



**AACHEN CENTER  
FOR ADDITIVE  
MANUFACTURING**



# Customized Efficiency

**Your Partner for Additive Manufacturing**

# About us

The ACAM Aachen Center for Additive Manufacturing provides access to innovative know-how, consultancy and training. As a one-stop-shop for Additive Manufacturing we accelerate the industrialization and wide-spread adoption of this disruptive technology within Europe's most vivid engineering ecosystem: The RWTH Aachen Campus.



## **Direct access to unique AM resources**

Within ACAM, industry partners gain access to a unique AM material, machine and software portfolio, available at our R&D partner's facilities. More than 100 researchers, 25 years of experience and 50+ metal and polymer systems enable tailored, independent solutions along the entire AM process chain.



## **Tailored AM consulting services and training**

While complexity for free is desirable on component level, it has to be navigated on all company levels from strategy down to operations when implementing Additive Manufacturing. Within ACAM's professional consulting and education approach, the outstanding AM know-how, gained in countless industrial and publicly funded projects, is made available for companies seeking for guidance and support on their AM journey.



## **ACAM connects industry and research**

Industry members of ACAM carry out consortial, pre-competitive research and define relevant topics in a continuously growing community. Regularly held events allow for information exchange, formation of peer groups and discussion of future collaborations in between industry and R&D partners.

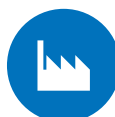
ACAM was established in 2016 to facilitate our industry partner's participation in AM-related research & development carried out on the RWTH Aachen Campus. By combining the expertise of over 100 researchers from 14 R&D partners and more than 35 industry members, ACAM understands and reinvents Additive Manufacturing on a global scale.



Research Partners at the



More than **100 researchers** dedicated to AM  
200+ years of person years in R&D experience

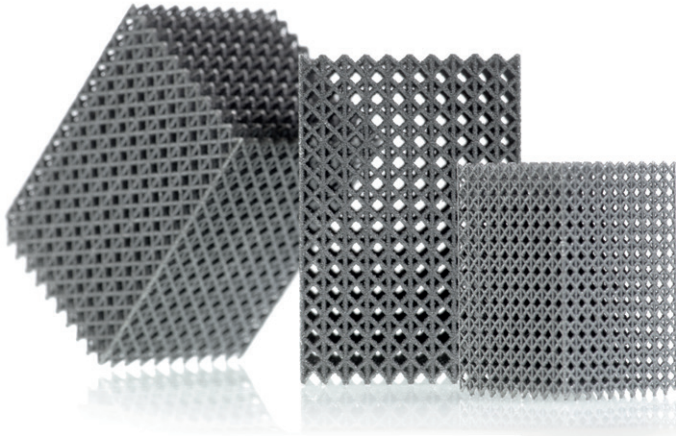


**3,000 m<sup>2</sup> AM** lab space  
Design, post-machining and testing facilities



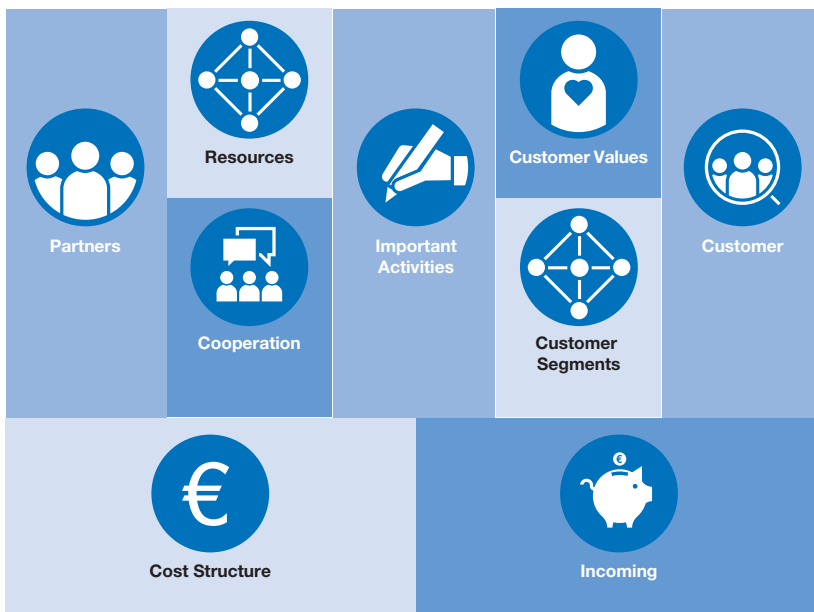
**25 systems for metal AM, 15 for polymers**  
L-PBF, DED, SLS, SLA, EBM, FDM

