

GOVERNMENT OF INDIA
MINISTRY OF CIVIL AVIATION
Lok Sabha
STARRED QUESTION NO. : 405
(TO BE ANSWERED ON THE 31st March 2022)
BENEFITS OF DRONE TECHNOLOGY

405. SHRI Y.S. AVINASH REDDY

Will the Minister of CIVIL AVIATION

be pleased to state:-

- (a) whether the drones offer tremendous benefits for use in various sectors of economy viz. agriculture, defence, law enforcement and mapping;**
- (b) if so, the steps taken by the Government to promote use of drone technology;**
- (c) the details of public and private sector organisations which are using drones and the number of drone manufacturing plants which are coming up in the country; and**
- (d) whether any such plants are being established in the State of Andhra Pradesh and if so, the details thereof?**

ANSWER

Minister of CIVIL AVIATION (Shri Jyotiraditya M. Scindia)

(a) to (d): A statement is laid on the Table of the House.

Statement in reply to Lok Sabha Starred Question no 405 due for answer on 31 March 2022.; ; (a) to (d) Drones offer tremendous benefits to almost all sectors of the economy.

These include - agriculture, vaccine delivery, surveillance, search and rescue, transportation, mapping, defence and law enforcement to name a few. ; The Government released the liberalised Drone Rules, 2021 on 25th August 2021. In order to make India a global hub for drones under the Atmanirbhar Bharat Abhiyan, Ministry of Civil Aviation had requested Union Ministries to encourage various entities under their Ministry to promote use of drones. An illustrative list of drone applications relevant to different Ministries is at Annexure I. ; ; Drone outreach programmes were conducted in various States and Union Territories to promote use of drones, encourage startups for innovation, research and development in the emerging sector. The Government has brought out a Production Linked Incentive (PLI) Scheme for drones and drone components on 30th September 2021 with a total incentive of INR 120 crore spread over three financial years. ; As per Drone Rules, 2021, there is no requirement for drone manufacturers in the country, including those in Andhra Pradesh, to register on the Government's DigitalSky platform. Any person can operate drones in a green zone without prior permission upto a height of 400 feet. Prior permission from the Central Government and the concerned Air Traffic Authority (ATC) is required to operate drones in red and yellow zones respectively. ; The list of public and private sector entities given conditional exemption or permission for red zone drone operations is at Annexure II. An illustrative list of drone manufacturers in India is at Annexure III.

Statement in reply to Lok Sabha Starred Question No. 405 for answer on 31st March, 2022

Illustrative list of drone applications under different Union Ministries

S No	Ministry	Illustrative drone applications
1.	Agriculture & Farmers Welfare	<ul style="list-style-type: none"> a. Crop and soil health monitoring b. Irrigation estimation and scheduling c. Requirement and efficacy assessment of fertilizer and pesticide spraying d. Anti-locust operations e. Crop output estimates f. River and canal erosion; restoration tracking g. Insurance claim surveys
2.	Health & Family Welfare	<ul style="list-style-type: none"> a. Delivery of medicines, equipment and other supplies b. Pathology tests- sample collection from remote or epidemic/pandemic affected areas
3.	Panchayati Raj	<ul style="list-style-type: none"> a. Land records and property rights (SWAMITVA Scheme)
4.	Defence	<ul style="list-style-type: none"> a. Surveillance b. Combat c. Communication in remote areas d. Swarm drone solutions e. Counter drone solutions
5.	Home Affairs	<p>Surveillance, situational analysis, public announcements and evidence gathering for:</p> <ul style="list-style-type: none"> a. Security of sensitive installations b. Raids and counter-terror operations c. Crowd management d. Crime control e. VVIP security f. Disaster management; search and rescue; transportation of food, medicines and essentials g. Traffic management
6.	Housing and Urban Affairs	<ul style="list-style-type: none"> a. Urban planning and management b. Construction planning and monitoring c. Incident reporting d. Prevention of encroachment and land-use alteration
7.	Transportation: Road Transport and Highways; Railways; Ports, Shipping and Waterways	<ul style="list-style-type: none"> a. Surveillance b. Incident response c. Inspection and maintenance d. Project monitoring e. Disaster management

