

Swarm Robotics Market by Platform (UAV, UGV), Application (Security, Inspection & Monitoring, Mapping & Surveying, Search & Rescue and Disaster Relief, Supply Chain and Warehouse Management), End-Use Industry and Region - Global Forecast to 2028

Market Report | 2023-09-07 | 158 pages | MarketsandMarkets

AVAILABLE LICENSES:

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

Report description:

The swarm robotics market is projected to grow from USD 0.8 billion in 2023 to USD 3.0 billion by 2028, registering a CAGR of 30.9% during the forecast period. Some of the major factors driving the growth of the swarm robotics market include the increasing use of swarm robotics for parcel delivery through drones and the rising adoption of swarm-based drones in the military sector. However, technical challenges and high initial investment act as a challenge for the market in the future. The major growth opportunities for the market players are an integration of swarm intelligence technology with connected cars and the increasing use of swarm robotics in warehouses.

"Market for agriculture end-use industry will have the highest CAGR during the forecast period."

The agriculture segment of the swarm robotics market is expected to witness the highest CAGR during the forecast period. Agriculture is one of the main applications of swarm robotics, and using these robots provides an opportunity to inspect agricultural data for large areas and highly enhance the tasks required in precision agriculture. Swarm robotics is considered extremely relevant for precision farming and large-scale agricultural applications. Increasing adoption of automation and developing IoT are driving market growth due to the growing population and labor shortage. Furthermore, increasing research and development activities by the government and market players are also driving market growth.

"Supply chain and warehouse management application expected to register the highest CAGR during the forecast period."

The swarm robotics market's supply chain and warehouse management segment is expected to account for the highest CAGR in the forecast period. Swarm robotics can enhance supply chain and warehouse management efficiency, accuracy, and flexibility. These applications can lead to reduced operational costs, faster order processing, improved customer satisfaction, and better

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

warehouse space and resource utilization. The increasing demand for swarm robots in supply chain and warehouse management is driven by the growing development of manufacturers and the rising trend of automation in various industries.

"North America to account for the highest market share among other regions during the forecast period."

North America is expected to dominate the swarm robotics market during the forecast period. Increased R&D activities in the field of swarm intelligence would drive the growth of the swarm robotics market in North America. Further, the increasing demand for autonomous and semi-autonomous systems in the military, healthcare, and industrial sectors is driving the market growth. Moreover, the growing availability of advanced sensors and communication technologies is creating an opportunity for the market. Furthermore, the initiatives by various players in the market and government are also driving the market growth.

In determining and verifying the market size for several segments and subsegments gathered through extensive primary interviews, secondary research has been conducted with key industry experts in the swarm robotics market.

The break-up of primary participants for the report has been shown below:

-□By company type: Tier 1 - 35 %, Tier 2 - 45%, and Tier 3 - 20%

-□By designation: C-Level Executives - 35%, Managers - 25%, and Others - 40%

-□By region: North America - 45%, Europe - 20%, Asia Pacific - 30%, and RoW - 5%

The report profiles key players in the swarm robotics market with their respective market ranking analyses. Prominent players profiled in this report include Hydromea (Switzerland), Boston Dynamic (US), SwarmFarm (Australia), Swarm Technology (US), Sentien Robotics (US), Berkeley Marine Robotics (US), Swisslog Holding AG (Switzerland), FARobot, Inc. (Taiwan), K-Team Corporation (Switzerland), KION Group AG (Germany), among others.

Research Coverage

This research report categorizes the swarm robotics market based on platform, application, end-use industry, and region. The report describes the major drivers, restraints, challenges, and opportunities pertaining to the swarm robotics market and forecasts the same till 2028. The report also consists of leadership mapping and analysis of companies in the swarm robotics ecosystem.

Reasons to buy this report:

The report will help the market leaders/new entrants in this market with information on the closest approximations of the revenue numbers for the overall swarm robotics market and the subsegments. This report will help stakeholders understand the competitive landscape and gain more insights to position their businesses better and plan suitable go-to-market strategies. The report also helps stakeholders understand the market pulse and provides information on key market drivers, restraints, challenges, and opportunities.

The report provides insights on the following pointers:

- Analysis of key drivers (rising adoption of swarm-based drones in military sector, the development of new technologies, such as artificial intelligence and machine learning, and use of swarm robotics for parcel delivery through drones), restraints (technical challenges and high initial investment), opportunities (integration of swarm intelligence technology with connected cars and use of swarm robotics in warehouses), and challenges (lack of skilled workforce and low awareness about swarm intelligence and Reluctance to accept new technology by key industries) influencing the growth of the swarm robotics market

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

- Market Development: Comprehensive information about lucrative markets - the report analyses the swarm robotics market across varied regions

- Market Diversification: Exhaustive information about new products & services, untapped geographies, recent developments, and investments in the swarm robotics market

- Competitive Assessment: In-depth assessment of market shares, growth strategies, and product/service offerings of leading

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

players like Hydromea (Switzerland), Boston Dynamic (US), SwarmFarm (Australia), Swarm Technology (US), K-Team Corporation (Switzerland), among others in the swarm robotics market.