# Dimensions of Additive Manufacturing at the ACAM – A holistic approach



## Design

Adding value by means of AM starts in the early phases of product design. Lattice structures, functional integration, internal structures and topology optimization are just a few manifestations of Design for Additive Manufacturing. To exploit the full potential of those approaches, engineers are required to substantially challenge the way they ideate and design components. As part of our AM sandbox we provide access to all relevant software suites and guide our partners through the AM data chain. Furthermore, ACAM offers support in (re-)designing metal and polymer parts for a large share of relevant AM processes.

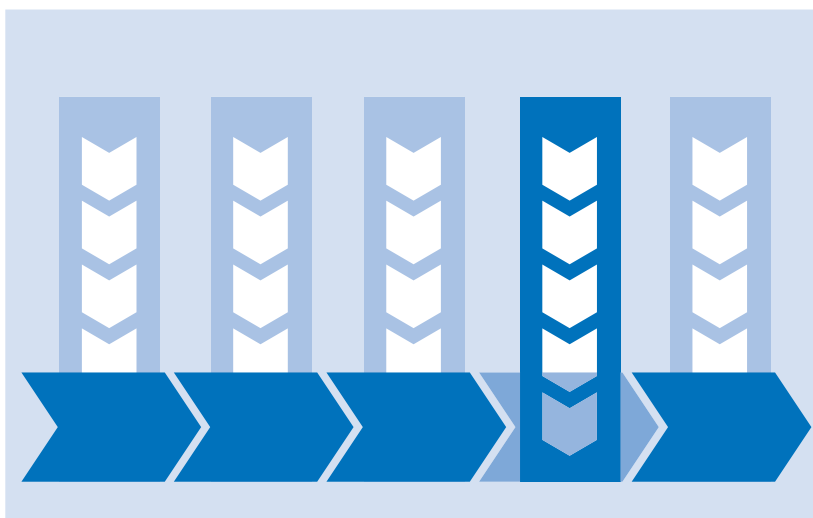


## Business Innovation

A successful implementation does not solely rely on technological aspects. Industrial end-users require robust methods to calculate AM product cost, optimize overall equipment effectiveness of their machinery and leverage know-how of their potential suppliers. This is where ACAM's unique portfolio of consulting services helps building a foundation for decision-making on all company levels from strategy to operations.

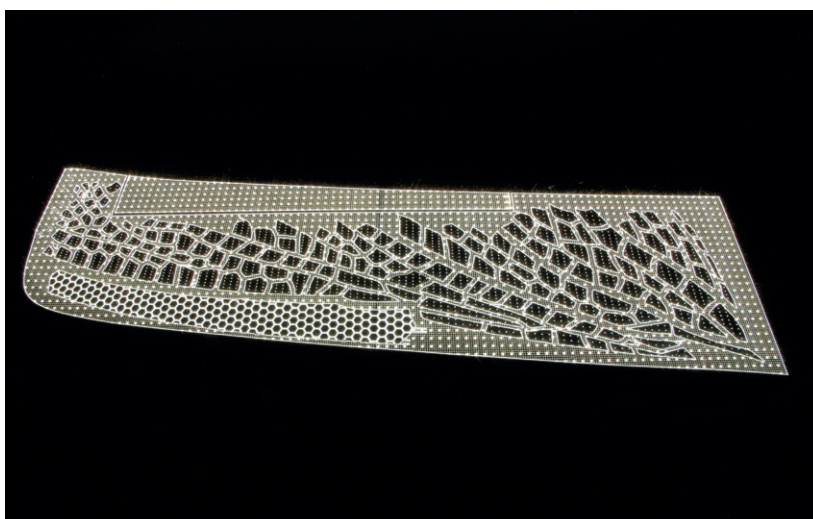
## Process Chains

The connection of all elements along the entire horizontal and vertical AM process chain is where ACAM's extensive partner network unfolds its full potential. Within this framework we identify customer- and part-specific process routes, ensuring maximum leverage of AM technology.