S No	Ministry	Illustrative drone applications
8.	Mining	<ul style="list-style-type: none"> a. Monitoring and Inspection b. Automatic surveying and mapping c. Stockpile assessment and management d. Haulage road optimisation
9.	Power	<ul style="list-style-type: none"> a. Real-time surveillance of assets and transmission lines b. Theft prevention and incident response c. Visual inspection and maintenance d. Construction planning and management
10.	Petroleum and Natural Gas	<ul style="list-style-type: none"> a. Real-time surveillance of assets and pipelines b. Theft prevention and incident response c. Visual inspection and maintenance d. Construction planning and management
11.	Environment, Forests and Climate Change	<ul style="list-style-type: none"> a. Monitoring of forests and wildlife b. Afforestation through seed-balls, irrigation and real-time monitoring c. Anti-poaching actions d. Pollution assessment and evidence-gathering
12.	Information and Broadcasting	<ul style="list-style-type: none"> a. High quality videography of events and difficult-to-reach-places at a fraction of the cost and approvals required b. Low altitude shooting without noise and dust pollution and risk of accidents c. Complete replacement of costly helicopter-based videography

Note:

1. The above list is **illustrative and not exhaustive**. New applications may evolve with time, usage and further innovations.
2. The above list has been prepared in consultation with academia, drone startups and industry bodies.

Statement in reply to Lok Sabha Starred Question No. 405 for answer on 31st March 2022

Public and private sector entities given conditional exemption or permission for red zone drone operations

S No	Exempted organisation	Purpose	Date of order
1.	Directorate of Plant Protection, Quarantine & Storage (DPPQS), MoAFW, Faridabad	Anti-locust operations	21 May 2020
2.	Commissionerate of Agriculture, Govt. of Rajasthan	Anti-locust operations	27 May 2020
3.	Maharashtra State Electricity Transmission Co. Ltd.	Power line Inspection	02 June 2020
4.	Department of Science and Technology, Survey of India (SOI)	Large scale mapping of inhabited areas of villages using drones under Central Sector Scheme "SVAMITVA".	11 June 2020
5.	Directorate of Plant Protection, Quarantine & Storage (DPPQS), MoAFW, Faridabad	Partial amendment of the MoCA order - use of engine powered drones upto 50 kg and night operations is permitted	27 June 2020
6.	Department of Agriculture, Agriculture Education and research, Government of Uttar Pradesh	Anti-locust operations	01 July 2020
7.	Indian Oil Corporation Limited (IOCL)	Aerial surveillance of oil pipelines	06 July 2020
8.	The Bombay Flying Club	Remote pilot training	24 July 2020
9.	Agriculture and farmers Welfare Department, Government of Haryana	Anti-locust operations	29 July 2020
10.	Wings Aviation Pvt. Ltd., Hyderabad	Remote pilot training	05 Aug 2020
11.	Flytech Aviation Academy, Secunderabad	Remote pilot training	05 Aug 2020
12.	Alchemist Aviation, Jamshedpur	Remote pilot training	07 Aug 2020
13.	Ambitions Flying Club Pvt. Ltd., Aligarh	Remote pilot training	10 Aug 2020
14.	Asia Pacific Flight Training Academy, Hyderabad	Remote pilot training	10 Aug 2020
15.	Falcon Aviation Academy	Remote pilot training	10 Aug 2020
16.	Government Aviation Training Institute, Bhubaneswar	Remote pilot training	11 Aug 2020
17.	Orient Flights Aviation Academy, Chennai	Remote pilot training	11 Aug 2020
18.	Telangana State Aviation Academy, Hyderabad	Remote pilot training	13 Aug 2020
19.	Pioneer Flying Academy Pvt. Ltd., Aligarh	Remote pilot training	14 Aug 2020
20.	The Gujarat Flying Club, Vadodara	Remote pilot training	21 Aug 2020
21.	Redbird Flight Training Academy	Remote pilot training	03 Sep 2020
22.	Brahmaputra Board	For conducting survey of flood and erosion effects of Brahmaputra River on Majuli Island	17 Sep 2020