Table of Contents:

1	INTRODUCTION	18
1.1	STUDY OBJECTIVES	18
1.2	MARKET DEFINITION	19
1.2.1	INCLUSIONS AND EXCLUSIONS	19
1.3	STUDY SCOPE	20
1.3.1	MARKETS COVERED	20
FIGURE 1 SWARM ROBOTICS MARKET SEGMENT		20
1.3.2	GEOGRAPHICAL SCOPE	20
1.3.3	YEARS CONSIDERED	21
1.4	CURRENCY CONSIDERED	21
1.5	STAKEHOLDERS	21
1.6	LIMITATIONS	22
1.7	IMPACT OF RECESSION	22
2	RESEARCH METHODOLOGY	23
2.1	INTRODUCTION	23
FIGURE 2 SWARM ROBOTICS MARKET: RESEARCH DESIGN		23
2.1.1	SECONDARY DATA	24
2.1.1.1	Major secondary sources	24
2.1.1.2	Key data from secondary sources	25
2.1.2	PRIMARY DATA	25
2.1.2.1	Key data from primary sources	26
2.1.2.2	Breakdown of primaries	26
2.1.3	SECONDARY AND PRIMARY RESEARCH	27
2.1.3.1	Key industry insights	28
2.2	MARKET SIZE ESTIMATION	28
2.2.1	BOTTOM-UP APPROACH	29
FIGURE 3 MARKET SIZE ESTIMATION METHODOLOGY: BOTTOM-UP APPROACH		29
2.2.2	TOP-DOWN APPROACH	29
FIGURE 4 MARKET SIZE ESTIMATION METHODOLOGY: SUPPLY-SIDE APPROACH		29
FIGURE 5 MARKET SIZE ESTIMATION METHODOLOGY: TOP-DOWN APPROACH		30
2.3	MARKET BREAKDOWN & DATA TRIANGULATION	30
FIGURE 6 DATA TRIANGULATION		30
2.4	RESEARCH ASSUMPTIONS	31
2.5	RESEARCH LIMITATIONS	31
2.6	RISK ASSESSMENT	32
2.6.1	RECESSION IMPACT	32
3	EXECUTIVE SUMMARY	33
FIGURE 7 UNMANNED AERIAL VEHICLES (UAVS) SEGMENT TO RECORD HIGHEST CAGR FROM 2023 TO 2028		33
FIGURE 8 SUPPLY CHAIN AND WAREHOUSE MANAGEMENT SEGMENT TO REGISTER HIGHEST CAGR BETWEEN 2023 AND 2028		34
FIGURE 9 MILITARY & DEFENSE SEGMENT TO HOLD LARGEST MARKET SHARE DURING FORECAST PERIOD		34
FIGURE 10 NORTH AMERICA ACCOUNTED FOR LARGEST SHARE OF SWARM ROBOTICS MARKET IN 2022		35
4	PREMIUM INSIGHTS	36
4.1	ATTRACTIVE OPPORTUNITIES FOR PLAYERS IN SWARM ROBOTICS MARKET	36

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

FIGURE 11	INCREASING DEMAND FROM MILITARY & DEFENSE AND INDUSTRIAL VERTICALS TO FUEL MARKET GROWTH	36
4.2	SWARM ROBOTICS MARKET, BY PLATFORM	36
FIGURE 12	UNMANNED AERIAL VEHICLES SEGMENT TO EXHIBIT HIGHEST GROWTH RATE DURING FORECAST PERIOD	36
4.3	ASIA PACIFIC: SWARM ROBOTICS MARKET, BY END-USE INDUSTRY AND REGION	37
FIGURE 13	MILITARY & DEFENSE AND CHINA DOMINATED ASIA PACIFIC SWARM ROBOTICS MARKET IN 2022	37
4.4	SWARM ROBOTICS MARKET, BY COUNTRY	38
FIGURE 14	INDIA TO BE FASTEST-GROWING SWARM ROBOTICS MARKET DURING FORECAST PERIOD	38
5	MARKET OVERVIEW	39
5.1	INTRODUCTION	39
5.2	MARKET DYNAMICS	39
FIGURE 15	SWARM ROBOTICS MARKET: DRIVERS, RESTRAINTS, OPPORTUNITIES, AND CHALLENGES	39
5.2.1	DRIVERS	40
FIGURE 16	SWARM ROBOTICS MARKET: IMPACT ANALYSIS OF DRIVERS	40
5.2.1.1	Rising adoption of swarm-based drones in military sector	40
5.2.1.2	Breakthroughs in artificial intelligence and machine learning	40
5.2.1.3	Revolutionizing parcel delivery through drones	41
5.2.2	RESTRAINTS	41
FIGURE 17	SWARM ROBOTICS MARKET: IMPACT ANALYSIS OF RESTRAINTS	41
5.2.2.1	Technical challenges and high initial investment	41
5.2.3	OPPORTUNITIES	42
FIGURE 18	SWARM ROBOTICS MARKET: IMPACT ANALYSIS OF OPPORTUNITIES	42
5.2.3.1	Integrating swarm intelligence in connected cars	42
5.2.3.2	Growing use of swarm robotics in warehouses	42
5.2.4	CHALLENGES	43
FIGURE 19	SWARM ROBOTICS MARKET: IMPACT ANALYSIS OF CHALLENGES	43
5.2.4.1	Lack of skilled workforce	43
5.2.4.2	Limited industrial awareness	43
5.3	VALUE CHAIN ANALYSIS	44
FIGURE 20	SWARM ROBOTICS MARKET: VALUE CHAIN ANALYSIS	44
5.4	ECOSYSTEM MAPPING	45
TABLE 1	SWARM ROBOTICS MARKET: ROLE OF KEY PLAYERS IN ECOSYSTEM	45
5.5	TRENDS/DISRUPTIONS IMPACTING CUSTOMER BUSINESSES	46
FIGURE 21	REVENUE SHIFTS AND NEW REVENUE POCKETS FOR SWARM ROBOTICS MARKET PLAYERS	46
5.6	PRICING ANALYSIS	46
TABLE 2	AVERAGE SELLING PRICE (ASP) OF ROBOTS AND HARDWARE COMPONENTS	46
5.6.1	AVERAGE SELLING PRICE (ASP) OF UAVS OFFERED BY KEY PLAYERS	47
FIGURE 22	AVERAGE SELLING PRICE (ASP) OF UAVS OFFERED BY KEY PLAYERS, BY APPLICATION	47
TABLE 3	AVERAGE SELLING PRICE (ASP) OF UAVS OFFERED BY KEY PLAYERS, BY APPLICATION	47
5.7	TECHNOLOGY ANALYSIS	48
5.7.1	SWARM ROBOTS IN CONSTRUCTION INDUSTRY	48
5.7.2	NANOROBOTS IN MEDICINE	48
5.7.3	AI-CONTROLLED DRONE SWARM	48
5.8	CASE STUDY ANALYSIS	48
5.8.1	HYDROMEA SA DESIGNED AUV SYSTEM TO ADDRESS CHALLENGES RELATED TO MEASUREMENT, NAVIGATION, AND COMMUNICATION	48
5.8.2	WOODSIDE DEPLOYED BOSTON DYNAMICS' SPOT ROBOT TO AUTOMATE ROUTINE INSPECTION AT NATURAL GAS FACILITY	49
5.9	PATENT ANALYSIS	49

