

In Space Manufacturing Market by Product Technology (Perovskite Photovoltaics cell,Graphene and solid-state Lithium batteries, Exchange membrane cells,Traction motor,Hydrogen propulsion system ,Insulin), End Use and Region - Global Forecast to 2040

Market Report | 2023-11-09 | 195 pages | MarketsandMarkets

AVAILABLE LICENSES:

- Single User \$4950.00
- Multi User \$6650.00
- Corporate License \$8150.00
- Enterprise Site License \$10000.00

Report description:

The In Space Manufacturing Market is estimated to be USD 4.6 billion in 2030 and is projected to reach USD 62.8 billion by 2040, at a CAGR of 29.7 % during the forecast period. Due to several factors, the global market for In Space Manufacturing is expanding significantly. In Space Manufacturing delivers several key advantages which includes space based asset management, replacement and repair of satellites, cost effective manufacturing of precision engineered products . In Space Manufacturing provides government, military and commercial users with a flexible, cost-effective alternatives for improving operational capabilities of space assets, remote repair and assembly capabilities and high quality products with wide applications in terrestrial markets.

" Quantum Dots Display ": The fastest growing segment by product technology type during the forecast period." Based on product technology type, the In Space Manufacturing market has been segmented into Perovskite Photovoltaics cell, Graphene and solid-state Lithium batteries ,Proton Exchange membrane cells, Traction motor, Hydrogen propulsion system ,Insulin,Electromagnetic metamaterials antennas, Perfect spheres bearings, Quantum Dots Display,Tissue /organ, ZBLAN fiber optics, Zeolite crystal. Quantum Dots Displays is expected to be the fastest-growing segment during the forecast period. .Quantum dots display enables manufacturers of displays and QD-LEDs to offer competitive technology compared to traditional high-end displays currently in the market. The advantage of microgravity manufacturing of high quality quantum dots coupled with zero switching cost are key factors for the expected high uptake of this technology in the market. "Japan to account for the largest CAGR in the In Space Manufacturing market in forecasted year"

Japan is expected to witness significant growth in the in the In Space Manufacturing market . Several factors contribute to this

trend:

Expanding Space Programs:

Japan has been investing heavily in space programs and are leading in the manufacturing of key product technologies in healthcare, automotive and fiber optics industries. Japan being a developed country has a high demand for products that can be manufactured in space and used in its terrestrial markets.

Strategic Partnerships: Japan has been forming strategic partnerships and alliances with technology companies, both domestic and international, to leverage their manufacturing. These partnerships will enable the commercial players to scale the production of their products and increase uptake of semi-finished and finished space fabricated goods.

Break-up of profiles of primary participants in the In Space Manufacturing market: By Company Type: Tier 1 - 35%, Tier 2 - 45%, and Tier 3 - 20% By Designation: C-Level Executives - 35%, Director level - 25%, and Others - 40% By Region: North America - 25%, Europe - 15%, Asia Pacific - 45%, Rest of the world - 15%

Prominent companies in the in-space manufacturing market are Allevi Inc. (US), Global Graphene Group, Inc. (US), Le Verre Fluore Fiber Solutions(France), Nedstack Fuel cell Technology BV (Netherlands) and Echodyne Corporation(US).among others. Research Coverage: The market study covers the In Space Manufacturing market across segments. It aims at estimating the market size and the growth potential of this market across different segments, such as deployment type, service model, application, end user, and region. The study also includes an in-depth competitive analysis of the key players in the market, along with their company profiles, key observations related to product and business offerings, recent developments, and key market strategies. Key benefits of buying this report: This report will help the market leaders/new entrants in this market with information on the closest approximations of the revenue numbers for the overall In Space Manufacturing market and its subsegments. The report covers the entire ecosystem of the In Space Manufacturing industry and will help stakeholders understand the competitive landscape and gain more insights to better position their businesses and plan suitable go-to-market strategies. The report will also help stakeholders understand the pulse of the market and provide them with information on key market drivers, restraints, challenges, and opportunities.

The report provides insights on the following pointers:

- Analysis of key drivers and there are several factors that could contribute to an increase in the In Space Manufacturing market.

- Product Development/Innovation: Detailed insights on upcoming technologies, research & development activities, and new product & service launches in the In Space Manufacturing market.

- Market Development: Comprehensive information about lucrative markets - the report analyses the In Space Manufacturing market across varied regions

- Market Diversification: Exhaustive information about new products & services, untapped geographies, recent developments, and investments in the In Space Manufacturing market.

