

3D Printing 2014: A Survey of SmarTech's Annual Market Findings

<https://marketpublishers.com/r/3C5F09C7810EN.html>

Date: May 2014

Pages: 0

Price: US\$ 3,995.00 (Single User License)

ID: 3C5F09C7810EN

Abstracts

In 2013, 3D printing grew up. World-class manufacturers shifted their 3D printing focus from rapid prototyping to rapid manufacturing; Some of largest consumer firms – Amazon, HP, Microsoft, Staples and UPS – began to pursue 3D opportunities; New commercialization directions for 3D-printed medical and dental implants and prosthetics accelerated. Meanwhile, the IPO and M&A acquisition activity continued apace. In this report, SmarTech provides an insider perspective on the latest 3D printing opportunities in this dynamic market environment. We pinpoint where the smart money will go in the 3D printing sector and how firms will be changing their business models and processes to profit from 3D printing.

Contents

CHAPTER ONE: INDUSTRY OVERVIEW

- 1.1 Business Climate Assessment: Will 2014 Be the Year of 3D Printing?
- 1.2 The Ten Largest Developments In 2013-2014
 - 1.2.1 Equipment Manufacturers Gear Up Their Service Offerings
 - 1.2.2 Accelerating 3DP Product Release Schedules
 - 1.2.3 OEMs Consolidate Materials Supply Chains
 - 1.2.4 Materials Manufacturers Get Involved As Well
 - 1.2.5 3DP Companies Appeal to Public Markets for New Capital
 - 1.2.6 Consolidation In the Personal Printer Market
 - 1.2.7 The Big Three Public 3DP Companies Miss Their Mark
 - 1.2.8 The Next Generation of 3DP Manufacturing Systems
- 1.3 The Ten Biggest Questions for 2014
 - 1.3.1 Will the Slew Of 3D Printing IPOs Continue?
 - 1.3.2 Will Eastern Companies Make a Splash In Western Markets?
 - 1.3.3 Will the Big Guys Jump Into the 3DP Space?
 - 1.3.4 Can Strides Be Made for Parts Qualification?
 - 1.3.5 Will Patent Expirations Drive Another Round of Start-ups?
 - 1.3.6 Will Industry Growth Rates Continue And New Profitable Opportunities Reveal Themselves?
 - 1.3.7 Can High-Grade Thermoplastics Become Viable Metal Substitutes?
- 1.4 New Printing Processes Promise New Growth
- 1.5 3DP Software Outlook
 - 1.5.1 Establishing Communication Standards CAD/CAM Software
 - 1.5.2 New Opportunities In Software
 - 1.5.3 Co-creation Software
- 1.6 Materials Overview 2014
 - 1.6.1 New Materials Outlook
- 1.7 Thinking About 3DP as a Collection of Many Technologies
- 1.8 Competition or Co-Opetition?
- 1.9 How Governments are Playing the 3DP Game
 - 1.9.1 Funding In the U.S.
 - 1.9.2 Funding In China
 - 1.9.3 Funding In Europe
- 1.10 The Five Biggest Markets for 3D Printing
- 1.11 Other Opportunities For AM
 - 1.11.1 Architecture

- 1.11.2 Design Industry Applications
- 1.11.3 Consumer Products
- 1.11.4 Nano-Materials Development and Qualification
- 1.12 Summary Forecasts