FIGURE 23	TOP 10 COMPANIES WITH HIGHEST NUMBER OF PATENT APPLICATIONS IN LAST 10 YEARS	49
TABLE 4	TOP 20 PATENT OWNERS IN LAST 10 YEARS	49
FIGURE 24	NUMBER OF PATENTS GRANTED PER YEAR, 2012-2023	50
5.9.1	LIST OF MAJOR PATENTS	51
TABLE 5	SWARM ROBOTICS MARKET: LIST OF MAJOR PATENTS	51
5.10	TRADE ANALYSIS	53
FIGURE 25	IMPORT DATA FOR PRODUCTS COVERED UNDER HS CODE 854140, BY COUNTRY, 2018-2022 (USD THOUSAND)	53
FIGURE 26	EXPORT DATA FOR PRODUCTS COVERED UNDER HS CODE 854140, BY COUNTRY, 2018-2022 (USD THOUSAND)	54
5.11	KEY STAKEHOLDERS AND BUYING CRITERIA	54
5.11.1	KEY STAKEHOLDERS IN BUYING PROCESS	54
FIGURE 27	INFLUENCE OF STAKEHOLDERS ON BUYING PROCESS FOR TOP THREE END-USE INDUSTRIES	54
TABLE 6	INFLUENCE OF STAKEHOLDERS ON BUYING PROCESS FOR TOP THREE END-USE INDUSTRIES	55
5.11.2	BUYING CRITERIA	55
FIGURE 28	KEY BUYING CRITERIA FOR TOP THREE APPLICATIONS	55
TABLE 7	KEY BUYING CRITERIA FOR END-USE INDUSTRIES	55
?		
5.12	PORTER'S FIVE FORCES ANALYSIS	56
FIGURE 29	SWARM ROBOTICS MARKET: PORTER'S FIVE FORCES ANALYSIS	56
TABLE 8	SWARM ROBOTICS MARKET: PORTER'S FIVE FORCES ANALYSIS	56
5.12.1	INTENSITY OF COMPETITIVE RIVALRY	57
5.12.2	THREAT OF SUBSTITUTES	57
5.12.3	BARGAINING POWER OF BUYERS	57
5.12.4	BARGAINING POWER OF SUPPLIERS	57
5.12.5	THREAT OF NEW ENTRANTS	57
5.13	KEY CONFERENCES AND EVENTS, 2023-2024	57
TABLE 9	SWARM ROBOTICS MARKET: LIST OF KEY CONFERENCES AND EVENTS	57
5.14	REGULATORY LANDSCAPE	59
5.14.1	REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS RELATED TO SWARM ROBOTICS	59
TABLE 10	NORTH AMERICA: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS	59
TABLE 11	EUROPE: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS	59
TABLE 12	ASIA PACIFIC: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS	60
TABLE 13	ROW: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS	60
5.14.2	STANDARDS AND REGULATIONS RELATED TO SWARM ROBOTICS	60
TABLE 14	NORTH AMERICA: SAFETY STANDARDS FOR SWARM ROBOTICS MARKET	60
TABLE 15	EUROPE: SAFETY STANDARDS FOR SWARM ROBOTICS MARKET	61
TABLE 16	ASIA PACIFIC: SAFETY STANDARDS FOR SWARM ROBOTICS MARKET	61
6	SWARM ROBOTICS MARKET, BY PLATFORM	62
6.1	INTRODUCTION	63
FIGURE 30	UNMANNED AERIAL VEHICLES SEGMENT TO GROW AT HIGHEST RATE DURING FORECAST PERIOD	63
TABLE 17	SWARM ROBOTICS MARKET, BY PLATFORM, 2019-2022 (USD MILLION)	63
TABLE 18	SWARM ROBOTICS MARKET, BY PLATFORM, 2023-2028 (USD MILLION)	63
6.2	UNMANNED GROUND VEHICLES (UGVS)	64
6.2.1	INCREASING ADOPTION OF UGVs FOR AGRICULTURAL INSPECTIONS, DISASTER RESPONSE, AND LOGISTICS APPLICATIONS TO DRIVE MARKET	64
TABLE 19	UGVS: SWARM ROBOTICS MARKET, BY APPLICATION, 2019-2022 (USD MILLION)	64
TABLE 20	UGVS: SWARM ROBOTICS MARKET, BY APPLICATION, 2023-2028 (USD MILLION)	64
6.3	UNMANNED AERIAL VEHICLES (UAVS)	65