- Competitive Assessment: In-depth assessment of market shares, growth strategies and service offerings of leading players like Allevi Inc. (US), Global Graphene Group, Inc. (US), Le Verre Fluore Fiber Solutions(France),Nedstack Fuel cell Technology BV (Netherlands) and Echodyne Corporation(US). among others in the In Space Manufacturing market.

Table of Contents:

1[INTRODUCTION[23 1.1[ISTUDY OBJECTIVES[23 1.2[IMARKET DEFINITION[24 TABLE 1[INCLUSIONS AND EXCLUSIONS[24 1.3[ISTUDY SCOPE[24 1.3.1[IMARKETS COVERED[24

FIGURE 1 IN-SPACE MANUFACTURING MARKET SEGMENTATION 24 1.3.2 REGIONS COVERED 25 1.3.3 YEARS CONSIDERED 25 1.4 CURRENCY CONSIDERED 25 TABLE 2 USD EXCHANGE RATES 26 1.5 LIMITATIONS 26 1.6 STAKEHOLDERS 26 2 RESEARCH METHODOLOGY 27 2.1 RESEARCH DATA 27 FIGURE 2□REPORT PROCESS FLOW□27 FIGURE 3⊓RESEARCH DESIGN⊓28 2.1.1 SECONDARY DATA 28 2.1.1.1 Key data from secondary sources 29 2.1.2 PRIMARY DATA 30 2.1.2.1 Key data from primary sources 30 2.1.2.2 □ Breakdown of primary interviews □ 31 FIGURE 4∏BREAKDOWN OF PRIMARY INTERVIEWS: BY COMPANY TYPE, DESIGNATION, AND REGION∏31 2.2 FACTOR ANALYSIS 31 2.2.1 INTRODUCTION 31 2.2.2 DEMAND-SIDE INDICATORS 31 2.2.3 SUPPLY-SIDE INDICATORS 32 2.2.4 RECESSION IMPACT ANALYSIS 32 2.3 MARKET SIZE APPROACH 32 2.3.1 BOTTOM-UP APPROACH 33 2.3.1.1 Market size estimation methodology 33 FIGURE 5[]MARKET SIZE ESTIMATION METHODOLOGY: BOTTOM-UP APPROACH[]33 2.3.2 TOP-DOWN APPROACH 34 FIGURE 6[]MARKET SIZE ESTIMATION METHODOLOGY: TOP-DOWN APPROACH[]34 2.4 DATA TRIANGULATION 35 FIGURE 7 DATA TRIANGULATION 35 2.5 RESEARCH ASSUMPTIONS 36 FIGURE 8⊓ASSUMPTIONS FOR RESEARCH STUDY⊓36 2.6 RESEARCH LIMITATIONS 36 2.7 RISK ANALYSIS 36 3 EXECUTIVE SUMMARY 37 FIGURE 9[]TISSUES/ORGANS SEGMENT TO ACCOUNT FOR LARGEST MARKET SHARE BY 2030[]37 FIGURE 10 QUANTUM DOT DISPLAYS SEGMENT TO ACCOUNT FOR LARGEST MARKET SHARE BY 2040 38 FIGURE 11 JAPAN TO BE FASTEST-GROWING MARKET FROM 2030 TO 2034 39 FIGURE 12[]APAN AND SOUTH KOREA TO BE FASTEST-GROWING MARKETS FROM 2035 TO 2040[]40 4⊓PREMIUM INSIGHTS∏41 4.1 ATTRACTIVE OPPORTUNITIES FOR PLAYERS IN IN-SPACE MANUFACTURING MARKET 41 FIGURE 13 ADVANCEMENTS IN ADDITIVE MANUFACTURING AND 3D PRINTING TECHNOLOGIES TO DRIVE MARKET 41 4.2⊓IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY (2030)∏41 FIGURE 14 TISSUES/ORGANS SEGMENT TO DOMINATE MARKET BY 2030 41 4.3∏IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY (2030-2034)∏42 FIGURE 15 TRACTION MOTORS SEGMENT TO DOMINATE MARKET BY 2034 42 4.4∏IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY (2035-2040)∏42