CHAPTER TWO: THE AEROSPACE MARKET FOR AM

- 2.1 The AM Value Proposition for Aerospace
 - 2.1.1 Weight and Lead Time Reduction are Key Value Drivers
- 2.2 Assessing the “Sweet Spots” of Current 3DP Equipment
 - 2.2.1 FDM and SL Processes
 - 2.2.2 Plastic Laser Sintering Processes
 - 2.2.3 Metal Powder Laser Sintering Processes
- 2.3 Opportunities In the Commercial Aerospace Industry
 - 2.3.1 Cabin Components
 - 2.3.2 Hinges and Brackets
 - 2.3.3 Pressurized Lines
 - 2.3.4 Airducts
 - 2.3.5 Housing Components
 - 2.3.6 Engine Components
 - 2.3.7 Wing Spar Components
- 2.4 Opportunities In Military/Defense Aerospace Industry
 - 2.4.1 Missiles
 - 2.4.2 Military Aircraft and the JSF
 - 2.4.3 UAVs
- 2.5 Opportunities In Space Applications
 - 2.5.1 Satellites
 - 2.5.2 Mars Rover Mission
 - 2.5.3 Rockets
 - 2.5.4 Printing In Space
- 2.6 New Materials
- 2.7 Getting 3DP Parts Onto the Next-Generation Commercial Planes
- 2.8 Renewed Interest in Non-Powder Bed Based Processes
- 2.9 Model-Based Enterprise
- 2.10 In-Situ Monitoring Systems Are Key for Aerospace
- 2.11 Will 3D Printing Change the Structure of the Aerospace Industry?
- 2.12 10-Year Forecasts For Aerospace Products

CHAPTER THREE: THE MEDICAL MARKET FOR AM

- 3.1 Medical Modeling
- 3.2 Cutting Guides and Patient Specific Instruments
 - 3.2.1 Measured Benefits of 3DP PSIs and Surgical Models
 - 3.2.2 Recent Recall of the Shape Match Cutting Guide
- 3.3 3DP-Enabled Customization Ushers Next Level of Orthopedic Implants
 - 3.3.1 Other Opportunities In Orthopedic Implants
 - 3.3.2 The Role Osseointegration Plays In the Rise of 3DP Implants
 - 3.3.3 Lattice Software
 - 3.3.4 High-Grade Plastics In Orthopedic Implants
- 3.4 Bio-Printing Markets
- 3.5 Markets for 3DP Prosthetics
- 3.6 3DP Hearing Aid Component Market
- 3.7 Medical Equipment Hardware/ Prototypes Component Market
- 3.8 Medical Materials Outlook
- 3.9 3DP In the Operating Room: Fact or Fiction?
- 3.10 How Will Regulatory Bodies Treat Orthopedic Implants?
- 3.11 10-Year Forecasts for Medical Products

CHAPTER FOUR: THE DENTAL MARKET FOR AM

- 4.1 The Advantages 3DP Brings to the Dental Industry
- 4.2 3DP Aligns With Trends In the Dental Industry
- 4.3 3DP Dental In Emerging Economies
 - 4.3.1 3DP With Face Complications Gaining Market Share In The Short-Term
 - 4.3.2 Flexible 3DP Dental Solutions are Key to Driving Adoption In the Dental Industry
- 4.4 3DP Is an Advantaged Substitute to CNC-Based Manufacturing Systems
- 4.5 Opportunities In Dental Models
 - 4.5.1 Materials Opportunities In Dental Modeling
- 4.6 Opportunities In Lost Wax Models
- 4.7 Opportunities In Dental Temporaries
- 4.8 Drill Guides
- 4.9 Orthodontic Aligners
- 4.10 3D-Printing Brings a New Meaning to Customized Dental Solutions
- 4.11 10-Year Forecasts For Dental Products