6.3.1	GROWING USE OF UAVS FOR ENVIRONMENTAL MONITORING TO DRIVE SEGMENTAL GROWTH	65
TABLE 21	UAVS: SWARM ROBOTICS MARKET, BY APPLICATION, 2019-2022 (USD MILLION)	65
TABLE 22	UAVS: SWARM ROBOTICS MARKET, BY APPLICATION, 2023-2028 (USD MILLION)	65
6.4	OTHERS	66
TABLE 23	OTHERS: SWARM ROBOTICS MARKET, BY APPLICATION, 2019-2022 (USD MILLION)	66
TABLE 24	OTHERS: SWARM ROBOTICS MARKET, BY APPLICATION, 2023-2028 (USD MILLION)	66
7	SWARM ROBOTICS MARKET, BY TYPE	67
7.1	INTRODUCTION	67
FIGURE 31	SWARM ROBOTICS MARKET, BY TYPE	67
7.2	DRONES	67
7.2.1	INCREASING USE OF DRONES FOR SEARCH AND RESCUE, ENVIRONMENTAL MONITORING, AND SURVEILLANCE APPLICATIONS TO DRIVE MARKET	67
7.3	ROBOTS	68
7.3.1	RIISING ADOPTION OF SWARM ROBOTS TO PERFORM LARGE, SCALABLE TASKS TO DRIVE MARKET	68
7.4	OTHERS	68
8	SWARM ROBOTICS MARKET, BY APPLICATION	69
8.1	INTRODUCTION	70
FIGURE 32	SWARM ROBOTICS MARKET, BY APPLICATION	70
FIGURE 33	SECURITY, INSPECTION, AND MONITORING SEGMENT TO COMMAND LARGEST SHARE OF SWARM ROBOTICS MARKET IN 2023	70
TABLE 25	SWARM ROBOTICS MARKET, BY APPLICATION, 2019-2022 (USD MILLION)	70
TABLE 26	SWARM ROBOTICS MARKET, BY APPLICATION, 2023-2028 (USD MILLION)	71
8.2	SECURITY, INSPECTION, AND MONITORING	71
8.2.1	GROWING INSPECTION OF CRITICAL INFRASTRUCTURES WITH DRONES TO DRIVE MARKET	71
TABLE 27	SECURITY, INSPECTION, AND MONITORING: SWARM ROBOTICS MARKET, BY END-USE INDUSTRY, 2019-2022 (USD MILLION)	72
TABLE 28	SECURITY, INSPECTION, AND MONITORING: SWARM ROBOTICS MARKET, BY END-USE INDUSTRY, 2023-2028 (USD MILLION)	72
TABLE 29	SECURITY, INSPECTION, AND MONITORING: SWARM ROBOTICS MARKET, BY PLATFORM, 2019-2022 (USD MILLION)	72
TABLE 30	SECURITY, INSPECTION, AND MONITORING: SWARM ROBOTICS MARKET, BY PLATFORM, 2023-2028 (USD MILLION)	73
8.3	MAPPING AND SURVEYING	73
8.3.1	USE OF SWARM ROBOTS TO MAP USAFE AND DIFFICULT ENVIRONMENTS TO SUPPORT SEGMENTAL GROWTH	73
TABLE 31	MAPPING AND SURVEYING: SWARM ROBOTICS MARKET, BY END-USE INDUSTRY, 2019-2022 (USD MILLION)	73
TABLE 32	MAPPING AND SURVEYING: SWARM ROBOTICS MARKET, BY END-USE INDUSTRY, 2023-2028 (USD MILLION)	74
TABLE 33	MAPPING AND SURVEYING: SWARM ROBOTICS MARKET, BY PLATFORM, 2019-2022 (USD MILLION)	74
TABLE 34	MAPPING AND SURVEYING: SWARM ROBOTICS MARKET, BY PLATFORM, 2023-2028 (USD MILLION)	74
8.4	SEARCH & RESCUE AND DISASTER RELIEF	75
8.4.1	NEED FOR REAL-TIME SEARCH AND RESCUE TO FUEL ADOPTION OF SWARM ROBOTS	75
TABLE 35	SEARCH & RESCUE AND DISASTER RELIEF: SWARM ROBOTICS MARKET, BY END-USE INDUSTRY, 2019-2022 (USD MILLION)	75
TABLE 36	SEARCH & RESCUE AND DISASTER RELIEF: SWARM ROBOTICS MARKET, BY END-USE INDUSTRY, 2023-2028 (USD MILLION)	76
TABLE 37	SEARCH & RESCUE AND DISASTER RELIEF: SWARM ROBOTICS MARKET, BY PLATFORM, 2019-2022 (USD MILLION)	76
TABLE 38	SEARCH & RESCUE AND DISASTER RELIEF: SWARM ROBOTICS MARKET, BY PLATFORM, 2023-2028 (USD MILLION)	76
8.5	SUPPLY CHAIN AND WAREHOUSE MANAGEMENT	76
8.5.1	USE OF DRONES IN SHIPPING AND DELIVERY APPLICATIONS TO FOSTER MARKET GROWTH	76
TABLE 39	SUPPLY CHAIN AND WAREHOUSE MANAGEMENT: SWARM ROBOTICS MARKET, BY END-USE INDUSTRY, 2019-2022 (USD	