## AM Technologies and Materials

AM processes are diverse and imply numerous unforeseen challenges when implementing them in a production environment. As all major metal and polymer AM processes are available within the R&D partner network, we are proud to offer independent insights and benchmarks to maximize AM productivity for our industry partners.



# Knowledge Area AM

In close cooperation, the ACAM Aachen Center for Additive Manufacturing and KEX AG are leveraging the unique experience in the field of Additive Manufacturing on a broad online knowledge base and tool suite.

## Are you facing similar challenges in the highly dynamic and innovative field of Additive Manufacturing?

- Evaluating the potential utilization of 3D-printing processes related to your product portfolio
- Staying up to date regarding relevant processes, materials and software in the field of Additive Manufacturing
- Assessing the maturity of state-of-the-art / disruptive process technologies along the entire AM value chain
- Scouting related patents

## Our Solution: Knowledge Area AM

- Utilize our huge application finder landscape with hundreds of pre-evaluated parts and products
- Rely on a frequently updated, near-time technology monitoring
- Unique digital process chain tool, based on a comprehensive pool of material, technology and expert profiles
- Patent analyzer toolbox

powered by



## Features

### Application Finder



- Global overview of components in all markets
- Filter for AM part specific industry and material
- Detailed AM part profile containing references, TRL, material and entity
- Monthly updates with up to 30 new AM parts

### Material & Technology Landscape



- All relevant AM-processes based on latest research results and industrial experience
- Identify suitable processes, materials and pre/post-processing steps for your production
- Stay informed about new processes and materials

### Patent Analyzer



- Keep an overview of global and European patent landscape regarding AM
- Track your competition by screening their latest patents on a weekly basis\*

### Near-Time Technology Monitoring



- Monitor the TRL of hundreds of relevant materials, procedures and AM software solutions
- Setup a personal alert for your company and receive feedback if relevant things change\*\*

# ACAM Professional Education Program

The ACAM professional education program relies on the 25 years of R&D know-how in the area of Additive Manufacturing in Aachen. We qualify employees on all levels from CxOs, via designers to machine operators. In the seminars you will experience the special features of AM technologies, materials and processes, the challenges while implementing AM as well as economic perspectives on one of the most dynamic manufacturing markets.



## Certificate Course Additive Implementer

The Additive Implementer course is certified by RWTH Aachen Campus and offers an independent perspective on relevant AM processes, materials and corresponding manufacturing equipment and software solutions. In addition, design principles, post-processing and QA measures are highlighted.

## ACAM In-house

The ACAM In-house program is based on a comprehensive portfolio of basic, advanced and experience modules, allowing for maximum flexibility regarding the scope and focus of the desired content. The respective training sessions can be carried out at the ACAM facilities or the premises of our customers.



## 3D Printing Guided Tours

Our guided tours feature insights into Europe's most vivid AM environment. With an installed base of more than 50 industrial and R&D manufacturing systems we showcase all process steps from design to post-machining of AM components.

## Discover3Dprinting

Within the framework of various tradeshows, the Discover3Dprinting seminar series aims to provide a comprehensive introduction to all major AM technologies, software tools and materials. Get in touch with our industry experts to start your AM journey!