S No	Exempted organisation	Purpose	Date of order
23.	Bharatpur Municipal Corporation	For data acquisition to prepare base map, development of thematic layers and city development and maintenance of Bharatpur city	18 Sep 2020
24.	Town and Country Planning Department, Mandi	For data acquisition for preparation of development plan of Nerchowk and Joginder Nagar planning areas	23 Sep 2020
25.	IGRUA, Amethi	Remote pilot training	06 Oct 2020
26.	Odisha Mining Corporation Ltd. (OMCL)	For conducting aerial surveys of three OMCL mines at Daitari, South Kaliapani and Kodingamali.	09 Oct 2020
27.	National Capital Region Transport Corporation (NCRTC)	For data acquisition for mapping and implementation of web-based GIS platform for Delhi-Meerut RRTS corridor	12 Oct 2020
28.	Global Konnect Aviation Services Pvt. Ltd.	Remote pilot training	16 Oct 2020
29.	National Thermal Power Corporation	For carrying out research and inspection activities at Vindhyaachal Super Thermal Power Station, Madhya Pradesh, Gadarwara Super Thermal Power Plant, Madhya Pradesh and Sipat Super Thermal Power Project, Chhattisgarh	19 Oct 2020
30.	CEPT University	For conducting iNUMBER (iNtegrated Urban Model for Built Environment Energy Research) project in Ahmedabad city	22 Oct 2020
31.	International Crops Research Institute	for the Semi-Arid Tropics (ICRISAT) Agricultural research activities within ICRISAT research fields	12 Nov 2020
32.	20 selected consortia	Facilitate conduct of BVLOS experimental flights of drones under the supervision of the Monitoring Committee	06 Jan 2021
33.	Central Potato Research Institute (CPRI)	For agricultural research activities in its research farm	12 Jan 2021
34.	Board of Control for Cricket in India (BCCI)	For live aerial cinematography of the India Cricket Season in 2021	04 Feb 2021
35.	Kochi Metro Rail Ltd. (KMRL)	For Integrated Urban Regeneration & Water Transport System (IURWTS) project	15 Feb 2021
36.	Ministry of Agriculture & Farmers Welfare (MoAFW)	For remote sensing data collection in agricultural areas of 100 districts of the country, for Gram Panchayat level yield estimation, under Pradhan Mantri Fasal Bima Yojana (PMBFY)	18 Feb 2021
37.	Indian Institute of Sugarcane Research (IISR)	For conducting the trials to evaluate drone spraying solution for controlling pest and diseases of sugarcane crop	09 Mar 2021
38.	Adani Defence Systems and Technologies Limited (ADSTL)	For demonstration of counter-drone system to Government organisations using drones	18 Mar 2021
39.	Professor Jayashankar Telangana State Agricultural University (PJTSAU)	For agricultural research activities	30 Mar 2021
40.	Central Mine Planning and Design Institute (CMPDI)	For surveying in coalfield areas of Coal India Ltd. For data acquisition of data for monitoring of various activities, volumetric measurement, and inspection using drones	05 Apr 2021