MILLION)77

TABLE 40SUPPLY CHAIN AND WAREHOUSE MANAGEMENT: SWARM ROBOTICS MARKET, BY END-USE INDUSTRY, 2023-2028 (USD MILLION)77

TABLE 41SUPPLY CHAIN AND WAREHOUSE MANAGEMENT: SWARM ROBOTICS MARKET, BY PLATFORM, 2019-2022 (USD MILLION)77

TABLE 42SUPPLY CHAIN AND WAREHOUSE MANAGEMENT: SWARM ROBOTICS MARKET, BY PLATFORM, 2023-2028 (USD MILLION)78

8.6OTHERS78

TABLE 43OTHERS: SWARM ROBOTICS MARKET, BY END-USE INDUSTRY, 2019-2022 (USD MILLION)78

TABLE 44OTHERS: SWARM ROBOTICS MARKET, BY END USE INDUSTRY, 2023-2028 (USD MILLION)78

TABLE 45OTHERS: SWARM ROBOTICS MARKET, BY PLATFORM, 2019-2022 (USD MILLION)79

TABLE 46OTHERS: SWARM ROBOTICS MARKET, BY PLATFORM, 2023-2028 (USD MILLION)79

9SWARM ROBOTICS MARKET, BY END-USE INDUSTRY80

9.1INTRODUCTION81

FIGURE 34SWARM ROBOTICS MARKET, BY END-USE INDUSTRY81

FIGURE 35MILITARY & DEFENSE SEGMENT TO ACCOUNT FOR LARGEST SHARE OF SWARM ROBOTICS MARKET IN 202381

TABLE 47SWARM ROBOTICS MARKET, BY END-USE INDUSTRY, 2019-2022 (USD MILLION)82

TABLE 48SWARM ROBOTICS MARKET, BY END-USE INDUSTRY, 2023-2028 (USD MILLION)82

9.2MILITARY & DEFENSE82

9.2.1GROWING USE OF DRONES IN ANTI-AIRCRAFT DEFENSE APPLICATIONS TO DRIVE MARKET82

TABLE 49MILITARY & DEFENSE: SWARM ROBOTICS MARKET, BY APPLICATION, 2019-2022 (USD MILLION)83

TABLE 50MILITARY & DEFENSE: SWARM ROBOTICS MARKET, BY APPLICATION, 2023-2028 (USD MILLION)83

TABLE 51MILITARY & DEFENSE: SWARM ROBOTICS MARKET, BY REGION, 2019-2022 (USD MILLION)83

TABLE 52MILITARY & DEFENSE: SWARM ROBOTICS MARKET, BY REGION, 2023-2028 (USD MILLION)84

9.3INDUSTRIAL84

9.3.1INDUSTRY 4.0 REVOLUTION TO DRIVE MARKET GROWTH84

TABLE 53INDUSTRIAL: SWARM ROBOTICS MARKET, BY APPLICATION, 2019-2022 (USD MILLION)84

TABLE 54INDUSTRIAL: SWARM ROBOTICS MARKET, BY APPLICATION, 2023-2028 (USD MILLION)85

TABLE 55INDUSTRIAL: SWARM ROBOTICS MARKET, BY REGION, 2019-2022 (USD MILLION)85

TABLE 56INDUSTRIAL: SWARM ROBOTICS MARKET, BY REGION, 2023-2028 (USD MILLION)85

9.4AGRICULTURE85

9.4.1INCREASING ADOPTION OF SWARM ROBOTS IN PRECISION FARMING APPLICATIONS TO SUPPORT MARKET GROWTH85

TABLE 57AGRICULTURE: SWARM ROBOTICS MARKET, BY APPLICATION, 2019-2022 (USD MILLION)86

TABLE 58AGRICULTURE: SWARM ROBOTICS MARKET, BY APPLICATION, 2023-2028 (USD MILLION)86

TABLE 59AGRICULTURE: SWARM ROBOTICS MARKET, BY REGION, 2019-2022 (USD MILLION)86

TABLE 60AGRICULTURE: SWARM ROBOTICS MARKET, BY REGION, 2023-2028 (USD MILLION)87

9.5HEALTHCARE87

9.5.1GROWING USE OF SWARM ROBOTICS FOR REMOTE HEALTHCARE TO DRIVE MARKET87

TABLE 61HEALTHCARE: SWARM ROBOTICS MARKET, BY APPLICATION, 2019-2022 (USD MILLION)87

TABLE 62HEALTHCARE: SWARM ROBOTICS MARKET, BY APPLICATION, 2023-2028 (USD MILLION)88

TABLE 63HEALTHCARE: SWARM ROBOTICS MARKET, BY REGION, 2019-2022 (USD MILLION)88

TABLE 64HEALTHCARE: SWARM ROBOTICS MARKET, BY REGION, 2023-2028 (USD MILLION)88

9.6OTHERS89

TABLE 65OTHERS: SWARM ROBOTICS MARKET, BY APPLICATION, 2019-2022 (USD MILLION)89

TABLE 66OTHERS: SWARM ROBOTICS MARKET, BY APPLICATION, 2023-2028 (USD MILLION)89

TABLE 67OTHERS: SWARM ROBOTICS MARKET, BY REGION, 2019-2022 (USD MILLION)90

TABLE 68OTHERS: SWARM ROBOTICS MARKET, BY REGION, 2023-2028 (USD MILLION)90

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

?

