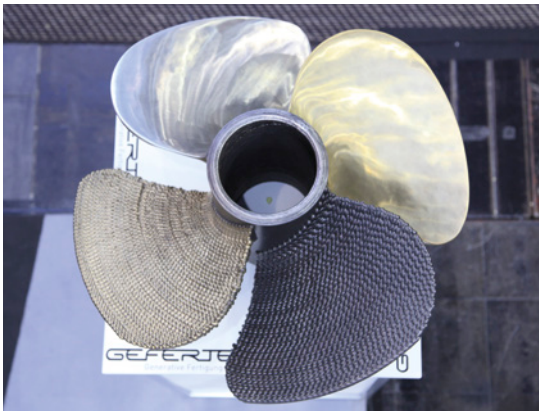


Additive Manufacturing in the Capital Region Berlin-Brandenburg



Ship propeller with material mix made by 3DMP®



The BigRep STUDIO G2 is optimized for 3D printing projects with industrial grade materials.

Companies (selection)

3Bots 3D Engineering
 3dk.berlin
 3YOURMIND
 addmotion
 Alexander Daniels Global
 Autodesk
 BASF Schwarzheide
 Berlin Tech Academy
 BigRep
 botspot
 Carl Zeiss Meditec
 Cellbricks
 CellCore3D
 clous
 Druckerfachmann.de
 EBK Krüger
 F&B rapid production
 Fab Lab Berlin
 Fastpart Kunststofftechnik
 flying-parts
 formlabs
 Gefertec
 Hewlett-Packard
 IFA 3D Medical Solutions
 KleRo Roboterautomation
 Kreatize
 Metalprint3D-XXL
 MotionLab.Berlin
 Nanoval
 Next Dynamics
 Orion Additive Manufacturing
 Ottobock
 Photon
 PSC Technologies
 PYOT Labs
 Ricoh Deutschland
 Rojahn Design
 Siemens
 SKLT Strahlkraft Lasertechnik
 Thiele+Wagner
 Time Tool Rapid Prototyping
 Trinkle 3D
 Trumpf
 voxelwerk
 werk5
 XERION Berlin Laboratories
 xolo
 YOUin3D.com

Additive manufacturing is becoming an increasingly important key technology with regard to industrial applications. The various innovative processes are on the agenda of large corporations, SMEs, and research institutes from almost all manufacturing industries. There is particular potential for development in the fields of aerospace, mobility and automotive, tool and mold making, as well as medical and dental technology, which are among the strengths of the capital region.

In recent years, Berlin-Brandenburg has become an important location for 3D printing technology developers, users, and service providers. For example, the medical technology company Otto Bock produces individual and custom-fit prostheses and orthoses using additive manufacturing. Siemens uses the technology for complex metallic components of gas turbines and Deutsche Bahn uses it to print spare parts for trains and infrastructure. Researchers at the Bundesanstalt für Materialforschung und -prüfung (BAM) have succeeded in developing 3D printers based on powder-based additive manufacturing in weightlessness for use in space travel.



»Formlabs is a young, innovative company that produces user-friendly and affordable 3D printing systems. These systems are used worldwide in the mechanical engineering & manufacturing industries, as well as in dentistry and education & research. Our headquarters are located in Boston, USA and our EMEA office in Berlin has been growing rapidly since 2015 - not least because of the high availability of young international talent, the excellent start-up ecosystem and the city's strong 3D printing community.«

Stefan Holländer
 Managing Director EMEA
 Formlabs GmbH



»3YOURMIND was founded in 2014 as a spin-off of the Technische Universität Berlin and above all benefited from Berlin's excellent startup ecosystem, the good funding instruments, and the high degree of availability of young talent. The strong 3D printing community in the city helped us with our rapid international breakthrough and makes Berlin the most important location for 3D printing in Germany.«

Stephan Kühn
 Founder, CEO
 3YOURMIND GmbH

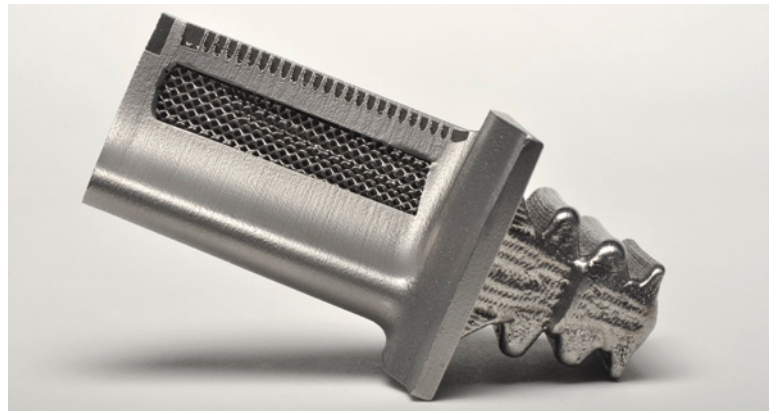
Complete value chain

Companies and scientific institutions in Berlin today represent the entire value chain of additive manufacturing. As an important interface between the digital economy and manufacturing industry, the sector also benefits greatly from the dynamic Berlin startup scene. In addition to hardware development, startups from Berlin also offer innovative solutions along the data-driven value-added process of 3D printing. CellCore develops component optimization software based on bionic principles to improve lightweight structures. Trinkle offers cloud-based software that enables the customization of 3D-printable products. Botspot is one of the leading international specialists for professional 3D scanning.

