoplastics for stable, accurate, and durable functional prototypes, tools, fixtures, and concept models in high-performance materials like ULTEM, as well as ABS, PC, and Nylon.

## DIRECT METAL LASER MELTING (DMLM)

Build areas up to 800mm x 400mm x 500mm A variety of metal alloys are available, including Aluminum, stainless and tool Steels, and super alloys like Inconel, Cobalt Chrome, and Titanium. We offer the largest powder bed fusion build platform in North America with the Xline 2000R!

## STEREOLITHOGRAPHY (SLA)

Build areas up to 650mm x 750mm x 550mm Providing accurate and tough opaque and clear PP-like and ABS-like aesthetic materials for rapid prototypes, fast.

**ROUSH**®

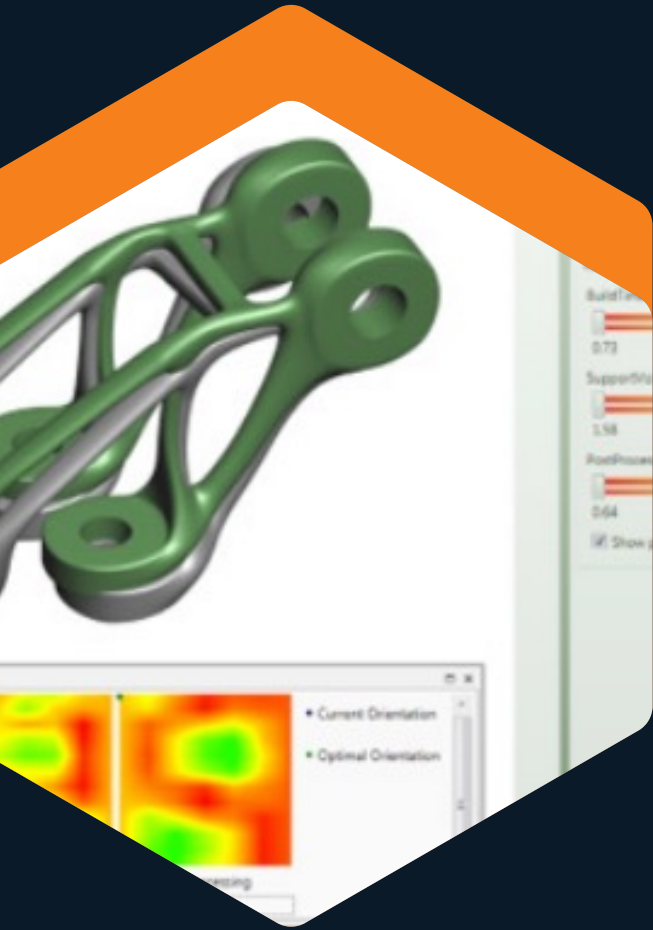
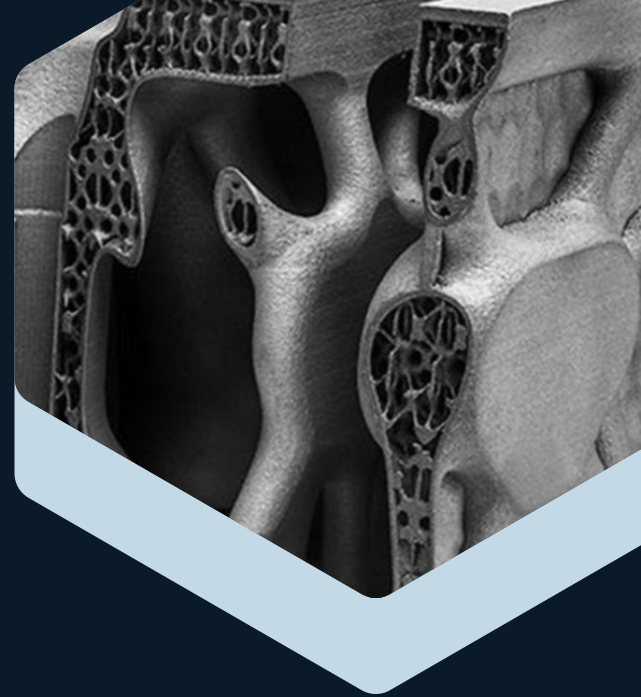
[www.roush.com](http://www.roush.com)

## SELECTIVE LASER SINTERING (SLS)

Build areas up to 508mm x 508mm x 760mm  
Our strong, impact-resistant nylon, glass-filled nylon, and carbon fiber-filled nylon materials, will provide you with superior mechanical properties for your high performance and model testing applications.

## FULL-SERVICE MACHINING

- 3, 4, and 5 axis machining
- Prototype and low-volume production parts
- Complex, tight tolerance parts



## DESIGN FOR ADDITIVE MANUFACTURING

- Weight, cost, and strength optimization
- Styling and topology optimization
- Support structure design & integration
- Component consolidation
- Build time optimization
- Complete CAD resource

## ENGINEERING AND TEST SERVICES

- FEA stress, durability analysis
- Thermal and deformation analysis
- DFMEA and PFMEA using AM parts
- Material testing
- Stress and durability testing
- Product DVP&R testing

## ADDITIONAL PROTOTYPE SERVICES

- 3D scanning
- Metal fabrication
- Model builds and vacuum forming
- Laser cutting
- Advanced composites manufacturing
- Paint services

**ROUSH**<sup>®</sup>

[www.roush.com](http://www.roush.com)