

Mechatronics Innovation Lab
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**Mechatronics
Innovation Lab**

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Webinar

How to design for Additive
Manufacturing.

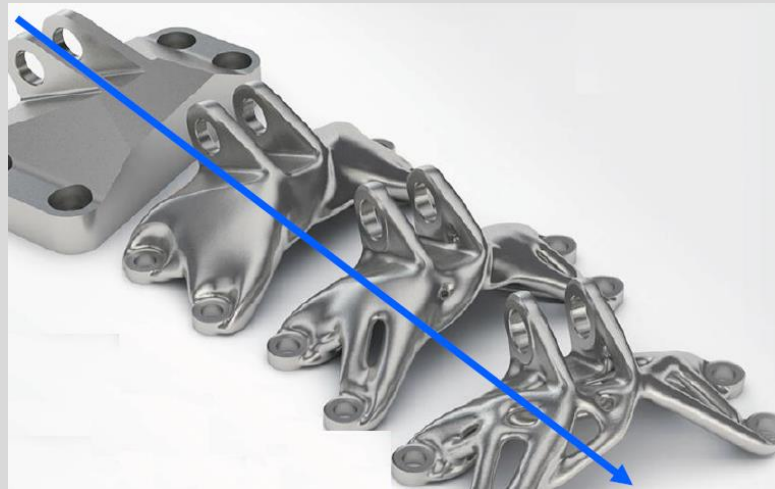


Why AM

Common design practice has limitations related to manufacturing methods like casting, machining and forging.

AM Benefits:

- Freedom of design
- Complexity is not a cost
- Enables new design options



Additive Manufacturing



The design course increases development skills and enables companies to leverage the freedom of design.

**Conventional
Manufacturing
(CM)**

- Manufactured by removing material
- Hard integration of several functions
- Design with the limits of producibility

**Additive
Manufacturing
(AM)**

- Manufactured by adding material
- Easy integration of several functions
- Design with the function of a part

Complexity of Design

A large, light gray arrow pointing from left to right, indicating the direction of increasing design complexity.

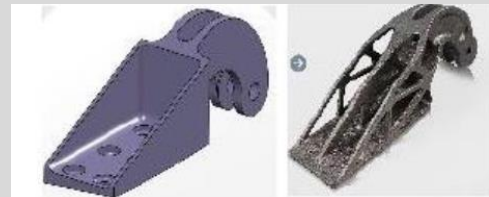
AM enable companies
designing parts for
optimal function and cost

-> not limited by current
production possibilities



What Skill Development Outcomes

1. Understanding the AM Technology
 - Understand the future of manufacturing
 - Explain AM Technology
 - Identify AM Process Steps
 - Understand mechanical properties of parts made by AM
 - Compare Conventional Manufacturing & AM
2. Apply Technical and Design Methods
 - Integrate Design in the AM Value Loop
 - Mastering 3-D Modeling
 - Immersive Design
 - Collaborative Design
 - Generative Design
 - Continues Engineering
3. Apply part assessment for AM
 - Evaluate AM parts
 - Use design methods on AM Examples
4. Understand possibilities & limitations of AM design
 - Know the methods to create own Design Rules



Generative Design - Airbus Example



How - Course Structure

Target Group	Industrial Designers Application Engineers Functional Manager Production /Logistics Research & Development Entrepreneurs (internal/external) Business development Product Management
Duration	4 weeks
Format	Blended Online Learning (Only a desktop with web cam is needed)
Course Modules	8
Online presence lecture	4 hours per module, 2 modules one day a week
Participation	Max. 20
Design Tools	ThinkerCad, Blender, Onshape , Generative
Fees	1 450€ each participant
Exam	Project Design work of a practical AM Solution
Certificate	digitalMASTERS



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Participation

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