Small and large-format printers for professional and industrial applications have been conquering the international market for several years. Various processes are used, from stereolithography and laser sintering as with the printers from Formlabs to fused filament fabrication/fused deposition modeling (FDM) from companies such as BigRep and F&B rapidproduction, to Gefertec's innovative 3D metal print process



3D-printed copper inductors from ProtiIQ and trinckle 3D



SLM-LPA hybrid blade produced at Fraunhofer IPK

based on arc welding technology. In addition, Berlin is home to a number of experienced companies in materials science, such as 3dk.berlin, which continues to develop a large number of plastics, and Nanoval, a specialist in the production of high-quality metal powders. In the field of bioprinting, the three-dimensional printing of living cell tissue structures, the new company Cellbricks is a pioneer in tissue engineering applications and the development of artificial organs for transplantation medicine.

Excellent science

Berlin's outstanding scientific landscape makes important contributions to technology development. Among others, its primary focuses are in digital 3D modeling at the Technische Universität of Berlin, printable ceramics, biomaterials, and quality control at the Bundesanstalt für Materialforschung und -prüfung (BAM), printed electronics at the Fraunhofer IPK and the Beuth University of Applied Sciences. The integration of additive manufacturing in the context of Industry 4.0 and the digital factory is being advanced by the Hochschule für Technik und Wirtschaft Berlin.



the obstacles to its implementation.«

Stefanie Brickwede
CEO
Mobility goes Additive e. V.



Prof. Dr.-Ing. Michael Rethmeier
Head of Division Welding Technology
Bundesanstalt für Materialforschung und -prüfung (BAM)

»With its variety of polymers, ceramics, and metals, additive manufacturing is highly relevant for many of BAM's areas of research. In Berlin, their applicability for automotive, aerospace and medical technology, among others, is being researched. Our global cooperation and research projects often result in innovations and patents whose industrial applicability is the stated goal of BAM.«

Global networks

Today, the German capital is an internationally renowned location for innovation, new technologies and additive manufacturing. For this reason, the 3D printing network MGA (Mobility/Medical goes Additive) was established here recently. Another milestone for 3D printing is the establishment of a center for additive manufacturing in the south of Berlin. The Industrial Additive Manufacturing Hub Berlin (IAM Hub) is a place to go for young 3D printing companies and scientific institutes. Innovative ideas are born and groundbreaking 3D printing projects are implemented on the rapidly developing campus, and there is also an attractive offer of co-working space.

In addition, the nationwide AM association Verband 3DDruck and other networks operate from Berlin and represent a strong community on various aspects of technology, law and standardization.

Science | Research (selection)

bbw University of Applied Sciences
Berlin University of the Arts
Beuth University of Applied Sciences Berlin
Bundesanstalt für Materialforschung und -prüfung (BAM)
Charité – Universitätsmedizin Berlin
Fraunhofer Institute for Applied Polymer Research (IAP)
Fraunhofer Institute for Production Systems and Design Technology (IPK)
Fraunhofer Institute for Reliability and Microintegration (IZM)
Fraunhofer Institute for Telecommunications, Heinrich Hertz Institute (HHI)
Hasso Plattner Institute
Hochschule für Technik und Wirtschaft Berlin (HTW)
Technical University of Applied Sciences Wildau
Technische Universität Berlin
Weißensee Academy of Art Berlin

Networks | Associations (selection)

3D Printing Network Berlin
Composites United
Medical goes Additive
Initiative Leichtbau
Innovation Network for Advanced Materials
Mobility goes Additive
Netzwerk Leichtbau Metall Brandenburg
Verband 3DDruck

Our goal: your success!

Berlin offers excellent starting conditions for growth, production, research and development. Economic policy focuses on innovation and technological performance.

Our goal is to help companies and scientific institutes start up, develop and network here.

We support you with:

- Finding a location
- Funding and financing
- Technology transfer and R&D cooperation
- Collaborative networks
- Recruiting strategy
- Visa applications
- International market development



The new competence atlas for additive manufacturing in the capital region is online. Register your company free of charge!

www.businesslocationcenter.de/industrieatlas

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Berlin Partner für Wirtschaft und Technologie GmbH
Fasanenstr. 85
10623 Berlin | Germany
www.berlin-partner.de

Contact: David Hampel
T +49 30 46302-422
david.hampel@berlin-partner.de



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Mobility goes Additive
www.mobilitygoesadditive.com

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