

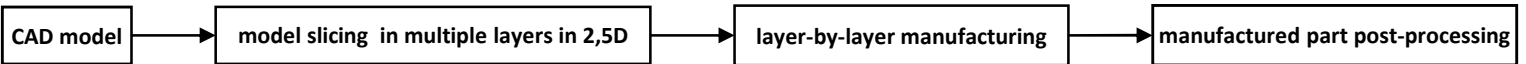
Development of Multi-Material 3D Microstructures by Additive Manufacturing

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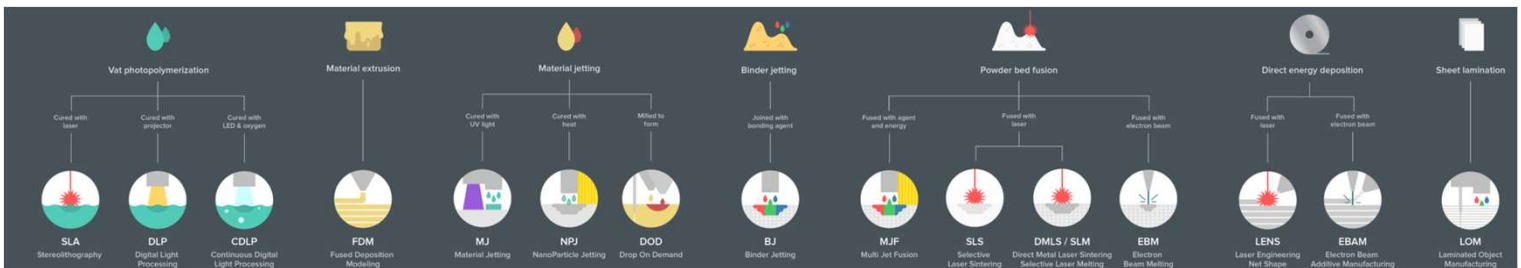
CIRIMAT - Institut CARNOT Chimie Balard Cirimat¹, CNES², Thales Alenia Space³

Industrial Context : Lightening, Volume Reduction and Shape Complexification of Specific Parts

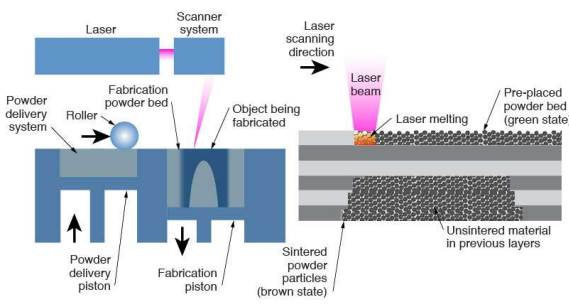
Global Operation of Additive Manufacturing (AM)



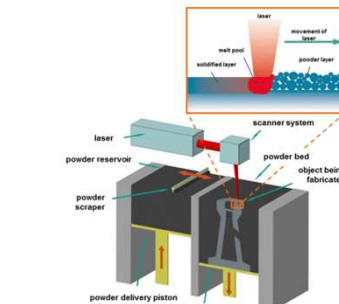
Additive Manufacturing Technologies



Laser Powder Bed Fusion (LPBF) at CIRIMAT



3D Systems – ProX Direct Metal Printer 200
Near-Infrared laser source (1,07µm)
Maximal laser power : 300W
Tuneable power : 30W – 300W
Focalized laser spot size : 70µm



Coherent – CREATOR Metal 3D Printer
Near-Infrared laser source (1,07µm)
Maximal laser power : 250W
Tuneable power : 52W – 250W
Focalized laser spot size : 40µm



Experimental Method - Test Matrix to Optimize Conditions of Manufacturing