FIGURE 16 QUANTUM DOTS DISPLAYS SEGMENT TO ACCOUNT FOR LARGEST MARKET SHARE BY 2040 42 4.5□IN-SPACE MANUFACTURING MARKET, BY REGION□43 FIGURE 17 ASIA PACIFIC TO BE FASTEST-GROWING REGIONAL MARKET FROM 2030 TO 2034 43 FIGURE 18 REST OF THE WORLD TO BE FASTEST-GROWING REGIONAL MARKET FROM 2035 TO 2040 44 5 MARKET OVERVIEW 45 5.1⊓INTRODUCTION⊓45 5.2 MARKET DYNAMICS 46 FIGURE 19 IN-SPACE MANUFACTURING MARKET: DRIVERS, RESTRAINTS, OPPORTUNITIES, AND CHALLENGES 46 5.2.1 || DRIVERS || 46 5.2.1.1 Advancements in additive manufacturing and 3D printing technologies 46 5.2.1.2 Manufacturing advantages of in-space fabrication over terrestrial manufacturing 47 5.2.1.3 Increasing momentum for space-based infrastructure by government agencies and private players 48 5.2.1.4 Decreasing launch costs 48 5.2.2 RESTRAINTS 49 5.2.2.1 High costs involved in maturation of space-based manufacturing technologies 49 5.2.2.2 Restricted production scale due to unavailability of key manufacturing raw materials 49 5.2.3 OPPORTUNITIES 49 5.2.3.1 Need for in-space manufactured products for use in manned journeys and space habitats 49 5.2.3.2 New market for in-space services in expanding satellite constellations 50 5.2.4 CHALLENGES 51 5.2.4.1 [Refinement and utilization of available resources for ISRU-based manufacturing processes]51 5.2.4.2 Long maturation timelines for key technologies in space-based manufacturing ecosystem 51 5.3 VALUE CHAIN ANALYSIS 51 FIGURE 20 VALUE CHAIN ANALYSIS OF IN-SPACE MANUFACTURING MARKET 52 5.4 TRENDS AND DISRUPTIONS IMPACTING CUSTOMER BUSINESS 53 FIGURE 21 TRENDS AND DISRUPTIONS IMPACTING IN-SPACE MANUFACTURING MARKET 53 5.5 IN-SPACE MANUFACTURING MARKET ECOSYSTEM 54 5.5.1 PROMINENT COMPANIES 54 5.5.2 PRIVATE AND SMALL ENTERPRISES 54 5.5.3 COSYSTEM 54 FIGURE 22□IN-SPACE MANUFACTURING MARKET ECOSYSTEM MAP□54 TABLE 3 IN-SPACE MANUFACTURING MARKET ECOSYSTEM 55 5.6 PORTER'S FIVE FORCES ANALYSIS 56 FIGURE 23 IN-SPACE MANUFACTURING MARKET: PORTER'S FIVE FORCES ANALYSIS 56 TABLE 4□IN-SPACE MANUFACTURING MARKET: PORTER'S FIVE FORCE ANALYSIS□56 5.6.1 THREAT OF NEW ENTRANTS 57 5.6.2 THREAT OF SUBSTITUTES 57 5.6.3 BARGAINING POWER OF SUPPLIERS 57 5.6.4 BARGAINING POWER OF BUYERS 57 5.6.5⊓INTENSITY OF COMPETITIVE RIVALRY∏57 5.7 REGULATORY LANDSCAPE TABLE 5[]NORTH AMERICA: REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS[]58 TABLE 6 [EUROPE: REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS [58 TABLE 7 ASIA PACIFIC: REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS 59 TABLE 8 REST OF THE WORLD: REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS 60 6 INDUSTRY TRENDS 61