S No	Exempted organisation	Purpose	Date of order
41.	Indian Oil Corporation Ltd. (IOCL)	For aerial surveillance of pipelines using drones	08 Apr 2021
42.	Centre for Aerospace Research (CASR), Anna University	For remote pilot training	13 Apr 2021
43.	Kumbh Mela Administration	For conducting drone light show at Kumbh Mela, Haridwar, Uttarkhand using drones	13 Apr 2021
44.	West Central Railway (WCR), Kota	To use drones at train accident site and maintaining safety and security of railway assets	22 Apr 2021
45.	West Central Railway (WCR), Katni	To use drones at train accident site and maintaining safety and security of railway assets	22 Apr 2021
46.	Vedanta Ltd. (Cairn Oil and Gas)	For inspection of assets and enhance safety of personnel	22 Apr 2021
47.	Nagar Nigam of Dehradun, Haldwani, Haridwar and Rudrapur	For preparation of GIS based property database and electronic tax register using drones	22 Apr 2021
48.	Indian Council of Medical Research (ICMR)	For conducting feasibility study of Covid-19 vaccine delivery using drones	22 Apr 2021
49.	Ministry of Home Affairs (MHA)	To entities under the jurisdiction of MHA entities and State/ UT police regarding drone operations	27 Apr 2021
50.	Government of Telangana	For conducting experimental delivery of vaccines using drones within VLOS range	29 Apr 2021
51.	Odisha Mining Corporation Ltd. (OMCL)	For conducting aerial survey at Sasubohumali bauxite mines using drones	30 Apr 2021
52.	20 selected consortia	For BVLOS experimental flights of drones	04 May 2021
53.	Power Grid Corporation of India Ltd. (PGCIL)	For aerial inspection of the Agra-Aligarh power transmission line using drones	06 May 2021
54.	Central Mine Planning and Design Institute (CMPDI)	For conducting drone-based aerial surveys at Jayant, Dudhichua and Nigahi open-cast projects of Northern Coalfields Ltd. (NCL)	07 May 2021
55.	Government of Telangana	For conducting experimental BVLOS drone flights for delivery of vaccines	07 May 2021
56.	National Thermal Power Corporation (NTPC)	For conducting drone-based aerial surveys at Kerandari coal mining project in Jharkhand	11 May 2021
57.	Madhya Pradesh Madhya Kshetra Vidyut Vitaran Co. Ltd. (MPMKVVCL)	For data acquisition, mapping and aerial survey of Bhopal, Gwalior, Indore and Jabalpur cities for developing a web-based solar roof-top tool	13 May 2021
58.	Pipeline Infrastructure Ltd. (PIL)	For aerial monitoring of PIL natural gas pipeline between Nalgonda and Ranga Reddy districts in Telangana	13 May 2021
59.	Indian Oil Corporation Ltd. (IOCL)	For inspection of equipment and stacks etc. at IOCL Panipat refinery	13 May 2021
60.	Tata Steel Ltd. (TSL)	For monitoring of raw material stock in captive locations and preparing a surface topographical mapping of mining areas in 23 locations of TSL	28 May 2021
61.	Aries Agro Ltd.	For spraying of micronutrients in agricultural fields in 25 locations	31 May 2021
62.	Hindustan Petroleum Corporation Ltd. (HPCL)	For aerial surveillance of oil pipelines between Rewari to Bahadurgarh and	08 June 2021

