



Automotive

Additive Manufacturing Opportunities in 2018–23

Driving AM Evolution

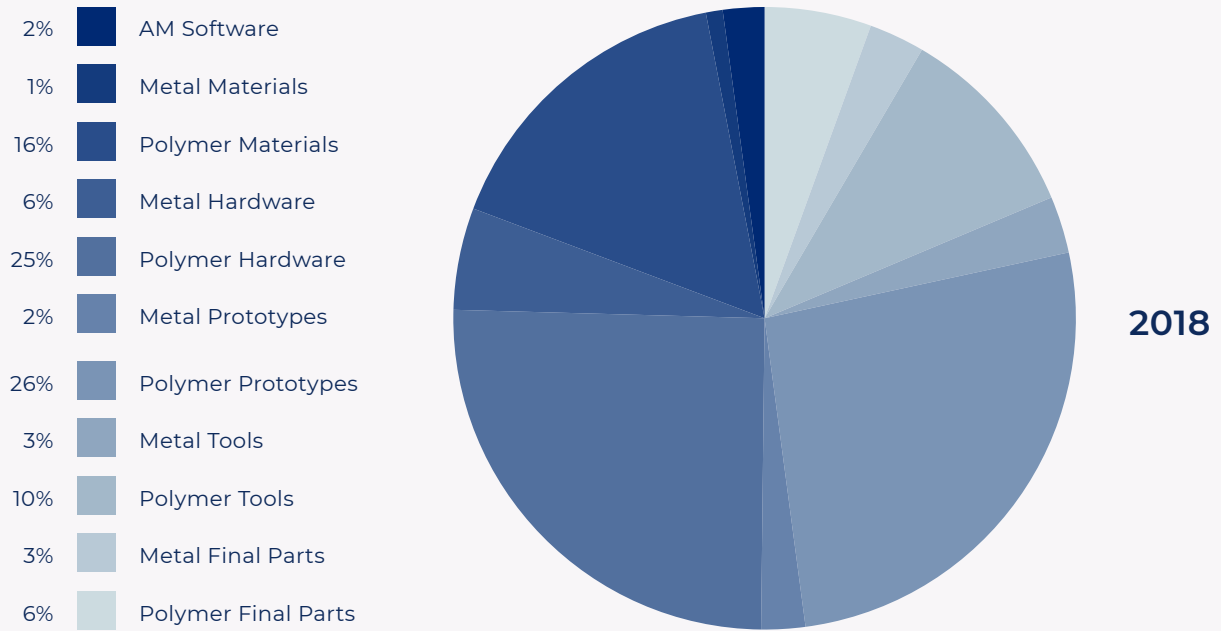
Automotive industry stakeholders worldwide are now racing toward full industrialization and integration of the AM process within their end-to-end production workflow, beginning with software and materials, passing through the AM hardware, and ending with services and a growing number of possible applications.

3D printing is thus well positioned to expand its use as the primary technology for automotive prototyping as well as tooling, while also establishing a stronger than ever opportunity for serial and mass customized part production. We expect the overall market for AM in automotive to grow to an impressive **\$12.4 billion US by 2028**