6.1 INTRODUCTION 61

6.2 TECHNOLOGY TRENDS 61 6.2.1 SPACE QUALIFICATION AND MINIATURIZATION OF 3D PRINTING TECHNOLOGY 61 6.2.2 ROBOTIC ASSEMBLY AND MANUFACTURING METHODS FOR SPACE HARDWARE 62 6.2.3 MODULAR MANUFACTURING OF SPACECRAFT AND SATELLITE COMPONENTS 62 6.3□USE CASE ANALYSIS□63 6.3.1⊓USE CASE 1: IN-SPACE MICROFABRICATION⊓63 6.3.2⊓USE CASE 2: COBOTS AND AI ROBOTS FOR SPACE FACTORIES□64 6.3.3 USE CASE 3: ADVANCED BIO-INKS 65 6.4 IMPACT OF MEGATRENDS 65 6.4.1 SOLAR PANEL MANUFACTURING FOR SATELLITES 65 6.4.2 DEVELOPMENT OF MISSION EXTENSION VEHICLES 66 6.5 PATENT ANALYSIS 66 TABLE 9⊓LIST OF KEY PATENTS⊓66 7 IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY 72 7.1 INTRODUCTION 73 FIGURE 24 OUANTUM DOT DISPLAYS SEGMENT TO REGISTER HIGHEST CAGR FROM 2030 TO 2034 73 FIGURE 25 QUANTUM DOT DISPLAYS SEGMENT TO REGISTER HIGHEST CAGR FROM 2035 TO 2040 74 TABLE 10[IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2030?2034 (USD MILLION)[75 TABLE 11[IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2035-2040 (USD MILLION)[]75 7.2 PEROVSKITE PHOTOVOLTAIC CELLS 76 7.2.1 PEROVSKITE CELLS TO ADDRESS DEMAND FOR SUSTAINABLE AND EFFICIENT SOLAR POWER SOLUTIONS 76 7.3 GRAPHENE AND SOLID-STATE LITHIUM BATTERIES 76 7.3.1 GRAPHENE AND SOLID-STATE BATTERY TECHNOLOGY ADOPTION TO REDUCE DEPENDENCE ON TRADITIONAL BATTERIES 76 7.4□PROTON EXCHANGE MEMBRANE CELLS (PEMC)□76 7.4.1 AUTOMATION OF LABOR-INTENSIVE PEMC MANUFACTURING PROCESSES TO STREAMLINE MANUFACTURING 76 7.5 TRACTION MOTORS 77 7.5.1 POWERFUL ELECTRIC DRIVES TO REPLACE TRADITIONAL MOTORS IN TRAINS 77 7.6 HYDROGEN PROPULSION SYSTEMS 77 7.6.1 MICROGRAVITY ENVIRONMENT TO MITIGATE COMPLEX MANUFACTURING CHALLENGES 77 7.7 INSULIN 77 7.7.1 INCREASING DEMAND FOR EXPENSIVE LIFE-SAVING DRUGS TO BE SUSTAINED BY IN-SPACE MANUFACTURING 77 7.8 ELECTROMAGNETIC METAMATERIAL ANTENNAS 7.8.1 LOW-RESOURCE MANUFACTURING OF ADVANCED ANTENNAS TO REDUCE TERRESTRIAL PRODUCTION COSTS 7.9 PERFECT SPHERE BEARINGS 78 7.9.1 NEED FOR ACCURATE AND REAL-TIME TARGET INFORMATION TO ENHANCE MILITARY MISSION CAPABILITIES 78 7.10 QUANTUM DOT DISPLAYS 78 7.10.1 PRECISION MANUFACTURING IN MICROGRAVITY ENVIRONMENT TO DRIVE ADOPTION OF HIGH-QUALITY DISPLAYS 78 7.11 TISSUES/ORGANS 78 7.11.1 NOVEL MANUFACTURING PROCESSES TO ENABLE ORGAN AND TISSUE BIO-PRINTING 78 7.12 ZBLAN FIBER OPTICS 79 7.12.1 SPACE FABRICATION OF HIGH-QUALITY OPTICAL FIBERS TO BE COST-EFFECTIVE 79 7.13 ZEOLITE CRYSTALS 79 7.13.1 MICROGRAVITY CONDITIONS TO ENABLE HIGH-QUALITY ZEOLITE CRYSTAL PRODUCTION 79 8 IN-SPACE MANUFACTURING MARKET, BY END USER 8.1 INTRODUCTION 81 8.2 GOVERNMENT & MILITARY 81 8.2.1 IN-SPACE MANUFACTURING TO ADDRESS DEMAND FOR REPAIR AND MAINTENANCE OF SPACE-BASED ASSETS AND IMPROVED

Scotts International. EU Vat number: PL 6772247784 tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