10 SWARM ROBOTICS MARKET, BY REGION 91

10.1 INTRODUCTION 92

FIGURE 36 INDIA TO REGISTER HIGHEST CAGR IN GLOBAL SWARM ROBOTICS MARKET DURING 2023-2028 92

FIGURE 37 NORTH AMERICA TO REGISTER HIGHEST CAGR IN SWARM ROBOTICS MARKET IN NORTH AMERICA DURING FORECAST PERIOD 93

TABLE 69 SWARM ROBOTICS MARKET, BY REGION, 2019-2022 (USD MILLION) 93

TABLE 70 SWARM ROBOTICS MARKET, BY REGION, 2023-2028 (USD MILLION) 93

10.2 NORTH AMERICA 94

FIGURE 38 NORTH AMERICA: SWARM ROBOTICS MARKET SNAPSHOT 94

TABLE 71 NORTH AMERICA: SWARM ROBOTICS MARKET, BY COUNTRY, 2019-2022 (USD MILLION) 95

TABLE 72 NORTH AMERICA: SWARM ROBOTICS MARKET, BY COUNTRY, 2023-2028 (USD MILLION) 95

TABLE 73 NORTH AMERICA: SWARM ROBOTICS MARKET, BY END-USE INDUSTRY, 2019-2022 (USD MILLION) 95

TABLE 74 NORTH AMERICA: SWARM ROBOTICS MARKET, BY END-USE INDUSTRY, 2023-2028 (USD MILLION) 96

10.2.1 US 96

10.2.1.1 Growing adoption of swarm robotics technology in military & defense to drive market 96

10.2.2 CANADA 96

10.2.2.1 Government-led initiatives to encourage adoption of robots to drive market 96

10.2.3 MEXICO 97

10.2.3.1 Increasing deployment of swarm robotics by military sector to augment market growth 97

10.2.4 IMPACT OF RECESSION ON SWARM ROBOTICS MARKET IN NORTH AMERICA 97

10.3 EUROPE 97

FIGURE 39 EUROPE: SWARM ROBOTICS MARKET SNAPSHOT 98

TABLE 75 EUROPE: SWARM ROBOTICS MARKET, BY COUNTRY, 2019-2022 (USD MILLION) 99

TABLE 76 EUROPE: SWARM ROBOTICS MARKET, BY COUNTRY, 2023-2028 (USD MILLION) 99

TABLE 77 EUROPE: SWARM ROBOTICS MARKET, BY END-USE INDUSTRY, 2019-2022 (USD MILLION) 99

TABLE 78 EUROPE: SWARM ROBOTICS MARKET, BY END-USE INDUSTRY, 2023-2028 (USD MILLION) 100

10.3.1 UK 100

10.3.1.1 Growing use of swarm robotics for agricultural applications to fuel market growth 100

10.3.2 GERMANY 100

10.3.2.1 Innovations in autonomous underwater vehicles to drive market 100

10.3.3 FRANCE 101

10.3.3.1 Increasing investments in development of smart factories to fuel demand for swarm robotics 101

10.3.4 ITALY 101

10.3.4.1 Increasing demand for autonomous underwater vehicles in military applications to propel market growth 101

10.3.5 REST OF EUROPE 101

10.3.6 IMPACT OF RECESSION ON SWARM ROBOTICS MARKET IN EUROPE 101

10.4 ASIA PACIFIC 102

FIGURE 40 ASIA PACIFIC: SWARM ROBOTICS MARKET SNAPSHOT 103

TABLE 79 ASIA PACIFIC: SWARM ROBOTICS MARKET, BY COUNTRY, 2019-2022 (USD MILLION) 103

TABLE 80 ASIA PACIFIC: SWARM ROBOTICS MARKET, BY COUNTRY, 2023-2028 (USD MILLION) 104

TABLE 81 ASIA PACIFIC: SWARM ROBOTICS MARKET, BY END-USE INDUSTRY, 2019-2022 (USD MILLION) 104

TABLE 82 ASIA PACIFIC: SWARM ROBOTICS MARKET, BY END-USE INDUSTRY, 2023-2028 (USD MILLION) 104

