3D SYSTEMS
Additive Manufacturing Solutions

30+ Years of 3D Solutions

A timeline of innovation across industries

Interest in 3D printing and additive manufacturing as an advanced emerging technology has increased substantially in recent years, yet the technology has a much longer history than many realize.

For over 30 years, additive hardware, software, materials and applications have been increasingly used in a variety of industries. Explore the timeline below to follow the development of 3D printing as it transforms our world.

30+ YEARS

1980

1983

First-ever 3D printed part created
SLA, by inventor Chuck Hull

1985

The first commercial 3D printer introduced
The SLA-1, by 3D Systems
Right: Charles (Chuck) Hull, President of 3D Systems, Inc.

1986

Patent issued for Stereolithography (SLA)
Ability to create physical parts from digital files enables unprecedented time and cost savings and is adopted for prototyping to accelerate new product development

1987

First 3D printed medical model from CT scan

First artist works with 3D printing
Forbidden Fruits, by Masaki Fujihata

Patent issued for Selective Laser Sintering (SLS)

1988

Acrylate and epoxy resins commercialized

North American Stereolithography Users Group established

1989

1990

Fused Deposition Modeling (FDM) introduced

1991

SLS systems emerge
A powder-based process, SLS builds are self-supporting. SLS expands the range of materials and applications suitable for 3D printing

1992

QuickCast introduced
80% reduction in lead time for metal castings

1993

Printing with wax emerges
Jewelers begin to take advantage of speed and geometrical complexity of 3D printing

1994

Emergence of intuitive, voxel-based digital sculpting and force-feedback haptic devices
By Sensable Technology, Inc.

Introduction of ColorJet Printing
By Z Corporation

1995

3D printing enables new business model of mass customization for clear dental aligners
By Align Technology, Inc.

Reverse engineering software enables new design and inspection applications
By Geomagic

1996

Robotic simulation, 3D graphics and haptics advance medical training
By Simbionix

MultiJet Printing emerges
Offers economical option for parts in plastic and wax

1997

Metal AM introduced
Titanium alloy materials pique interest of aerospace manufacturers

Entertainment industry leverages 3D design, development and manufacturing
Gentle Giant Studios founded

1998

Powdered steel materials emerge
Growth in available metals expands addressable applications

First 3D printed organ
A bladder, Wake Forest University

Rise in reverse engineering, 3D imaging and inspection software
INUS Technology founded

1999

Additive and subtractive manufacturing available on demand under one roof
By Quickparts

2000

Emergence of VR medical simulators

Patient-specific 3D printed anatomical models and surgical templates enable precision healthcare
By Medical Modeling, Inc.

First 3D printed hearing aids

2001

Ongoing material expansion
Composites, high-elongation, low-durometer, high heat and flame-retardant materials emerge, extending range of applications

2004

Successful separation of conjoined twins facilitated by 3D printed anatomical models
Dr. James Goodrich

2005

Commercialization of powdered 17-4 stainless steel material for additive applications

2006

First 3D printed prosthetic leg is produced

2008

3D Systems expands access to 3D printed parts
Begins offering parts production services

Creation of Direct Manufacturing Research Center
3D Systems, Boeing, EOS, Evonik of Germany and MTT with the University of Paderborn (Germany)

2009

Founding of ASTM Committee F42 on Additive Manufacturing Technologies
Created to produce standards on testing, processes, materials, design and terminology

First full-length animated movie to use 3D printing for characters
Coraline, Laika Animation

2010

Noted growth in use of AM for manufacturing
Increased adoption by hearing aid and dental markets

2011

FDA 510(K) clearance for VSP®
Precision method for planning and transferring surgical plans to the OR using patient-specific data

President Obama announces national Advanced Manufacturing Process Partnership (AMP)
Initiative to bring together industry, universities and the federal government to increase U.S. competitiveness in manufacturing

2012

Hobbyist systems popularized

Direct Metal Printing added to 3D Systems portfolio
3D Systems offers broadest range of 3D printing technologies under one roof

2013

TIME Magazine names Iris van Herpen's 3D printed flexible dress one of the year's 50 Best Inventions

2014

Chuck Hull inducted into National Inventors Hall of Fame and receives European Inventor Award
For invention of Stereolithography

Industry-leading CAD/CAM software solutions for tool-making and CNC programming offered by 3D Systems
Acquisition of Cimatron (established 1982 and GibbsCAM (established 1983)

2015

Next-gen additive manufacturing introduced with Figure 4™ platform
The industry's first modular, scalable, fully-integrated direct 3D production platform to enable unprecedented speeds and low costs for customized manufacturing, bridge manufacturing, and low volume production

2016

2017

Chuck Hull receives Washington Award

2019

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