MISSION FUNCTIONALITY 81 8.3 COMMERCIAL 81 8.3.1 INVESTMENTS IN SPACE ECONOMY TO DRIVE MARKET 81 9 IN-SPACE MANUFACTURING MARKET, BY POINT OF USE 82 9.1 INTRODUCTION 83 9.2□SPACE□83 9.2.1 IN-SPACE MANUFACTURING TO BE ADVANTAGEOUS FOR CONTINUED GROWTH OF NEW SPACE ECOSYSTEM 83 9.3 TERRESTRIAL 9.3.1 IN-SPACE PRODUCTS TO WITNESS INCREASED DEMAND IN FUTURE 83 10⊓IN-SPACE MANUFACTURING MARKET, BY REGION⊓85 10.1 INTRODUCTION 86 10.2 RECESSION IMPACT ON IN-SPACE MANUFACTURING MARKET 86 TABLE 12⊓IN-SPACE MANUFACTURING MARKET, BY REGION, 2030-2034 (USD MILLION)∏87 TABLE 13⊓IN-SPACE MANUFACTURING MARKET, BY REGION, 2035-2040 (USD MILLION)⊓87 10.3 NORTH AMERICA 87 10.3.1 PESTLE ANALYSIS: NORTH AMERICA 88 FIGURE 26 NORTH AMERICA: IN-SPACE MANUFACTURING MARKET SNAPSHOT 90 TABLE 14∏NORTH AMERICA: IN-SPACE MANUFACTURING MARKET, BY COUNTRY, 2030-2034 (USD MILLION)∏90 TABLE 15[]NORTH AMERICA: IN-SPACE MANUFACTURING MARKET, BY COUNTRY, 2035-2040 (USD MILLION)[]91 TABLE 16[NORTH AMERICA: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2030-2034 (USD MILLION)[]91 TABLE 17 NORTH AMERICA: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2035-2040 (USD MILLION) 92 10.3.2 US 92 10.3.2.1 Increasing investment in new space economy to drive market 92 TABLE 18 US: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2030-2034 (USD MILLION) 93 TABLE 19∏US: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2035-2040 (USD MILLION)∏93 10.3.3 CANADA 94 10.3.3.1 Government incentives to develop advanced technologies for space exploration and mining to drive market 94 TABLE 20∏CANADA: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2030-2034 (USD MILLION)∏94 TABLE 21 CANADA: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2035-2040 (USD MILLION) 95 10.4⊓EUROPE⊓95 10.4.1 PESTLE ANALYSIS: EUROPE 96 TABLE 22∏EUROPE: IN-SPACE MANUFACTURING MARKET, BY COUNTRY, 2030-2034 (USD MILLION)∏98 TABLE 23 TEUROPE: IN-SPACE MANUFACTURING MARKET, BY COUNTRY, 2035-2040 (USD MILLION) 78 TABLE 24⊓EUROPE: IN-SPACE MANUFACTURING MARKET. BY PRODUCT TECHNOLOGY, 2030-2034 (USD MILLION)⊓99 TABLE 25∏EUROPE: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2035-2040 (USD MILLION)∏99 10.4.2 UK 100 10.4.2.1 Collaborations between private and government entities to develop advanced material manufacturing processes to drive market⊓100 TABLE 26∏UK: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2030-2034 (USD MILLION)∏101 TABLE 27∏UK: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2035-2040 (USD MILLION)∏101 10.4.3 || FRANCE || 102 10.4.3.1 [Favorable government policies and maturation of advanced technologies to drive market 102 TABLE 28∏FRANCE: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2030-2034 (USD MILLION)∏103 TABLE 29∏FRANCE: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2035-2040 (USD MILLION)∏103 10.4.4 GERMANY 104 10.4.4.1 Sizeable aerospace industries and strong investments in technology to drive market 104

TABLE 30 GERMANY: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2030-2034 (USD MILLION) 104

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com www.scotts-international.com

TABLE 31 GERMANY: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2035-2040 (USD MILLION) 105 10.4.5 RUSSIA 105

10.4.5.1 Diversification of technology products and development of advanced hardware to enable commercial viability of ISM products to drive market 105

TABLE 32 RUSSIA: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2030-2034 (USD MILLION) 106 TABLE 33 RUSSIA: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2035-2040 (USD MILLION) 106 10.4.6 ITALY 107

10.4.6.1 Domestic space programs to drive market 107

TABLE 34[]ITALY: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2030-2034 (USD MILLION)[]107 TABLE 35[]ITALY: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2035-2040 (USD MILLION)[]108 10.5[]ASIA PACIFIC[]108

10.5.1 PESTLE ANALYSIS: ASIA PACIFIC 108

FIGURE 28 ASIA PACIFIC: IN-SPACE MANUFACTURING MARKET SNAPSHOT 110

TABLE 36[]ASIA PACIFIC: IN-SPACE MANUFACTURING MARKET, BY COUNTRY, 2030-2034 (USD MILLION)[]110 TABLE 37[]ASIA PACIFIC: IN-SPACE MANUFACTURING MARKET, BY COUNTRY, 2035-2040 (USD MILLION)[]111 TABLE 38[]ASIA PACIFIC: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2030-2034 (USD MILLION)[]111 TABLE 39[]ASIA PACIFIC: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2035-2040 (USD MILLION)[]112 10.5.2[]CHINA[]112