10.4.1 CHINA 105

10.4.1.1 Increasing research and development activities to drive market 105

10.4.2 JAPAN 105

10.4.2.1 Increasing usage of multi-swarm robotics technology in various industrial applications to boost market 105

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

10.4.3	INDIA	106
10.4.3.1	Increasing adoption of swarm robotics in military sector to support market growth	106
10.4.4	AUSTRALIA	106
10.4.4.1	Demand from agriculture and military industries to substantiate market growth	106
10.4.5	REST OF ASIA PACIFIC	106
10.4.6	IMPACT OF RECESSION ON SWARM ROBOTICS MARKET IN ASIA PACIFIC	106
10.5	REST OF THE WORLD	107
FIGURE 41	ROW: SWARM ROBOTICS MARKET SNAPSHOT	107
TABLE 83	ROW: SWARM ROBOTICS MARKET, BY REGION, 2019-2022 (USD MILLION)	108
TABLE 84	ROW: SWARM ROBOTICS MARKET, BY REGION, 2023-2028 (USD MILLION)	108
TABLE 85	ROW: SWARM ROBOTICS MARKET, BY END-USE INDUSTRY, 2019-2022 (USD MILLION)	108
TABLE 86	ROW: SWARM ROBOTICS MARKET, BY END-USE INDUSTRY, 2023-2028 (USD MILLION)	108
10.5.1	MIDDLE EAST & AFRICA	109
10.5.1.1	Adoption of swarm robotics in mining industry to drive market	109
10.5.2	SOUTH AMERICA	109
10.5.2.1	Growing adoption of industrial robotics to drive market	109
?		
11	COMPETITIVE LANDSCAPE	110
11.1	OVERVIEW	110
11.2	STRATEGIES ADOPTED BY KEY PLAYERS	110
TABLE 87	OVERVIEW OF STRATEGIES DEPLOYED BY KEY PLAYERS IN SWARM ROBOTICS MARKET	110
11.2.1	PRODUCT PORTFOLIO	111
11.2.2	REGIONAL FOCUS	112
11.2.3	ORGANIC/INORGANIC GROWTH STRATEGIES	112
11.3	MARKET SHARE ANALYSIS, 2022	112
TABLE 88	SWARM ROBOTICS MARKET: DEGREE OF COMPETITION	112
11.4	REVENUE ANALYSIS OF KEY PLAYERS IN SWARM ROBOTICS MARKET	114
FIGURE 42	REVENUE ANALYSIS OF KEY PLAYERS IN SWARM ROBOTICS MARKET IN 2022	114
11.5	SWARM ROBOTICS MARKET: EVALUATION MATRIX OF KEY COMPANIES	115
11.5.1	STARS	115
11.5.2	PERVASIVE PLAYERS	115
11.5.3	EMERGING LEADERS	115
11.5.4	PARTICIPANTS	115
FIGURE 43	SWARM ROBOTICS MARKET: COMPANY EVALUATION MATRIX, 2022	116
11.6	SWARM ROBOTICS MARKET: EVALUATION MATRIX OF STARTUPS/SMALL AND MEDIUM-SIZED ENTERPRISES (SMES)	116
11.6.1	PROGRESSIVE COMPANIES	116
11.6.2	RESPONSIVE COMPANIES	116
11.6.3	DYNAMIC COMPANIES	117
11.6.4	STARTING BLOCKS	117
FIGURE 44	SWARM ROBOTICS MARKET: STARTUPS/SMES EVALUATION MATRIX, 2022	117
11.7	COMPANY FOOTPRINT	118
TABLE 89	COMPANY FOOTPRINT	118
TABLE 90	APPLICATION FOOTPRINT OF COMPANIES	118
TABLE 91	END-USE INDUSTRY FOOTPRINT OF COMPANIES	119
TABLE 92	REGION FOOTPRINT OF COMPANIES	119
TABLE 93	SWARM ROBOTICS MARKET: LIST OF KEY STARTUPS/SMES	120
TABLE 94	SWARM ROBOTICS MARKET: COMPETITIVE BENCHMARKING OF KEY STARTUPS/SMES	121

