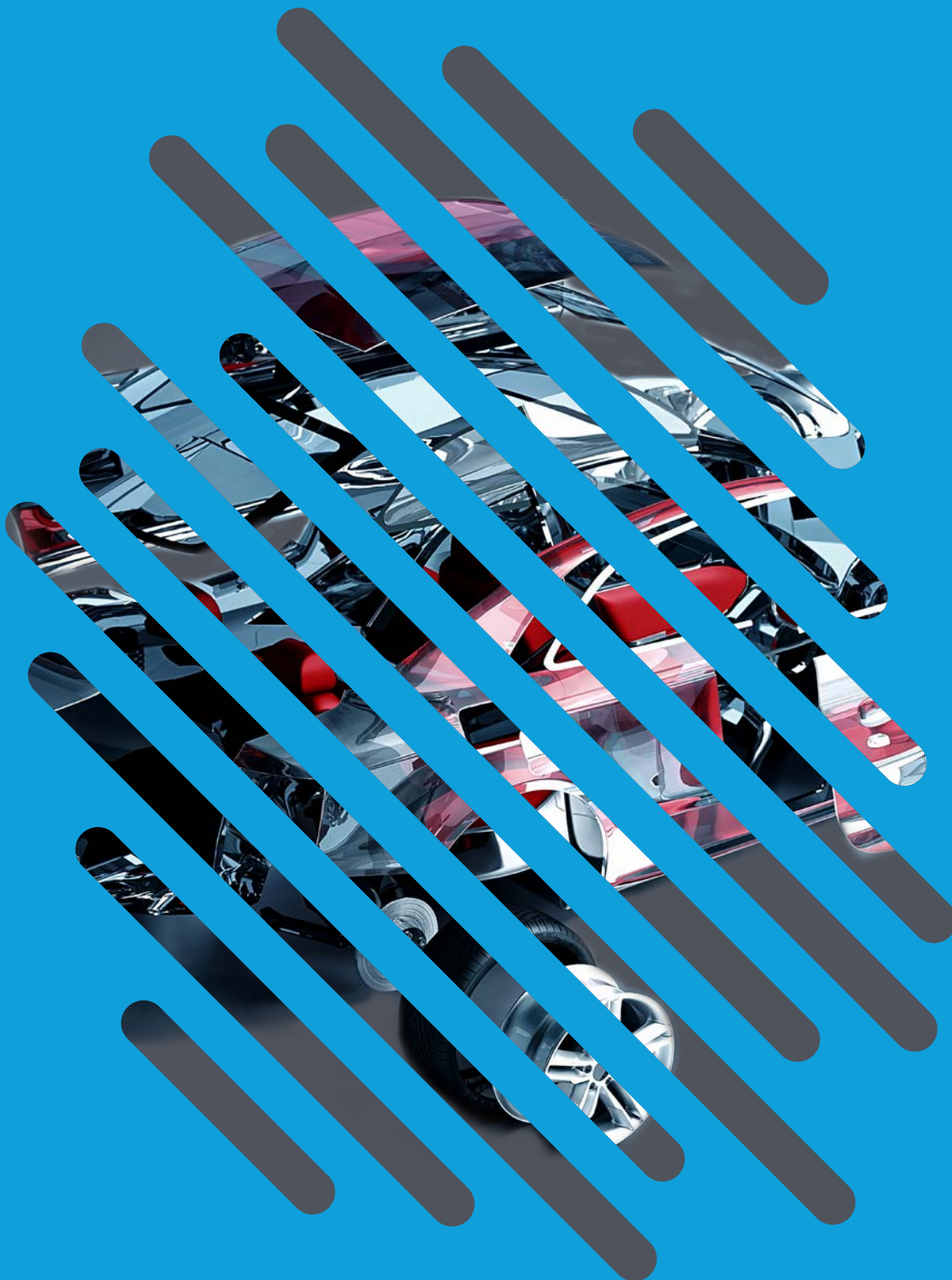


# Unlock the Potential™

Low Cost, High Volume  
Metal Additive Manufacturing



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# About 3DEO

## Unlock the Potential of Metal AM

3DEO's breakthrough Intelligent Layering® technology unlocks high volume metal AM by drastically reducing final part cost. Despite the low cost, our parts meet the high industry benchmark MPIF Standard 35 while still achieving tight tolerances and an impressive surface finish. Intelligent Layering® will open metal AM to the majority of the industries that can't afford today's expensive options.

