Advice, Experiment and Production centre of 3D printing plastic & metal
Problems within the market

- Small en medium sized companies and schools will not start with additive manufacturing because:
  - No financial resources to make a high investment
  - No willing to take a high risk
  - Not be capable to build there own knowledge of additive manufacturing
Mission

To bring the 3D Print Technology & knowledge to:

• **Small and medium sized enterprises**  
  *(by the production company 3D Print Lab LTD)*

• **College of higher and medium education**  
  *(by the non-profit organisation DiCam)*

• **University of Applied Science**  
  *(by the non-profit organisation DiCam)*

Focus on Additive manufacturing of industrial parts in metal & plastic
DiCam will be the connector between institutes that will create knowledge of additive manufacturing .............. and the SME’s / education that will need this knowledge for education program and to innovate the production process.

DiCam (Dutch innovation Centre of Additive Manufacturing)

Advice, Experiment and Production centre of 3D printing plastic & metal
Non-profit organisation DiCam (Dutch innovation Centre of additive manufacturing)

Stichting DiCam
Dutch Innovation Centre of Additive Manufacturing

- NLR
- Universiteit of Exeter
- Avans Hogeschool
- Objexlab / Fontys
- ROC Tilburg
- MAT inspired
- Lijn academie
- EOS Campus program
- Dohmen advocaten
- TNO

NLR / TNO AM Metaal Research Program

Education  Knowledge  Innovation  Research  Landscape  Back-up

DiCam
Dutch Innovation Centre of Additive Manufacturing

3D Print Lab  3DP metal  ?  ?

Advice, Experiment and Production centre of 3D printing plastic & metal
Partners of the DiCam

The National Aerospace Laboratory
- access to SLM
- knowledge sharing
- starting projects
- only metal no plastic

University of Exeter
- access to different 3D printers
- knowledge sharing
- starting projects

TNO
- organisation for scientific research
- access to SLS plastic printer
- knowledge sharing

Gate 2
- platform for the International Aerospace and Maintenance sector
- location of 3D Print Lab

Advice, Experiment and Production centre of 3D printing plastic & metal
Partners of the DiCam

Avans hogeschool (26,000 students)
- university of Applied Science
- create an Education program of additive manufacturing
- internships by the members

ROC Tilburg (10,000 students)
- college of higher and medium education
- create an Education program of additive manufacturing
- internships by the members

Objexlab Fontys (34,000 students)
- university of Applied Science
- collaboration of education program and knowledge sharing

MAT inspired
- laboratories for material analysis
- cooperation with the Eindhoven University of Technology
- will do analysis of 3D print products

Advice, Experiment and Production centre of 3D printing plastic & metal
3D Print Lab LTD

3D Print Lab is the production facility of additive manufacturing for the DiCam and the partners. The production company is owned by stockholders from the SME’s.

Advice, Experiment and Production centre of 3D printing plastic & metal
Advice
- product development
- production process
- workshops
- training
- projects

Experimental
- prototyping
- verify

Production
- small production

3 divisions (only for members)
Profile of the members & partners

To cooperate and to start with DiCam or 3D Print Lab:

• Small en medium sized companies and schools will have access to knowledge

• Companies can create new products and enter new markets

• Schools can develop education programs for the students

• We will create a large network with the companies, schools, government and institutes

• Companies and schools will be prepared for the new manufacturing
## Access to 3D Print facilities

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>3D Print Lab</th>
<th>NLR</th>
<th>University of Exeter</th>
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<tbody>
<tr>
<td></td>
<td>plastic</td>
<td>metal</td>
<td>plastic &amp; metal</td>
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</tbody>
</table>

### 3D printers
- **EOS P110 (PA12)**
- **EOS P396 (PA12)**
- **AM250 (metal)**
- **SLM 280 HL (metal)**
- **EOS P800 (Peek)**
- **EOS P100 (PA12)**
- **DTM 2000 (PA12)**
- **Project HD 3000 (PMMA)**
- **Dimension Elite (ABS)**
- **Dimension (ABS)**
- **Accufusion LC105 (metal)**
- **SLM Realiser MCP (metal)**

### Test lab
- ✔️

### Certify
- ❌

### Post processing
- ✔️
Gate 2 “Aerospace Business park” (Ericssonstraat 2, Rijen, The Netherlands)

- 3D Print Lab
- Rotary Wing Training Center for service technician Chinook
- European Aerial Systems Training Academy for Drones
- Helicopter Instruction & Operational Support Flight Training Center
- Aerocat for optimize of Aerospace catering process
- Everest Coating develop ceramic coatings
- Composite Expertise Center for training of composite technology
- Lijmacademy for training of industrial agglutinate
- www.gate2.nl
- 100 foot Nearby military AirPort
Advice, Experiment and Production centre of 3D printing plastic & metal

Location

Gate 2
Aerospace & Maintenance Value Park
Ericssonstraat 2
5121 ML Rijen
The Netherlands
DiCam & 3D Print Lab

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