11.8	COMPETITIVE SCENARIOS AND TRENDS	121
11.8.1	PRODUCT LAUNCHES AND DEVELOPMENTS	122
TABLE 95	SWARM ROBOTICS MARKET: PRODUCT LAUNCHES AND DEVELOPMENTS, JANUARY 2019-JANUARY 2023	122
11.8.2	DEALS	122
TABLE 96	SWARM ROBOTICS MARKET: DEALS, JANUARY 2019-JANUARY 2023	122
11.8.3	OTHERS	122
TABLE 97	SWARM ROBOTICS MARKET: OTHERS, JANUARY 2019-JANUARY 2023	122
?		
12	COMPANY PROFILES	123
	(Business overview, Products/Services/Solutions offered, Recent developments & MnM View)*	
12.1	KEY PLAYERS	123
12.1.1	HYDROMEIA	123
TABLE 98	HYDROMEIA: COMPANY OVERVIEW	123
TABLE 99	HYDROMEIA: PRODUCTS/SERVICES/SOLUTIONS OFFERED	123
TABLE 100	HYDROMEIA: PRODUCT LAUNCHES	124
TABLE 101	HYDROMEIA: DEALS	124
12.1.2	SWARMFARM	126
TABLE 102	SWARMFARM: COMPANY OVERVIEW	126
TABLE 103	SWARMFARM: PRODUCTS/SERVICES/SOLUTIONS OFFERED	126
12.1.3	K-TEAM CORPORATION	128
TABLE 104	K-TEAM CORPORATION: COMPANY OVERVIEW	128
TABLE 105	K-TEAM CORPORATION: PRODUCTS/SERVICES/SOLUTIONS OFFERED	128
12.1.4	BOSTON DYNAMICS	130
TABLE 106	BOSTON DYNAMICS: COMPANY OVERVIEW	130
TABLE 107	BOSTON DYNAMICS: PRODUCTS/SERVICES/SOLUTIONS OFFERED	130
12.1.5	SWARM TECHNOLOGY	132
TABLE 108	SWARM TECHNOLOGY: COMPANY OVERVIEW	132
TABLE 109	SWARM TECHNOLOGY: PRODUCTS/SERVICES/SOLUTIONS OFFERED	132
12.1.6	KION GROUP AG	133
TABLE 110	KION GROUP AG: COMPANY OVERVIEW	133
FIGURE 45	KION GROUP AG: COMPANY SNAPSHOT	134
TABLE 111	KION GROUP AG: PRODUCTS/SERVICES/SOLUTIONS OFFERED	134
12.1.7	SENTIEN ROBOTICS	135
TABLE 112	SENTIEN ROBOTICS: COMPANY OVERVIEW	135
TABLE 113	SENTIEN ROBOTICS: PRODUCTS/SERVICES/SOLUTIONS OFFERED	135
12.1.8	SWISSLOG HOLDING AG	136
TABLE 114	SWISSLOG HOLDING AG: COMPANY OVERVIEW	136
TABLE 115	SWISSLOG HOLDING AG: PRODUCTS/SERVICES/SOLUTIONS OFFERED	136
TABLE 116	SWISSLOG HOLDING AG: PRODUCT DEVELOPMENT	137
12.1.9	BERKELEY MARINE ROBOTICS INC.	138
TABLE 117	BERKELEY MARINE ROBOTICS INC.: COMPANY OVERVIEW	138
TABLE 118	BERKELEY MARINE ROBOTICS INC.: PRODUCTS/SERVICES/SOLUTIONS OFFERED	138
12.1.10	FAROBOT, INC.	139
TABLE 119	FAROBOT, INC.: COMPANY OVERVIEW	139
TABLE 120	FAROBOT, INC.: PRODUCTS/SERVICES/SOLUTIONS OFFERED	139
?		
12.2	OTHER PLAYERS	140

12.2.1	UNBOX ROBOTICS PVT. LTD.	140
12.2.2	BARNSTORM AGTECH	140
12.2.3	AMBOTS	141
12.2.4	AUTONOMOUS ROBOTICS LTD	141
12.2.5	ROBOTICS IND, INC.	142
12.2.6	RESSON AEROSPACE INC.	142
12.2.7	MOBILEYE	143
12.2.8	ROLLS-ROYCE	144
12.2.9	GENERATION ROBOTS	145
12.2.10	CAJA	145
12.2.11	APIUM INC.	146
12.2.12	AGILOX SERVICES GMBH	147
12.2.13	ECA GROUP	148
12.2.14	SRI INTERNATIONAL	149
12.2.15	EXYN TECHNOLOGIES	149

*Details on Business overview, Products/Services/Solutions offered, Recent developments & MnM View might not be captured in case of unlisted companies.

13	APPENDIX	150
13.1	DISCUSSION GUIDE	150
13.2	KNOWLEDGESTORE: MARKETSANDMARKETS' SUBSCRIPTION PORTAL	154
13.3	AVAILABLE CUSTOMIZATIONS	156
13.4	RELATED REPORTS	156
13.5	AUTHOR DETAILS	157

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

Swarm Robotics Market by Platform (UAV, UGV), Application (Security, Inspection & Monitoring, Mapping & Surveying, Search & Rescue and Disaster Relief, Supply Chain and Warehouse Management), End-Use Industry and Region - Global Forecast to 2028

Market Report | 2023-09-07 | 158 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*	<input type="text"/>	Phone*	<input type="text"/>
First Name*	<input type="text"/>	Last Name*	<input type="text"/>
Job title*	<input type="text"/>		
Company Name*	<input type="text"/>	EU Vat / Tax ID / NIP number*	<input type="text"/>
Address*	<input type="text"/>	City*	<input type="text"/>

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

Zip Code*

Country*

Date

Signature