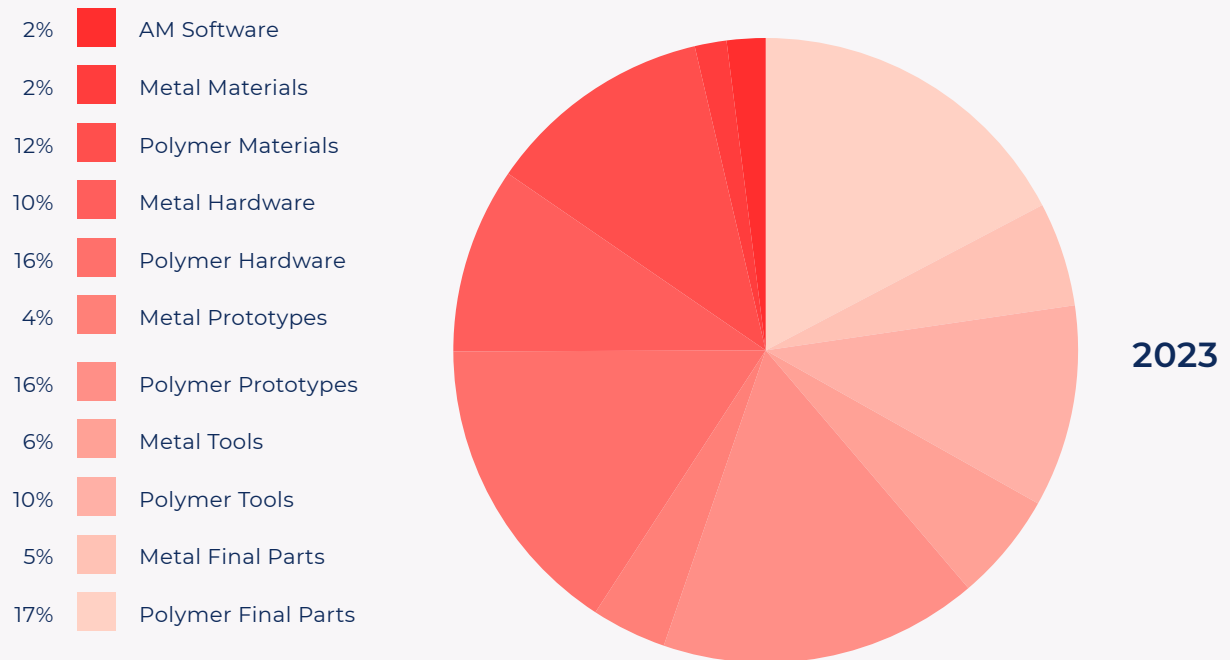
(growing at **24.8% CAGR**). This growth will be driven in the short and medium term by increasing adoption and use of 3D printing for prototyping and tooling.

Long term growth will be driven by final part production - even beyond the forecast period examined in this report. All segments considered in this report (hardware, materials and software) are expected to represent major revenue opportunities for AM industry stakeholders and service providers. Parts production including metal and polymer parts, as well as both parts produced internally by automotive OEM's and in outsourcing, are expected to be the primary revenue opportunity driving the entire segment.

