

# The Mixed Factory Environment



## Bringing additive and subtractive manufacturing into the same metal production workflow

Additive manufacturing is factory-ready and able to automate, integrate, connect and scale within conventional production settings. Find out what the Digital Factory looks like, and where AM delivers the most value to manufacturers and their products.

### Optimize production with function-specific modules

A mixed factory environment includes both additive and subtractive processes that are logically assigned and sequenced to the task at hand. Developments in additive manufacturing allow manufacturers to leverage the initial work cell to build optimized parts that feed into subsequent processes.



**WORK CELL 1:**  
Metal 3D Print



**WORK CELL 2\*:**  
Machine



**WORK CELL 3:**  
Heat Treat



**WORK CELL 4:**  
Inspect

\*Sequencing of subsequent work cells will vary based on application.

### When to use Additive Manufacturing in the factory setting

Like any other manufacturing tool, additive manufacturing offers value that matches some applications better than others. Additive manufacturing is best suited for critical applications with high value and allows you to:



Introduce innovative performance improvements



Eliminate assembly and common failure points



Improve system function with reduced weight



Add complexity with efficiency



### Navigating the limitations of Additive Manufacturing

Additive manufacturing enables manufacturers to produce parts in metals that would be impossible or prohibitively expensive using conventional methods.

To justify the use of additive manufacturing for your application, you must take advantage of this core value and design for additive production.



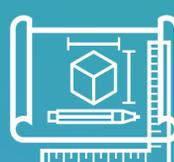
#### Find the Right Application

Using AM for critical applications with high value can unlock performance improvements to the part, system, or both.



#### Analyze Cost vs. Value

Sometimes AM parts cost more to produce but significantly increase the performance, lifespan or value of the part. Every application requires an evaluation of cost versus value.



#### Design for AM

Design for the tool you plan to use to get the most out of it. Consulting with AM experts or using an all-in-one AM software like 3DXpert™ can help deliver successful design improvements.



### Scale when and how you need with modular metal Additive Manufacturing solutions

When we talk about factories, we are talking about volume production. New modular metal additive manufacturing systems function like any other manufacturing equipment, enabling you to add the number and type of units you need to reach your target.

#### WHAT TO LOOK FOR IN A MODULAR ADDITIVE MANUFACTURING SOLUTION



**1. Printer Module (PTM)**  
For 24/7 printing



**2. Removable Print Module (RPM)**  
Seals the build platform from the atmosphere and moves throughout the factory



**4. Powder Management Module (PMM)**  
De-powders parts, recycles unused materials, prepares RPM for next print



**5. Parking Module (PAM)**  
Holds RPMs in inert environment until ready for next stage

**3. Transport Module (TRM)**  
Takes RPMs from PTM to PMM



3D Systems' DMP Factory 500 is a flexible metal AM system comprised of function-specific modules to handle printing, depowdering, transportation, and layover.

### Find out more

Want to learn more about the current state of metal AM solutions for the Digital Factory?

[Get the Executive Brief](#)