

# MUPAMI

Multiplicative Products in Additive Manufacturing\*

## Initiating R&D projects in additive manufacturing

Christian Bobisch & Marcel Spill

an Innovation Network by ZENIT GmbH

\*funded by the Federal  
Ministry for economic Affairs  
and Energy through Central  
innovation program for SME



# Agenda

Zeit	Agenda
11:00	Innovation Network MUPAM – Initiating R&D projects in additive manufacturing <ul style="list-style-type: none"><li>• Christian Bobisch, ZENIT GmbH</li></ul>
11:10	Drucken Sie schon oder zögern Sie noch? <ul style="list-style-type: none"><li>• Torsten Wolschendorf, Prototec GmbH &amp; Co. KG</li></ul>
11:20	Driving Innovations by Engineering <ul style="list-style-type: none"><li>• Paul Simons, TSG Group B.V.</li></ul>
11:30	Intuitive und elegante Definition von Materialverläufen an einem CAD Modell <ul style="list-style-type: none"><li>• Thu Huong Luu, Fraunhofer IGD</li></ul>
11:40	Automated solutions for 3D printing platforms <ul style="list-style-type: none"><li>• Arno Gramsma, AMPC Solutions B.V.</li></ul>
11:50	Opportunities for expert 1:1 discussions (break out-rooms)

# ZENIT: Partner in Business and Science



Agency for innovation  
of the state of  
North Rhine-Westphalia



Public Private Partnership

- State of NRW
- Consortium of banks
- Zenit e.V: (200 SME)



Turnover:  
4,8 Mio. EUR (2018)



