Powder Bed 3D Printing Solutions on the Rise

Powder Bed Fusion for Metal and Plastics set for highest growth potential amongst seven main 3D Printing Technologies

London, 8th September 2016- Powder Bed Fusion 3D printers accounted for 40% of the global revenues from Industrial/Professional* 3D Printer shipments in 1H'16, and are set to rise further, according to data released today by CONTEXT, the IT market research company.

"In unit volumes, the Industrial/Professional 3D Printer segment was mostly made up of printers leveraging one of seven technologies, with printers based on Material Extrusion, Vat Photopolymerization and Material Jetting accounting for most of the unit volumes," noted Chris Connery, VP for Global Analysis at CONTEXT. "The fourth most dominant technology – Powder Bed Fusion – is the one everyone is watching however, as it continues to rise in share and also represents the biggest part of the market in terms of revenues."

The growing interest around Powder Bed Fusion exists since this technology segment represents the two hottest trends in 3D Printing: (1) Metal 3D Printing and (2) Plastic 3D Printing for short/mid-run production from exiting players as well as from new IT stalwarts HP and Ricoh.

Metal remained one of the fastest areas of growth in the 3D Printing market with powder bed fusion solutions representing 90% of that metal market. The Metal market alone again witnessed growth above market totals, up 29% in Q1'6, with the Metal space already turning the corner into finished good part production for small and mid-run manufacturing.

This trend in metal is fully recognized by many of the world's leading manufacturing companies, best exemplified by GE's announcement this week that they will acquire two leading Metal 3D Printer companies (SLM and Arcam, #2 and #4 in global metal 3D Printer hardware revenues) to create a new Additive Manufacturing Business to continue to realize their goal of becoming a the preeminent digital industrial company. No fewer than ten global brands offered metal PBF 3D Printers to the market in Q1'16, led by EOS, Concept Laser and SLM Solutions with more coming to market every period.

While metal 3D Printing is already focused on production, plastics has yet to turn this corner. New power based solutions hope to change this, however. "HP is now entering the market with a new, laser-free plastics based Powder Bed Fusion printer and hopes this will help the 3D Printer market for plastics move from one focused on Rapid Prototyping to one more focused on short and mid-range production", added Connery. Likewise, rival Ricoh has also entered the 3D Printer market on the plastics side with a different take on Power Bed Fusion.

With the rise of new plastic based Powder Bed Fusion solutions (typically using nylon) from HP, Ricoh and others, together with the continued growth in the Metals space, CONTEXT is reporting that additive manufacturing machines based on powder are poised to grow at a 63% 5-Year CAGR to a unit share of 26% by 2020.

"Throughout the forecast horizon, the Additive Manufacturing sector as a whole will continue to benefit from the wide variety of technologies existing in the space with no one technology able to act as a "silver bullet" across all sectors", Connery added. "Advancements are expected across all major technologies most recently evidenced by market leader Stratasys and its enhancements to its long-standing (and market leading) Material Extrusion technology (aka FDM) and by relative newcomers like Carbon (formerly Carbon3D) and its advancements in stereolithography."

* Excludes sub $5,000 Desktop/Personal 3D Printers. Industrial/Professional printers continue to dominate revenue share for 3D Printing and Additive Manufacturing hardware, accounting for 78% share of the total $742 million first half printer revenues for the world market.

About CONTEXT
Headquartered in London with approximately 250 staff across the world, CONTEXT specialises in tracking technology sales and pricing globally. Supported by the largest Distribution Channel Database in the world and coupled with our extensive experience in managing and reporting on large data sets, we provide the highest quality data that has been helping our clients make business-critical decisions for over 30 years. CONTEXT also works with Government Statistical Services and key Trade Associations globally.

Figure 1: Global Industrial/Professional Printer Segmentation (Units) by ASTM Process
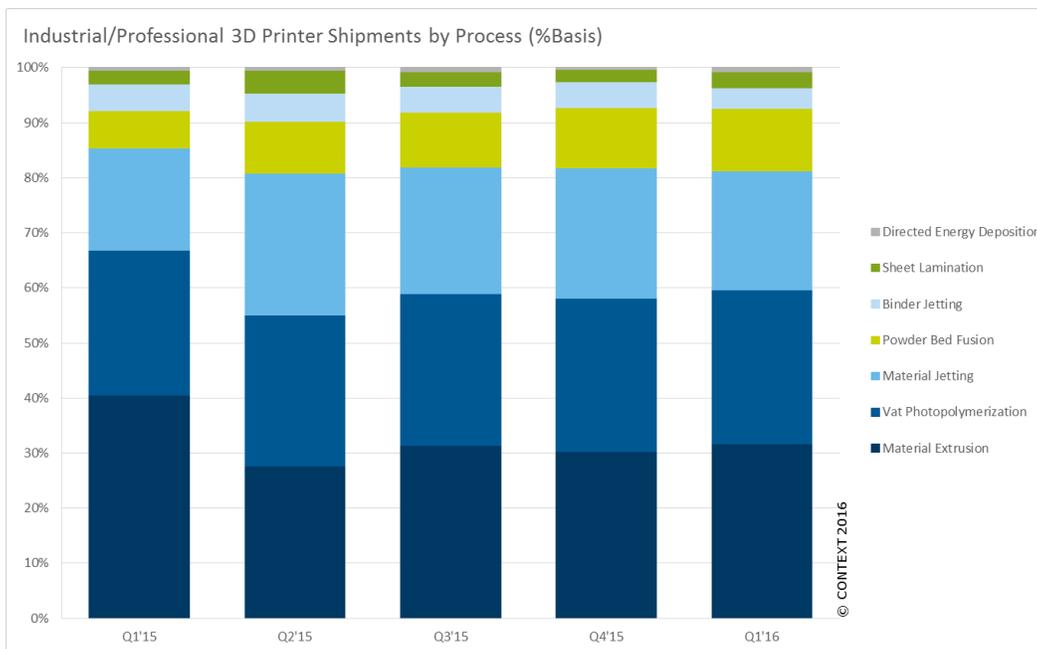
Figure 2: Global Industrial/Professional Printer Segmentation (Printer Revenue) by ASTM Process

Industrial/Professional 3D Printer Revenue by Process (%Basis)

Legend:
- Sheet Lamination
- Binder Jetting
- Directed Energy Deposition
- Vat Photopolymerization
- Material Extrusion
- Material Jetting
- Powder Bed Fusion

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