Leveraging its unique technology as a parts supplier, 3DEO sells high volume, high-value metal parts to manufacturers for a variety of applications across a wide range of industries. *3DEO is selectively accepting new high volume, high-value industrial applications of 100+ pieces.*

We obsess about three things: *PART COST, QUALITY, and RESPONSIVENESS.*

# Benefits of Metal AM with 3DEO

- Repeatable, high volume production
- Dramatically lower final part costs
- Quality parts that meet MPIF Standard 35
- Complex, previously impossible designs
- Wide variety of industrial metals available
- Very short manufacturing lead times
- Fast, highly iterative development cycles

MANUFACTURERS  
CURRENTLY ADOPTING AM

2/3

“3D printing could  
very well have a larger  
impact on manufacturing  
than any other  
technology.”

-Wohlers Report  
Wohlers Associates, Inc.

“[Additive manufacturing]  
is really fundamentally  
changing the way we think  
about the company.”

-Mark Little, CTO at GE

COST

#1

BARRIER TO  
ADOPTION

METAL AM  
GROWING AT

76%

EXPONENTIAL GROWTH:  
GROWING TO

5M

UNITS SOLD IN 2019  
WITH 250,000, UNITS SOLD IN 2015

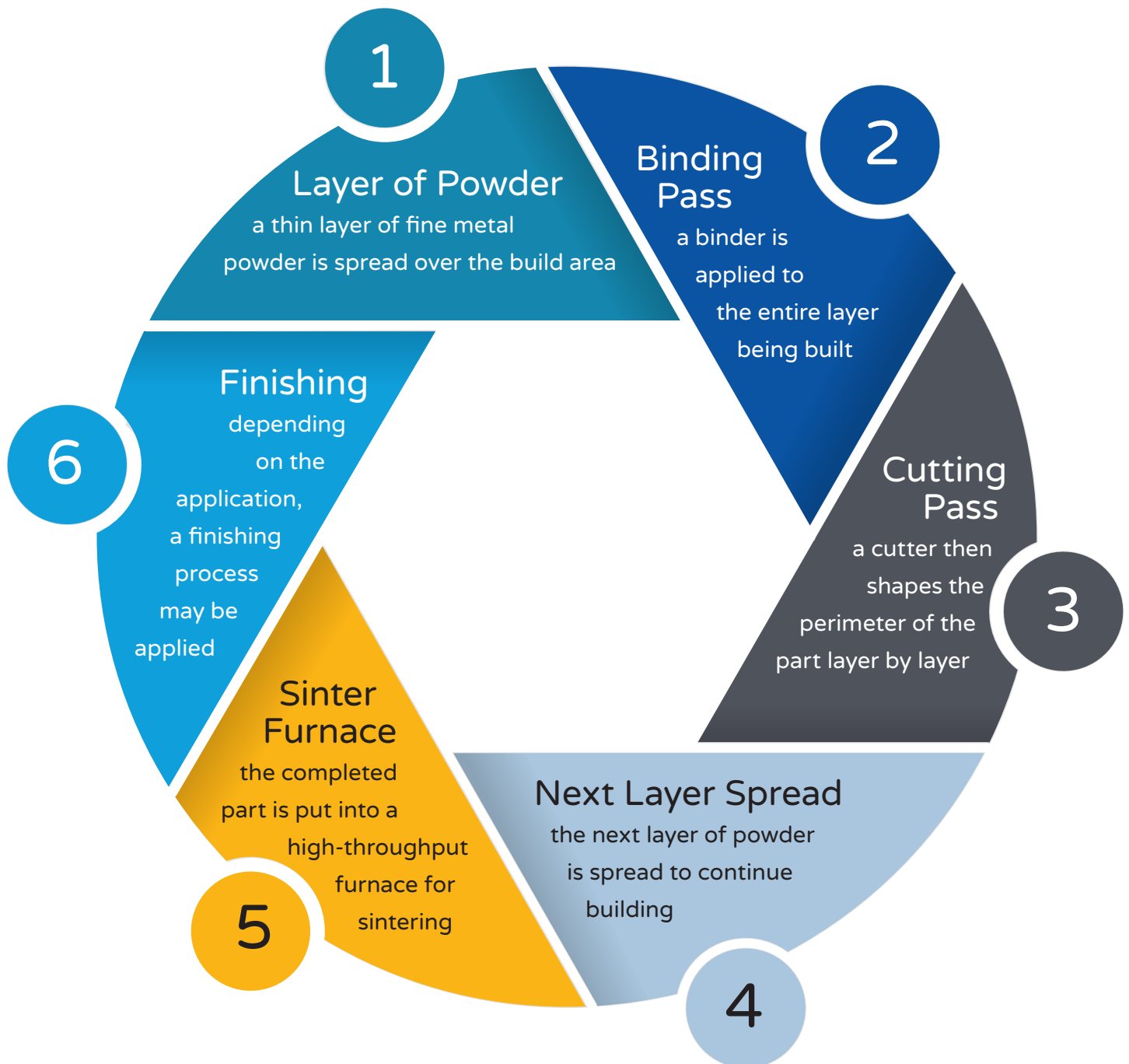


# Intelligent Layering® Technology

Intelligent Layering® is a fundamentally new metal AM technology that reduces final part cost by as much as 80%. The process, pictured to the right, follows six steps to build parts that meet MPIF Standard 35 for quality -- a first in metal AM.