Employees: 70



Funding year: 1984

# Business- and Fields of Competence



Innovations



Technology



Internationalisation



Funding consultancy



Networks



Artificial intelligence



3D-printing



Circular Economy



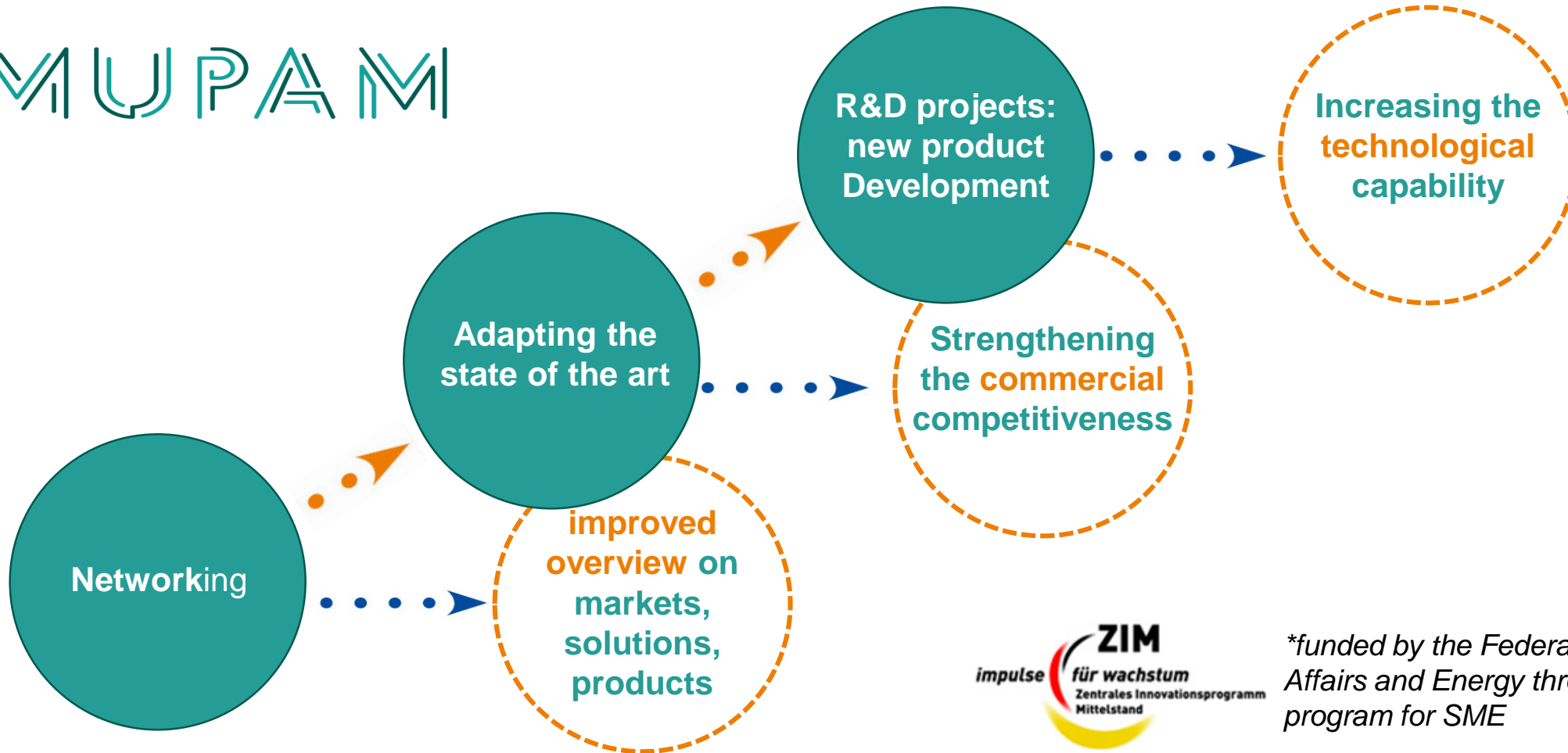
Hydrogen



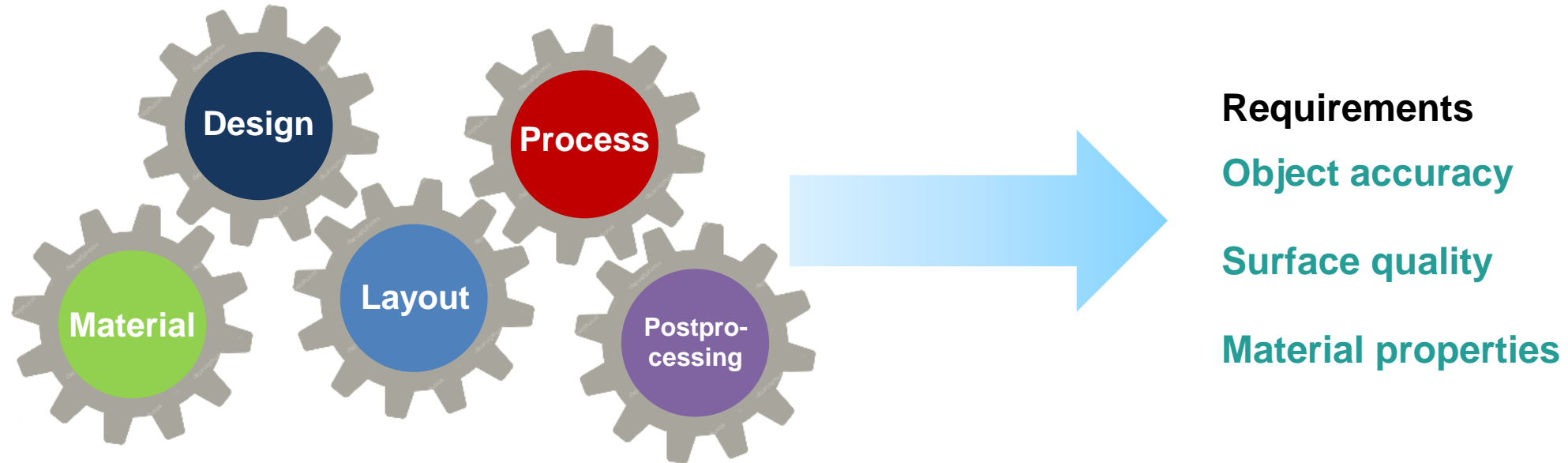
Educating skilled workers

# Goal of the Network

MUPAMI



# Competences in the Network



## 1. Mechanical Properties

- Homogenizing or tailoring mechanical properties

## 2. Surface Quality

- Surface quality at industrial grade

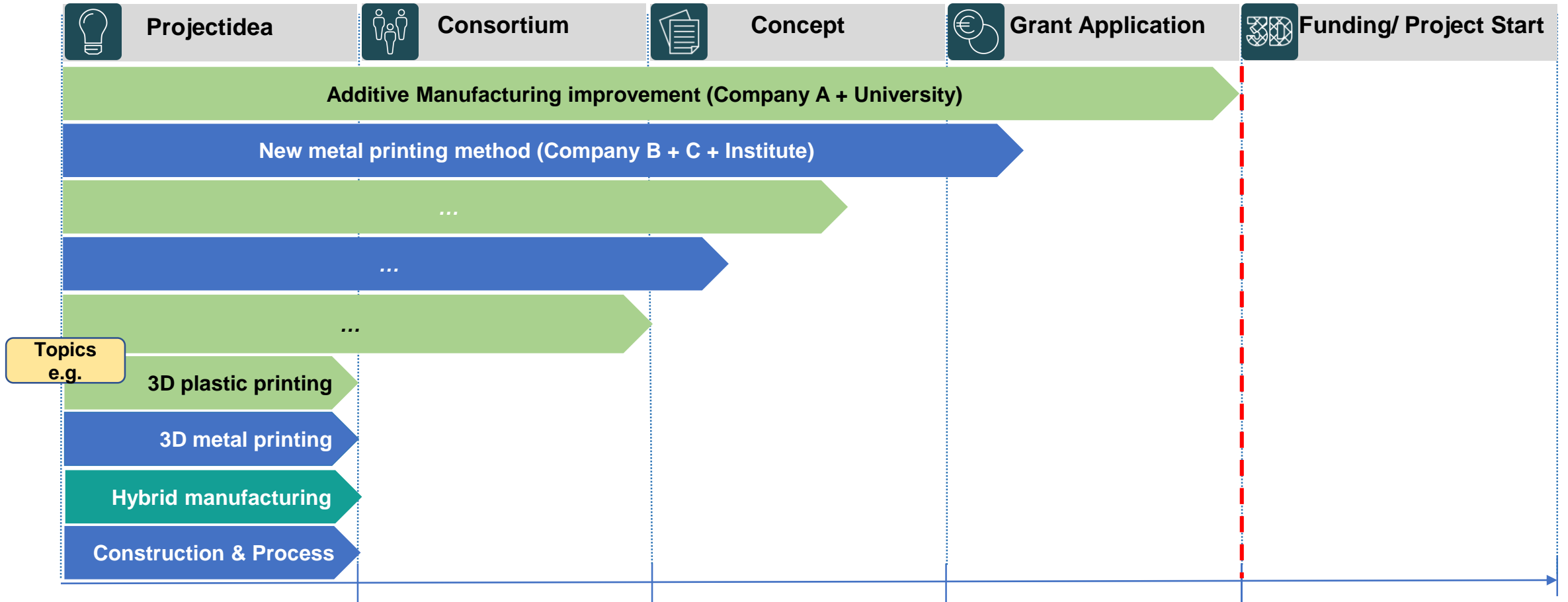
## 3. Hybride Materials & Constuction

- Material development & characterization; new construction concepts

## 4. Processintegration and –security

- Digitization & automation of AM process chains

# R&D Roadmap



# MUPAM Partners

<p><b>German SMEs</b></p>					<p><b>Associated Start-up</b></p>	
<p><b>German R&amp;D institutions</b></p>						
<p><b>Associated partners</b></p>				<p><b>Supporting partners</b></p>		
<p><b>International SMEs</b></p>						
<p><b>Intern. R&amp;D</b></p>		<p><b>I Intern. coordinator</b></p>				<p>Link behind each logo!</p>



# Competences in the Network



- 3D printing services
- Rapid prototyping
- Various techniques and materials
- AM consulting



- Research organisation for visual computing
- 3D printing & scanning
- Cloud Computing/ graphic card usage



**TOTAL SUPPORT**  
*group*

- B2B development of end products
- special mechanical engineering
- Solutions for automation and mechatronics. :



- industrial additive manufacturing of functional polymer and metal parts
- modular, end-to-end production cluster.
- an integrated software platform.

# Benefits for Network Members

- **Fast access to funding (ZIM-program → SME & R&D)**

- All topics/ timescale application → funding: 3 months
- Support in conception & application
- Up to 200.000 € funding per SME



- **Costs for active participation (until 2023)**

GERMAN SME	GERMAN start-up	Associated larger company
max. 250 €/ m	max. 125 €/ m	max. 450 €/ m or other services (conference hosting etc.)

