



IMPACT OF 3D METAL PRINTING (ADDITIVE MANUFACTURING) IN INDUSTRIAL APPLICATION

Overview of 3D Metal Printing (Additive Manufacturing) Technology

3D printing technologies are not a recent novelty, after all its invention goes back to the 1980s when Chuck Hull first developed and patented the idea of stereo lithography – a method and apparatus for making solid objects by successively “printing” thin layers of ultraviolet curable materials on top of the other. The timeline below helps to illustrate the journey made insofar.

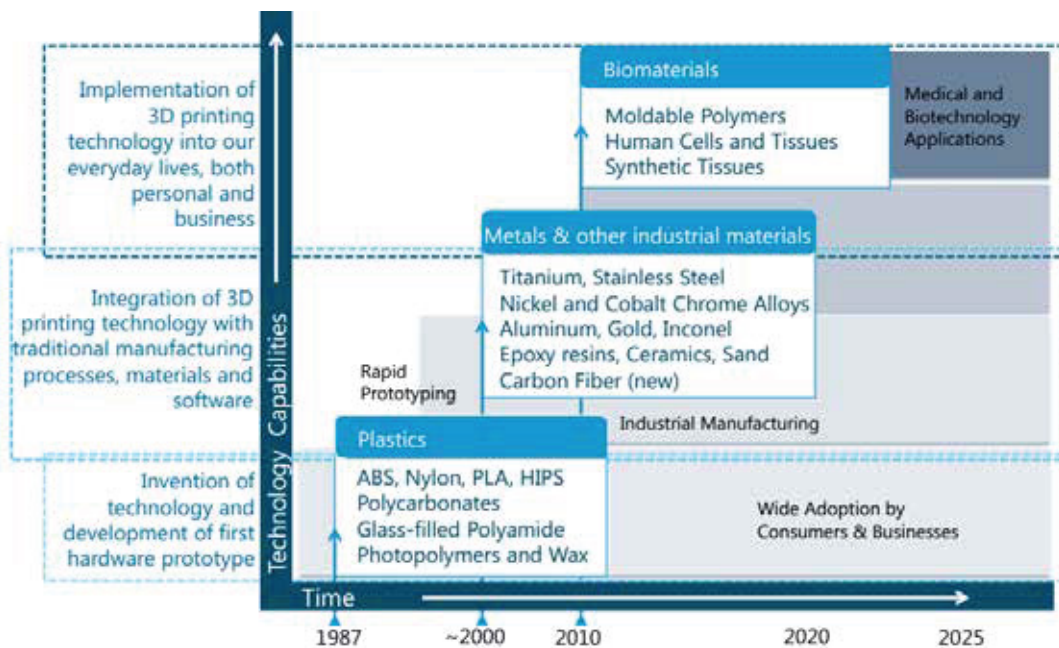


Fig 1 – Evolution of 3D printing technologies⁽¹⁾

What has changed recently is the explosion of plastic desktop systems becoming readily available in the consumer market place (for example Makerbot) and the increased prominence and interests in the potential application within the industrial space mainly driven by metal 3D printing technology. With 3D metal printers now being able to work with materials such as titanium, stainless steel, aluminum and inconel, it positions the technology as a possible transformative game changer when it comes to making parts for industrial application.



Fig 2 - Makerbot