10.5.2.1 Strong government initiatives to increase contribution in all space programs to drive market 112 TABLE 40 CHINA: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2030-2034 (USD MILLION) 113 TABLE 41 CHINA: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2035-2040 (USD MILLION) 113 10.5.3 INDIA 114

10.5.3.1 Future space programs and increasing commercial players in space technology segment to drive market 114 TABLE 42 INDIA: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2030-2034 (USD MILLION) 114 TABLE 43 INDIA: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2035-2040 (USD MILLION) 115 10.5.4 APAN 115

10.5.4.1 Growing demand for drone services in agriculture, inspection, and entertainment to drive market 115 TABLE 44 APAN: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2030-2034 (USD MILLION) 116 TABLE 45 APAN: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2035-2040 (USD MILLION) 116 10.5.5 SOUTH KOREA 117

10.5.5.1 Growing demand for high-quality fibers and precision machined goods to drive market 117 TABLE 46 SOUTH KOREA: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2030-2034 (USD MILLION)

TABLE 47 SOUTH KOREA: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2035-2040 (USD MILLION) 118 10.6 REST OF THE WORLD 118

10.6.1 PESTLE ANALYSIS: REST OF THE WORLD 119

FIGURE 29 REST OF THE WORLD: IN-SPACE MANUFACTURING MARKET SNAPSHOT 120

TABLE 48 REST OF THE WORLD: IN-SPACE MANUFACTURING MARKET, BY REGION, 2030-2034 (USD MILLION) 120

TABLE 49 REST OF THE WORLD: IN-SPACE MANUFACTURING MARKET, BY REGION, 2035-2040 (USD MILLION) 121

TABLE 50 REST OF THE WORLD: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2030-2034 (USD MILLION) 121 TABLE 51 REST OF THE WORLD: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2035-2040 (USD MILLION) 122 10.6.2 MIDDLE EAST & AFRICA 122

10.6.2.1 Increasing applicability of drones in defense and commercial sectors to drive market 122

TABLE 52[MIDDLE EAST & AFRICA: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2030-2034 (USD MILLION)[]123 TABLE 53[]MIDDLE EAST & AFRICA: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2035-2040 (USD MILLION)[]123 10.6.3[]LATIN AMERICA[]124

10.6.3.1 Emergence of new players in technology sector to drive market 124

TABLE 54[LATIN AMERICA: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2030-2034 (USD MILLION)]124