# Our Offer



## Membership

- Joining ACAM is the best way to stay up to date regarding most recent developments in Additive Manufacturing
- ACAM provides four types of memberships tailored to the respective background of your company
- Basic and business memberships come with an annual voucher budget to participate in Consortial R&D Projects



## Community

- Online: Interaction and exchange of information with other industry and R&D Partners, AM technology monitoring, event list
- Offline: Networking, idea exchange and R&D updates during ACAM semi-annual and additional peer group meetings
- Access to Knowledge Area AM\*



## Research & Development

- The ACAM industrial members jointly define research topics on an annual basis. Leveraging the unique resources on the RWTH Aachen Campus, the defined projects are then conducted by our R&D partners
- The project findings are accessible for the respective consortial partners. All ACAM industrial members receive a comprehensive executive summary for each project



## Services

- Bi- or multilateral projects according to our customer's specific needs
- ACAM recruits the project team from a large pool of experienced, motivated AM engineers and consultants
- To ensure best-in-class results ACAM acts as project leader and general contractor
- Services also available without membership



## Further Education

- Since the industrialization of Additive Manufacturing affects all organization levels, ACAM has developed a comprehensive, modular training approach
- In close collaboration with its R&D partners, ACAM is continuously updating the seminar's contents to provide an up-to-date overview and perspective on all relevant elements along the AM process chain
- Further Education also available without membership



# Membership Types

## BASIC MEMBERSHIP 20.000 € p.a.

As a basic member you have access to the ACAM community. You will receive the annual report and will be invited to all community events. In addition, you have an annual voucher budget worth 6.000 € to participate in Consortial R&D Projects.

## BUSINESS MEMBERSHIP 40.000 € p.a.






Our business members possess an annual voucher budget worth 22.000 €. Despite being able to allocate them to bilateral projects and training, they constitute the ACAM steering committee, defining the roadmap and pre-selecting the consortial R&D projects. Furthermore, as a business member you get access to the Knowledge Area AM and receive an additional discount for training and bilateral projects.

## COMMUNITY MEMBERSHIP 16.000 € p.a.

As a community member, you receive access to the Knowledge Area AM, a broad and unique knowledge database. Furthermore, you become an equal partner of the ACAM community, participating in our annual meetings and receiving the annual report, holding executive summaries for all consortial R&D projects.

## COOPERATION MEMBERSHIP individual fee

The cooperation membership is designed to promote a collaborative technology, software and service exchange. The benefits and costs are arranged individually.

SERVICE PORTFOLIO		Platform only	ACAM Membership		
		Knowledge Area 10.000 € / year	Community 16.000 € / year	Basic* 20.000 € / year	Business 40.000 € / year
 <b>Community</b>	AM Knowledge Area Basic Expert	✓	✓		
	Networking in the ACAM Community Annual ACAM Report		✓	✓	✓
 <b>Research &amp; Development</b>	Annual ACAM applied R&D projects			✓	✓
	Partner matching for public research projects				✓
 <b>Membership</b>	ACAM vouchers (each worth 2,000 €)			3	11
	Steering Committee Member				✓
 <b>Further Education</b>	Tailored Inhouse Seminars	€	€	%	✓
	General seminars and Certificate Courses				%
 <b>Services</b>	ACAM expert hotline for specific questions		✓	✓	✓
	Process, equipment and material development	€	€	€	%
	AM engineering services and prototyping				

\*Basic ACAM Membership also available without AM Knowledge Area (12.000 € / year)

€ paid access; % discounts provided

# Our Member Network



**AACHEN CENTER  
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## Join the ACAM Community!

Community | R&D | Services | Education

**Business Members**








**Basic Members**















































**Cooperation Members**









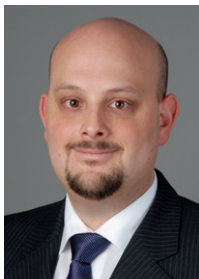


**Consortial Projects:**  
voucher allocation during annual meeting



**ACAM Community Meeting**

# Contact



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## Sources

**Title:** ACAM

**P. 2:** Fraunhofer ILT/RWTH DAP/Oerlikon AM

**P. 3:** Campus GmbH/Steindl

**P. 4:** ACAM/RWTH DAP

**P. 5:** ACAM/RWTH DAP

**P. 6:** Shutterstock

**P. 7:** Shutterstock, Mesago

**P. 10:** GKN Sinter Metals

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