S No	Exempted organisation	Purpose	Date of order
		Bahadurgarh to Barwala locations in Haryana	
63.	Indian Institute of Tropical Meteorology (IITM), Pune	For atmospheric research purpose using drones in 5 locations	08 June 2021
64.	Survey of India	For large scale mapping of inhabited areas of villages using drones under Central Sector Scheme "SVAMITVA"	08 June 2021
65.	ICAR- National Rice Research Institute (NRRI), Cuttack	For research and development of rice crop	21 June 2021
66.	Mahanadi Coalfields Limited (MCL)	For aerial survey and surveillance activities in mining areas of MCL	21 June 2021
67.	West Central Railway, Itarsi	For surveillance and assessment of site during train derailments or accidents	21 June 2021
68.	Punjab Agricultural University	For agricultural research purpose in own premises	02 July 2021
69.	Ministry of Housing and Urban Affairs (MoHUA)	For monitoring the progress of construction work at 6 LHP sites under PMAY-U	02 July 2021
70.	CEPT University	For conducting iNUMBER (iNtegrated Urban Model for Built Environment Energy Research) project in Ahmedabad city	02 July 2021
71.	Odisha Mining Corporation (OMC)	For aerial survey at three OMC mines located in Daitari, South Kaliapani and Kodingamali	02 July 2021
72.	FTOs and RPTOs	For conducting remote pilot training	02 July 2021
73.	Department of Health and Family Welfare (DoHFW)	For conducting experimental BVLOS drone flights to deliver essential healthcare items from Mawkyrwat CHC to Ranikor CHC in Meghalaya	02 July 2021
74.	Directorate of Urban Local Bodies, Haryana	For data acquisition, mapping and implementation of web-based GIS platform for development of AMRUT cities and property tax survey for Hisar, Panchkula, Ambala urban areas using drones	30 July 2021
75.	National Thermal Power Corporation (NTPC)	For conducting aerial surveillance, ash dyke monitoring and thermal inspection	30 July 2021
76.	National Institute of Science Education and Research (NISER)	For conducting aerial survey and photogrammetry of centrally protected monuments in collaboration with ASI	04 Aug 2021
77.	Government of Telangana	For conducting afforestation project	04 Aug 2021
78.	Government of Karnataka	For creating urban property ownership records in Bengaluru	13 Aug 2021
79.	Gangtok Smart City Development Ltd. (GSCDL)	For drone-based aerial survey for smart city project	13 Aug 2021
80.	SAIL, IISCO Steel Plant, Burnpur	For conducting perimeter surveillance	13 Aug 2021
81.	FTOs	For conducting remote pilot training	13 Aug 2021
82.	Tractors and Farm Equipment (TAFE)	For aerial spraying to assess crop health and prevent crop disease	13 Aug 2021
83.	Mahindra and Mahindra (M&M) Ltd.	For agricultural trials and precision spraying on paddy and hot pepper crop in Telangana and Andhra Pradesh	13 Aug 2021
84.	Bayer Crop Science Ltd.	For agricultural research activities and agricultural spraying	13 Aug 2021
85.	Indian Institute of Tropical	For BVLOS atmospheric research purpose	13 Aug 2021

S No	Exempted organisation	Purpose	Date of order
	Meteorology (IITM), Pune	upto 9000 feet	
86.	National Health Mission (NHM)	For conducting BVLOS drone flights to deliver essential healthcare items in tribal areas of Jawhar, Maharashtra	13 Aug 2021
87.	Survey of India (SoI)	For conducting drone-based aerial survey of large scale mapping projects	23 Aug 2021
88.	Indian Institute of Technology, Bombay (IIT-B)	For research, development and testing of drones in its own premises	10 Sep 2021
89.	Indian Council of Medical Research (ICMR)	For conducting experimental BVLOS vaccine delivery in Andaman and Nicobar Islands, Manipur and Nagaland upto a height of 3000 meters	10 Sep 2021
90.	National Aerospace Laboratories (NAL)	For conducting experimental BVLOS flights for research and development upto a height of 500 meters	13 Sep 2021
91.	TATA Advanced Systems Ltd. (TASL)	For conducting experimental BVLOS flights for testing of drones upto height of 1000 meters at Puttaparthi airport in Andhra Pradesh	26 Oct 2021
92.	Jatayu Unmanned Technologies Pvt. Ltd.	For counter drone system demonstration	17 Nov 2021
93.	wTVision Solutions Pvt. Ltd.	For India vs New Zealand series 2021	15 Nov 2021
94.	Airport Director, Calicut	For drone based videography at Calicut International Airport	29 Nov 2021
95.	Tamil Nadu Institute of Urban Studies (TNIUS)	For drone based survey for the pilot project on formulation of local area plan and town planning scheme	09 Dec 2021
96.	Department of Information Technology, Himachal Pradesh	For conducting BVLOS flight from Himachal Pradesh Cricket Association Stadium, Dharamshala to Dr. R.P Medical College, Tanda to demonstrate the delivery of medical equipment	13 Dec 2021
97.	Revenue Secretary, Ministry of Finance	For drone based videography in New Delhi	17 Dec 2021
98.	Survey of India	For drone based survey under SVAMITVA scheme and large scale mapping projects (LSM) in India	20 Dec 2021
99.	Reliance Industries Ltd.	For drone based topographical survey of Reliance Dahej Marine Terminal	23 Dec 2021
100.	Yash Raj Films Ltd.	For drone based videography at Kalina University, Mumbai	23 Dec 2021
101.	Navi Mumbai Municipal Corporation (NMMC)	For drone based surface topographical mapping of Navi Mumbai area	04 Jan 2022
102.	Madhya Pradesh Tourism Board (MPTB)	For drone based videography in Khajuraho group of temples	04 Jan 2022
103.	All India Institute of Medical Sciences (AIIMS), New Delhi	For project Sanjeevani to deliver lifesaving medicines between AIIMS, New Delhi campus & AIIMS, New Delhi - Jhajjar campus using drones	04 Jan 2022
104.	M/s Creative Group LLP	For drone based surface topographical mapping of greenfield airport in Udhamsingh Nagar district	06 Jan 2022
105.	Tata Steel Utilities and Infrastructure Services Ltd.	For drone based topographical survey of a designated area near Sonari Airport,	12 Jan 2022