- **Benefits**

- Knowledge transfer
- MUPAM-Events (network meetings, work groups, conferences, ...)
- R&D-Projects (access to funding)

# Synnnergies - ZIM-Networks @ ZENIT



Copernicus services  
for industry

[www.copserv.net/](http://www.copserv.net/)  
(just finished)



AI for  
production

[www.ki-map.net](http://www.ki-map.net)



Kooperationsnetzwerk  
Funktionsintegration  
und neue Oberflächen  
für das Automobilinterieur  
der Zukunft

**Automotive-  
Interieur**  
[www.foresight-  
automotive.com/](http://www.foresight-automotive.com/)



Additive manufacturing  
/ 3D printing

[www.mupam.net/](http://www.mupam.net/)



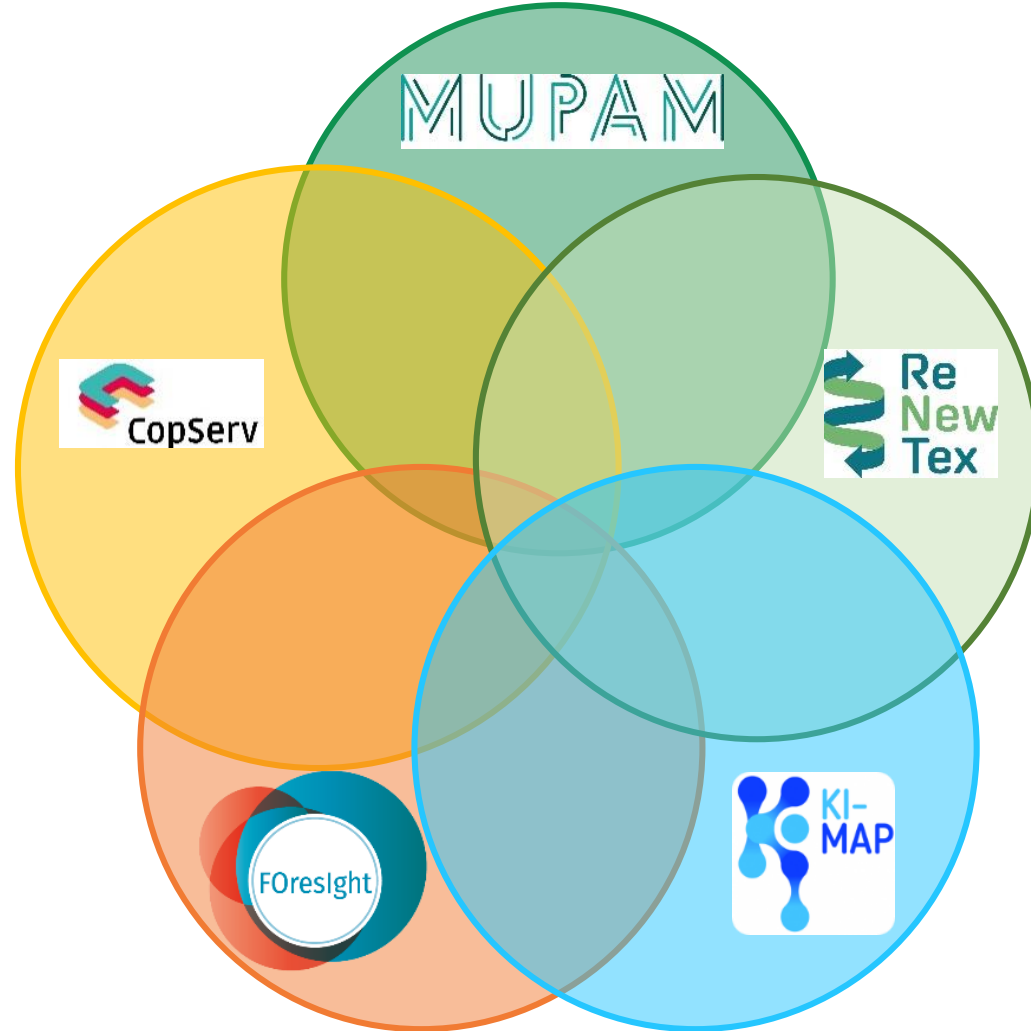
Circular economy  
for textiles

[www.renewtex.eu](http://www.renewtex.eu)

**+ individual consultancy for SME**

**+ access to Enterprise European Network (EEN)**

# Synnnergies - ZIM-Networks @ ZENIT



# Contact @ MUPAM

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