CHAPTER FIVE: THE AUTOMOTIVE MARKET FOR AM

- 5.1 AM Driving Innovation

5.2 3DP Continues To Augment Functional Prototyping Activities

5.2.1 Improvements Coming Down the Pipeline

5.2.2 Infusing Workforces With a Renewed Creativity

5.3 Realizing Flexible Supply Chains With 3D-Printed Tooling

5.3.1 Opportunities for Large Format Sand 3DP Equipment In Rapid Automotive Tooling

5.4 3DP's Effect on the Auto Replacement Part Supply Chain

5.5 Performance Automotive Opportunities

5.6 Customization Opportunities for Luxury Vehicles

5.7 10-Year Forecasts for Automotive Products

CHAPTER SIX: PERSONAL/EDUCATIONAL MARKETS FOR AM

6.1 A Shifting Personal Printer Landscape

6.2 Understanding the Divide Between the Big Three Personal Printing Companies and the Little Guys

6.3 Crowd Sourcing Role In the Personal Printer Market

6.4 What Is the Magic Price Point for Personal 3DP?

6.5 Opportunities In SL Personal Printers

6.6 Opportunities In Personal 3DP Peripherals

6.6.1 Personal 3DP Scanners

6.6.2 "Killer" Apps

6.6.3 3DP Pens

6.7 Opportunities In Personal Printing Materials

6.8 Opportunities for 3DP In Education

6.9 10-Year Forecasts for Personal Printer Products

CHAPTER SEVEN: OTHER FORECASTS

About SmarTech Markets Publishing

About the Analyst

Acronyms and Abbreviations Used In this Report

List Of Exhibits

LIST OF EXHIBITS

- Exhibit 1-1: Materials Companies' Recent Moves Into 3DP
- Exhibit 1-2: New Large Format Printer Releases
- Exhibit 1-3: New High Growth 3DP Technologies
- Exhibit 1-4: New Opportunities In Software
- Exhibit 1-5: New Materials With Large Profit Potential
- Exhibit 1-6: Institutions Formed as Part of the NNMI Initiative
- Exhibit 1-7: Primary Markets for 3DP Over the Next Ten Years
- Exhibit 1-8: Markets for 3DP Products in the Design Industry
- Exhibit 1-9: Intriguing Opportunities In Consumer Products
- Exhibit 1-10: Summary Forecasts for the 3DP Market by Product Category
- Exhibit 1-11: Summary Forecasts for the 3DP Market By Industry
- Exhibit 1-12: Total Printers Sold by Application (Number of Systems)
- Exhibit 1-13: Total 3DP Equipment Market By Printer Class (%)
- Exhibit 1-14: Total Printers Sold by Industry (Number of Systems)
- Exhibit 2-1: Value Drivers for the AM Industry
- Exhibit 2-2: Factors Limiting the Addressable Market for Metal Powder Bed 3DP Parts
- Exhibit 2-3: Addressable Market for Metal Powder Bed AM Parts
- Exhibit 2-4: Engine Components Suitable for 3DP Manufacturing
- Exhibit 2-5: Total 3DP Aerospace Market
- Exhibit 2-6: Aerospace Printers Sold By Printer Category (Number of Systems)
- Exhibit 3-1: Major Commercially Available PSI Systems
- Exhibit 3-2: Advantages of 3DP PSI Implementation
- Exhibit 3-3: Other Orthopedic Implants Being Explored By 3DP
- Exhibit 3-4: Advantages of High-Grade Plastics Over Titanium
- Exhibit 3-5: Bio-Printing Commercialization Timeline
- Exhibit 3-6: Benefits 3D Printing Can Bring To the Prosthetics Market
- Exhibit 3-7: Total 3DP Medical Market
- Exhibit 3-8: Medical Printers Sold By Printer Category (Number of Systems)
- Exhibit 4-1: Global Trends In the Dental Industry
- Exhibit 4-2: Forces Affecting Short-Term Adoption of 3DP In Dental
- Exhibit 4-3: Benefits of 3D Printing Temporaries Over CNC Milling
- Exhibit 4-4: Benefits of Producing Wax Printers
- Exhibit 4-5: 3DP Dental Implant Categories
- Exhibit 4-6: Total 3DP Dental Market
- Exhibit 4-7: Dental Printers Sold By Printer Category (Number of Systems)

Exhibit 5-1: Tooling Applications for Different 3DP Processes

Exhibit 5-2: Total 3DP Auto Market

Exhibit 5-3: Auto Printers Sold By Printer Category (Number of systems)

Exhibit 6-1: Benefits of PLA in the Personal and Education Markets

Exhibit 6-2: Main Opportunities for 3DP in Education

Exhibit 6-3: Total 3DP Personal/Education Market

Exhibit 6-4: Personal/Education Printers Sold By Printer Category (Number of Systems)

Exhibit 7-1: Total 3DP "Other" Market

Exhibit 7-2: Other Printers Sold By Printer Category (Number of Systems)

I would like to order

Product name: 3D Printing 2014: A Survey of SmarTech's Annual Market Findings

Product link: <https://marketpublishers.com/r/3C5F09C7810EN.html>

Price: US\$ 3,995.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/3C5F09C7810EN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:
Last name:
Email:
Company:
Address:
City:
Zip code:
Country:
Tel:
Fax:
Your message:

****All fields are required**

Customer signature _____

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970