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

TABLE 55 LATIN AMERICA: IN-SPACE MANUFACTURING MARKET, BY PRODUCT TECHNOLOGY, 2035-2040 (USD MILLION) 125 11 COMPETITIVE LANDSCAPE 126 11.1 INTRODUCTION 126 TABLE 56 KEY DEVELOPMENTS BY LEADING PLAYERS IN IN-SPACE MANUFACTURING MARKET, 2019-2023 126 11.2 RANKING ANALYSIS 128 FIGURE 30 MARKET RANKING OF TOP 5 PLAYERS, 2023 128 11.3 COMPANY EVALUATION MATRIX 129 11.3.1 STARS 129 11.3.2 EMERGING LEADERS 129 11.3.3 PERVASIVE PLAYERS 129 11.3.4 PARTICIPANTS 130 FIGURE 31⊓IN-SPACE MANUFACTURING MARKET: COMPANY EVALUATION MATRIX, 2022∏130 11.4 COMPANY FOOTPRINT 131 TABLE 57 COMPANY PRODUCT FOOTPRINT 131 TABLE 58 COMPANY PRODUCT TECHNOLOGY FOOTPRINT (PEROVSKITE PHOTOVOLTAIC CELLS, TRACTION MOTORS, AND OTHERS)∏132 TABLE 59 COMPANY PRODUCT TECHNOLOGY FOOTPRINT (PERFECT SPHERE BEARINGS, TISSUES/ORGANS, AND OTHERS) 133 TABLE 60 COMPANY REGIONAL FOOTPRINT 134 11.5 COMPETITIVE SCENARIO 134 11.5.1 MARKET EVALUATION FRAMEWORK 135 11.5.2 PRODUCT LAUNCHES 135 TABLE 61 PRODUCT LAUNCHES, 2019-2023 135 11.5.3 DEALS 138 TABLE 62 DEALS, 2019-2023 138 11.5.4 OTHERS 151 TABLE 63[]OTHERS, 2019-2023[]151 12 COMPANY PROFILES 152 12.1 INTRODUCTION 152 (Business Overview, Products Offered, Recent Developments, and MnM View (Key strengths/Right to Win, Strategic Choices Made, and Weaknesses and Competitive Threats))* 12.1.1 OXFORD PHOTOVOLTAICS LTD. 152 TABLE 64 OXFORD PHOTOVOLTAICS LTD.: COMPANY OVERVIEW 152 TABLE 65 OXFORD PHOTOVOLTAICS LTD.: PRODUCTS/SOLUTIONS/SERVICES OFFERED 153 TABLE 66 OXFORD PHOTOVOLTAICS LTD.: OTHERS 153 12.1.2 QUANTUMSCAPE CORPORATION 154 TABLE 67 QUANTUMSCAPE CORPORATION: COMPANY OVERVIEW 154 TABLE 68 OUANTUMSCAPE CORPORATION: PRODUCTS/SOLUTIONS/SERVICES OFFERED 154 TABLE 69 QUANTUMSCAPE CORPORATION: PRODUCT DEVELOPMENTS 154 TABLE 70 QUANTUMSCAPE CORPORATION: DEALS 155 12.1.3 NEDSTACK FUEL CELL TECHNOLOGY BV 156 TABLE 71 NEDSTACK FUEL CELL TECHNOLOGY BV: COMPANY OVERVIEW 156 TABLE 72 NEDSTACK FUEL CELL TECHNOLOGY BV: PRODUCTS/SOLUTIONS/ SERVICES OFFERED 156 TABLE 73 NEDSTACK FUEL CELL TECHNOLOGY BV: PRODUCT DEVELOPMENTS 157 TABLE 74 NEDSTACK FUEL CELL TECHNOLOGY BV: DEALS 157 12.1.4 ECHODYNE CORPORATION 159 TABLE 75 ECHODYNE CORPORATION: COMPANY OVERVIEW 159

TABLE 76 ECHODYNE CORPORATION: PRODUCTS/SOLUTIONS/SERVICES OFFERED 159 TABLE 77 ECHODYNE CORPORATION: PRODUCT DEVELOPMENTS 160 TABLE 78 ECHODYNE CORPORATION: DEALS 161 12.1.5 ABB LTD. 164 TABLE 79 ABB LTD.: COMPANY OVERVIEW 164 FIGURE 32 ABB LTD.: COMPANY SNAPSHOT 165 TABLE 80 ABB LTD.: PRODUCTS/SOLUTIONS/SERVICES OFFERED 165 TABLE 81 ABB LTD.: DEALS 166 12.1.6 SIEMENS AG 168 TABLE 82 SIEMENS AG: COMPANY OVERVIEW 168 FIGURE 33 SIEMENS AG: COMPANY SNAPSHOT 169 TABLE 83 SIEMENS AG: PRODUCTS/SOLUTIONS/SERVICES OFFERED 169 TABLE 84⊓SIEMENS AG: DEALS⊓170 12.1.7 BIOPRINTING SOLUTIONS 172 TABLE 85[]3D BIOPRINTING SOLUTIONS: COMPANY OVERVIEW[]172 TABLE 86⊓3D BIOPRINTING SOLUTIONS: PRODUCTS/SOLUTIONS/SERVICES OFFERED⊓172 TABLE 87[]3D BIOPRINTING SOLUTIONS: PRODUCT DEVELOPMENTS[]173 12.1.8 LE VERRE FLUORE FIBER SOLUTIONS 174 TABLE 88 LE VERRE FLUORE FIBER SOLUTIONS: COMPANY OVERVIEW 174 TABLE 89 LE VERRE FLUORE FIBER SOLUTIONS: PRODUCTS/SOLUTIONS/SERVICES OFFERED 174 TABLE 90 LE VERRE FLUORE FIBER SOLUTIONS: PRODUCT DEVELOPMENTS 175 TABLE 91 LE VERRE FLUORE FIBER SOLUTIONS: DEALS 175 12.1.9 ALLEVI 176 TABLE 92 ALLEVI: COMPANY OVERVIEW 176 TABLE 93 ALLEVI: PRODUCTS/SOLUTIONS/SERVICES OFFERED 176 TABLE 94 ALLEVI: DEALS 177 12.1.10 THORLABS, INC. 178 TABLE 95 THORLABS, INC.: COMPANY OVERVIEW 178 TABLE 96[]THORLABS, INC.: PRODUCTS/SOLUTIONS/SERVICES OFFERED[]178 TABLE 97⊓THORLABS, INC.: DEALS⊓179 12.1.11 GLOBAL GRAPHENE GROUP, INC. (G3) 180 TABLE 98 GLOBAL GRAPHENE GROUP, INC. (G3): COMPANY OVERVIEW 180 TABLE 99IIGLOBAL GRAPHENE GROUP. INC. (G3): PRODUCTS/SOLUTIONS/SERVICES OFFEREDI180 TABLE 100 GLOBAL GRAPHENE GROUP, INC. (G3): PRODUCT DEVELOPMENTS 181 TABLE 101 GLOBAL GRAPHENE GROUP, INC. (G3): DEALS 181 12.1.12 FRACTAL ANTENNA SYSTEMS, INC. 182 TABLE 102 FRACTAL ANTENNA SYSTEMS, INC.: COMPANY OVERVIEW 182 TABLE 103 FRACTAL ANTENNA SYSTEMS, INC.: PRODUCTS/SOLUTIONS/SERVICES OFFERED 182 TABLE 104 FRACTAL ANTENNA SYSTEMS, INC.: PRODUCT DEVELOPMENTS 182 12.1.13 HYPERSONIX LAUNCH SYSTEMS LTD. 183 TABLE 105 HYPERSONIX LAUNCH SYSTEMS LTD.: COMPANY OVERVIEW 183 TABLE 106[]HYPERSONIX LAUNCH SYSTEMS LTD.: PRODUCTS/SOLUTIONS/SERVICES OFFERED[]183 TABLE 107 HYPERSONIX LAUNCH SYSTEMS LTD.: PRODUCT DEVELOPMENTS 184 TABLE 108 HYPERSONIX LAUNCH SYSTEMS LTD.: DEALS 184 12.1.14 NOVO NORDISK A/S 186 TABLE 109 NOVO NORDISK A/S: COMPANY OVERVIEW 186 FIGURE 34 NOVO NORDISK A/S: COMPANY SNAPSHOT 186

