



# ADDITIVE MANUFACTURING EUROPEAN CONFERENCE

European Parliament - 4 December 2019

## TAKEAWAYS

The fifth edition of the Additive Manufacturing European Conference (AMEC) took place at the European Parliament. This edition was co-hosted by Maria Spyraiki (EPP), Susana Solís Pérez (RE), and Patrizia Toia (S&D), Members of the European Parliament (MEP).

These MEPs together with Dinesh Dimhaja (RE) MEP, several high-level experts from the Additive Manufacturing (AM) world and the moderator Daniel Michaels, Head of Brussels office of The Wall Street Journal, discussed industry's state of play and the sustainability of value chains.

The conference highlighted that the AM sector will play an important role in the upcoming European industry strategy and that the future uptake of this technology will depend on cost reduction, better understanding of the benefits (such as material use and waste reduction) and availability of workforce. Furthermore, the experts have discussed how AM helps companies in their shift towards a more sustainable production and have reached high level of production in key sectors such as aerospace and healthcare.



### **Maria Spyraiki, Member of the European Parliament, EPP**

AM is one of the most promising production technologies at the global level. Horizon 2020 has been a powerful tool to fund the development and application of AM in different sectors. The support will continue with the upcoming Horizon Europe and with the implementation of the European Green Deal which will act as the catalyst and accelerator for European competitiveness.

The European Parliament can strengthen the further growth of the AM sector by initiating a report in ITRE on some of the main issues faced by the sector (standardization, intellectual property rights and product liability).



### **Susana Solís Pérez, Member of the European Parliament, RE**

The European Parliament will support the work of the European Commission towards an ambitious industrial strategy that can ensure the competitiveness of the European economy and the creation of quality jobs. Additive manufacturing, as a key enabling technology, can play a crucial role as it provides many opportunities for different industries. The EU must put in place a smart future-facing policy framework, which can preserve the European leadership in strategic sectors (e.g. 5G and AM) as well as preserve the human capital (e.g. investing on upskilling and reskilling of the existing workforce).





Patrizia Toia MEP and the other panellists



Dinesh Dhamija MEP

#### **Dinesh Dhamija, Member of the European Parliament, RE**

The rise AM promises to disrupt the manufacturing sector by making supply chains more efficient and savings on costs and material use. Legislators' main concern should be to give businesses the freedom needed to innovate without adding unnecessary constraints and avoiding too much prescriptive regulation. IMCO committee will try to make the internal market more efficient. AM will be among the drivers of this change by ensuring cost, energy and space reduction to several businesses.

#### **Patrizia Toia, Member of the European Parliament, S&D**

The European Parliament has asked the EC to deliver a strong European Industrial Policy, which will go hand in hand with the revision of competition law and state aid rules. AM can play a role in keeping high industrial competitiveness and deserves great political attention that supports the sector's growth. Horizon Europe will help the development of the AM value chain by bringing products to market and boosting synergies and cooperation between cross-sectoral actors in the field of innovation.

#### **Stewart Lane, Corporate Manager at Renishaw & Chairman of CECIMO AM Committee**

The EU is on the right track concerning the support for the AM sector. Many companies and start-ups have benefited from public funding, and some of those companies lead the sector towards innovation. EU policymakers should continue to provide financing for the AM industry development, as well as give support in closing the skills gap and promote European AM machines in new international trade deals.

AM will become a more attractive solution for end-users as soon as they understand all the costs savings that can be achieved (e.g. logistics, stocks, waste and material reduction).

#### **Ulf Johannesson, Global Leader Services at ARCAM EBM, GE Additive**

Any company, which wants to unleash the full potential of AM, needs to implement a new way of thinking the production chain.



Stewart Lane, Renishaw



Ulf Johannesson, ARCAM EBM



AM has a clear business case which includes a good return of investment as well as benefits in terms of material and waste reduction, and customization flexibility.

Aerospace has adopted AM in many aspects of their production chain, particularly to develop better engines. Furthermore, AM has helped this sector in its sustainability journey, cutting costs and reducing emissions and waste. Nevertheless, there is huge room for improvement in terms of applications. Regulatory issues have slowed down a broader uptake of AM in aerospace. In particular, it is not possible to fully exploit the design flexibility given by AM for repairing parts as it is not allowed to implement relevant modification on the approved design.

**Christian Haecker, Head of Industrialization at Oerlikon AM**

To ensure a stable growth of the sector, AM companies need to establish cooperation with relevant stakeholders (end-users, academia, other machine manufacturers) as well as have the freedom to innovate and set long term targets.

Medical, aerospace and energy industries are the most promising sectors for AM as they benefit from design flexibility and the level of geometrical complexity. Companies that have not yet implemented or integrated AM in their processes need to have the possibility to test, fail and learn from the experience. Policymakers should promote a legal and economic framework that allows the companies to go through these three steps.

Furthermore, the sector needs to find the right balance between new and experienced engineers; it is essential to invest in new training programmes and in courses specific for upskilling and reskilling.

**Harald Eibisch, Senior Expert technology development production at AUDI Sport**

AUDI started to work with AM to achieve savings in terms of time and cost. After testing the opportunities offered by AM, AUDI decided to focus the company's AM activities into the B2B market, particularly in the optimization of the internal tooling assembly line.



Christian Haecker, Oerlikon



Harald Eibisch, AUDI Sport





Michele Pressacco, LimaCorporate

According to AUDI, the B2C market will not experience significant improvement in the next years. Costs and speed are still not competitive comparing to traditional manufacturing. Therefore, the automotive sector will not experience a real AM revolution, but rather a step by step development.

#### **Michele Pressacco, Director Research & Development at LimaCorporate**

AM has demonstrated to be a real solution for mass production in the healthcare sector.

Cost remains high compared to conventional technology, and it is essential to have a valid proposition to justify a more expensive investment. The next step in the healthcare sector will be to achieve mass customization. LimaCorporate has taken the first step in this direction, opening the first AM factory in the Hospital for Special Surgery in New York. This pilot project will set the stage for new business opportunities and speed up the availability of custom-made devices for patients with complex medical cases.

In the healthcare sector, there is a need for better regulation and standards for AM. Some improvements were brought by the publication of the medical devices guideline and the work done at ASTM and ISO committees' level.

#### **Davide Ferrario, Research & Development Manager at Streparava**

One of the major trends in the automotive field is the need for higher-level of sustainability from an economic and environmental point of view.

AM provides benefits in terms of lightweight design, production flexibility, and accurate selection of the process considering market opportunity. Nevertheless, in the automotive sector, the full adoption of AM is still far, given that costs and limits in production volumes are still significant comparing to traditional manufacturing.

AM has almost countless new applications which need to be tested on a real case study to fully understand the benefits and the limits. Understanding of the business, having a good stakeholder cooperation and access to public funding can help end-users to pass the first stage of testing and move towards a broader application.

#### **Filip Geerts, CECIMO Director General**

AM industry continues to evolve, consolidating its position in sectors such as aerospace, healthcare and automotive. Additive manufacturing is not a standalone technology and will, for the most part, complement, and not replace, traditional forms of production. The sector is still at its early stage of development and has lots of space to improve. Process automation, speed and accuracy, as well as broadening the available materials are some of the areas in which the industry is currently working. Additive Manufacturing has an important role to play in increasing the competitiveness of European industry and in supporting circular economic models.



Davide Ferrario, Streparava



Filip Geerts, CECIMO