There are three main factors that result in 3DEO's industry-leading low production costs -- low machine cost, commodity materials, and creative software design. The entire build process was designed around lowering the per-part cost of metal AM.

Thanks to the low-cost and highly repeatable process, 3DEO is able to manufacture in high volumes that are economically unattractive to other metal AM technologies.



# Technical Specifications

## FINAL PART PRODUCTION SPECIFICATIONS

**Fit:** Tolerances of +/- 0.005 in/in

**Finish:** Variety of physical, chemical, and mechanical finishing options available

**Function:** Engineered densities up to +97% relative to wrought

**Feasibility :** Lowest per-part cost in metal AM with high volume (100+ piece) potential

## Material Possibilities

Currently manufacturing in stainless steel 17-4PH.

### Other Materials Under Development

- Inconel, nickel alloy
- Cobalt-chrome
- Titanium
- Tool steels
- Low-alloy steels
- Soft magnetic alloys
- Controlled-expansion alloys
- Tungsten carbide
- Tungsten heavy alloy
- Bronze, copper and brass

## Manufacturing Capabilities

**Secondary Operations:** We offer a variety of secondary operations, including heat treating, vibratory deburring, sizing/coining, machining, and steam treating.

**Quality Control & Metallurgical Inspection:** Complete mechanical testing facility including: optical metallographic equipment, vision system measuring center, CMM, optical comparator, micro-hardness and apparent hardness testers, gear checker, surface roughness testers, humidity chamber, and conductivity meter.



# Technology Comparison

TECHNOLOGY	CAPITAL COST	COST PER PART (AVG)	COMPLEXITY	VOLUME	LEAD TIME
<b>3DEO</b>	\$	\$	High	Low - Medium (100+)	Low
OTHER METAL AM	\$\$\$	\$\$\$	High	Low (1-100)	Low
SUBTRACTIVE MANUFACTURING / MACHINING	\$	\$	Low	Low - Medium (1-1,000)	Low - High
METAL INJECTION MOLDING (MIM)	\$	\$	Medium	High (20,000+)	High
CASTING	\$	\$	Low	High (20,000+)	High
HOT DROP FORGING	\$\$\$	\$	Low	High (20,000+)	High

Key advantages include **lower part cost** due to our proprietary technology, faster build times through Intelligent Layering®, and significantly **higher volumes** than other metal AM machines.

Stop losing money on outdated manufacturing and unlock the potential of metal additive manufacturing.

# Industries

- Industrial
- Automotive
- Appliance
- Energy
- Medical & Dental
- Aerospace

# Applications

- High volume
- High temperature
- High strength
- Complex designs

# Work With 3DEO

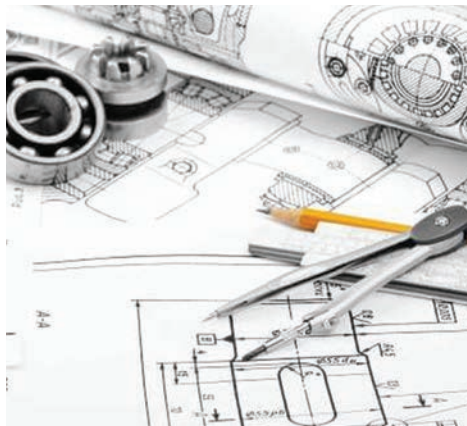
## 1 Initial Contact

Contact 3DEO to ask questions about our process or your application and requirements.



## 2 Design Review

Send us your design file(s). We will review and respond with detailed feedback, suggestions, and observations. If your part is a good fit for our capabilities, we will also provide a cost estimate.



## 3 Proposal

You review the estimate, and we confirm the project scope and submit a manufacturing proposal.



## 4 Evaluation

We deliver sample parts for your evaluation.



## 5 Purchase Order

After passing your QA process, a purchase order is signed for a full manufacturing run.



## 6 Manufacturing

We manufacture and ship the order.





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