TABLE 110 NOVO NORDISK A/S: PRODUCTS/SOLUTIONS/SERVICES OFFERED 187 TABLE 111 NOVO NORDISK A/S: DEALS 187 12.1.15 ENECOAT TECHNOLOGIES 190 TABLE 112 ENECOAT TECHNOLOGIES: COMPANY OVERVIEW 190 TABLE 113 ENECOAT TECHNOLOGIES: PRODUCTS/SOLUTIONS/SERVICES OFFERED 190 TABLE 114 ENECOAT TECHNOLOGIES: DEALS 191 12.1.16 FOMS, INC. 192 TABLE 115 FOMS, INC.: COMPANY OVERVIEW 192 TABLE 116 FOMS, INC.: PRODUCTS/SOLUTIONS/SERVICES OFFERED 192 TABLE 117 FOMS, INC.: PRODUCT DEVELOPMENTS 193 *Details on Business Overview, Products Offered, Recent Developments, and MnM View (Key strengths/Right to Win, Strategic Choices Made, and Weaknesses and Competitive Threats) might not be captured in case of unlisted companies. 13 APPENDIX 194 13.1 DISCUSSION GUIDE 194 13.2 KNOWLEDGESTORE: MARKETSANDMARKETS' SUBSCRIPTION PORTAL 196 13.3 CUSTOMIZATION OPTIONS 198 13.4 RELATED REPORTS 198

13.5 AUTHOR DETAILS 199



In Space Manufacturing Market by Product Technology (Perovskite Photovoltaics cell,Graphene and solid-state Lithium batteries, Exchange membrane cells,Traction motor,Hydrogen propulsion system ,Insulin), End Use and Region - Global Forecast to 2040

Market Report | 2023-11-09 | 195 pages | MarketsandMarkets

To place an Order with Scotts International:

- Print this form
- Complete the relevant blank fields and sign
- Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License		Price
	Single User		\$4950.00
	Multi User		\$6650.00
	Corporate License		\$8150.00
	Enterprise Site License		\$10000.00
		VAT	
		Total	

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346. []** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*	Phone*	
First Name*	Last Name*	
Job title*		
Company Name*	EU Vat / Tax ID / NIF	P number*
Address*	City*	

Zip	Code*
- 10	Couc

Country*

Date

Signature

2025-05-20