Automotive AM Market Share by Segment



Source: Smartech Publishing



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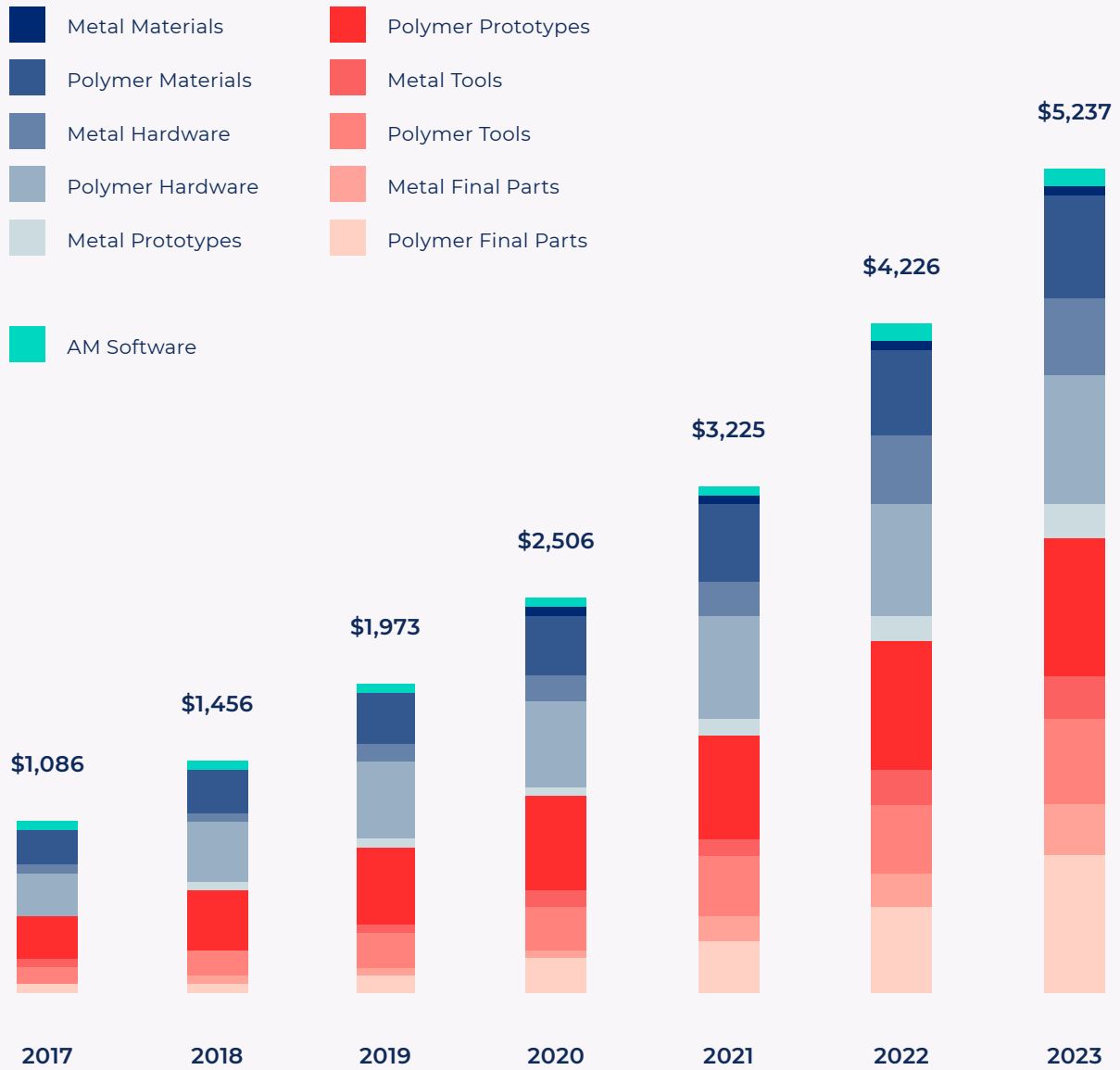
We identified several trends that confirmed this analysis. One is that major new hardware from leading vendors is now focusing on automotive part production: these systems include multi-jet fusion (HP), digital light synthesis (**Carbon**) as well as upcoming metal (binder) jetting systems from **Desktop Metal, GE, HP, Stratasys** and **XJet**. At the same time, current polymer AM market leaders such as **Stratasys, 3D Systems, EOS** and **EnvisionTEC** have all been upgrading and optimizing their technologies and processes looking to capitalize on the opportunity for higher batch production.

In addition, major automotive OEMs have formed partnerships with AM hardware OEM focusing on part production, given the value they see from integrating additive manufacturing into their processes. Finally, next-generation softwares from **Siemens,**

Autodesk, Dassault Systèmes, Materialise and many more are enabling both optimized part design for AM (DfAM) and AM integration into end-to-end production workflows via MES software. They are supported by advanced CAM (computer aided manufacturing), CAE (computer aided engineering), AM process simulation and AM process monitoring tools provided by both first and third-party vendors.

Overall part value generated by AM in automotive has been divided into small, medium and large size prototypes, tools (including jigs and fixtures) and final parts. Some of the most significant findings indicate that some larger parts such as powertrain elements in metal, and larger batches of small- and medium-size parts for polymers, will become the major revenue drivers for the next 10 years.

Total Automotive AM Market 2017-2023 (\$US M)



Source: Smartech Publishing

Full Report

[See Report](#)

In 2016, SmarTech Publishing released the most complete and thorough analysis and forecast of automotive additive manufacturing. Two years later many new events have continued to propel the use of 3D printing technology into the future of automotive production. This new 200-page 2018 report confirms the 2016 forecast, while also expanding it with new high-value and high-volume applications and technologies that have emerged.

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the actual AM hardware, and ending with services and a growing number of possible applications. 3D printing is thus well positioned to expand its use as the primary technology for automotive prototyping as well as tooling, while also establishing a stronger than ever opportunity for serial and mass customized part production.

This third dedicated study of automotive additive manufacturing expands coverage to consider the greater long term potential for additive manufacturing as a key production technology for the massive global automotive industry, paving the way to widespread adoption of both metal and polymer AM technologies.

SmarTech Publishing

A leading provider of industry analysis and market forecasts for the additive manufacturing industry. SmarTech Publishing's coverage provides insight to complement internal product planning and technology roadmapping, and provide low-cost knowledge enhancement for companies working in the AM industry.

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