S No	Exempted organisation	Purpose	Date of order
	(formerly JUSCO)	Jamshedpur	
106.	Oil and Natural Gas Corporation Ltd. (ONGC)	For drone based asset inspection and safety surveillance at ONGC, Hazira	12 Jan 2022
107.	Nehru Memorial Museum & Library (NMML)	For drone based videography of the old and new building of Pradhan Mantri Sangrahalaya and Teen Murti Bhavan in New Delhi	12 Jan 2022
108.	Asteria Aerospace (a Reliance Group company)	For drone based survey, inspection and monitoring of pipeline of Reliance Ethane Pipeline Ltd. and Reliance Industries Hazira Complex	14 Jan 2022
109.	Indira Gandhi Rashtriya Uran Akademi (IGRUA)	For conducting remote pilot training at Madhav Institute of Technology and Science, Gwalior	27 Jan 2022
110.	Quidich Innovation Labs Pvt. Ltd.	For drone based videography for India - West Indies and India - Sri Lanka series 2022	01 Feb 2022
111.	Ideation Technology Solutions Pvt. Ltd.	For drone based survey for GIS analysis of the terrain around Hooghly river within Kolkata Metropolitan Area as a part of World Bank project for Inland Water Transport, West Bengal	04 Feb 2022
112.	Bangalore International Airport Limited (BIAL)	For counter drone system demonstration near Kempegowda International Airport	04 Feb 2022
113.	L&T - Mindtree NxT	For drone based survey of 'Design and Construction of Mumbai-Ahmedabad High Speed Rail (MAHSR Bullet Train) project' of the National High-Speed Rail Corporation Limited (NHSRCL)	04 Feb 2022
114.	Cabinet Secretariat	For carrying out tuning of the radar by Special Protection Group (SPG) prior to installation of DRDO's anti-drone system for VVIP protection	04 Feb 2022
115.	One Inch Dreams GmbH	For drone based video shooting at Red Fort, New Delhi for the celebration of the 75th Anniversary of India's Independence	21 Feb 2022
116.	Surat Smart City Development Ltd	For drone based video shooting near Surat airport	25 Feb 2022
117.	Ministry of Culture	For drone based video shooting in New Delhi	03 Mar 2022
118.	Department of Tourism, Bihar	For conducting drone light show on Bihar Diwas, 2022	14 Mar 2022
119.	National Aerospace Laboratories (NAL)	For demonstration of drones in Wings India 2022 at Begumpet Airport, Hyderabad	17 Mar 2022
120.	Quidich Innovation Labs Pvt. Ltd.	For drone based videography for Indian Premier League 2022	21 Mar 2022
121.	Delhi Police	For drone based survey at Mehram Nagar Colony, Delhi	25 Mar 2022

Statement in reply to Lok Sabha Starred Question No. 405 for answer on 31st March 2022

Illustrative list of drone manufacturers in India

S No	Name of Organisation	Address	Key products
1	Martian Way Industries Private Limited	502 SATYA SADAN, BHIMANI STREET, MATUNGA EAST, MUMBAI - 400019	Industrial Drones, embedded AI hardware/software for drones
2	3dphysics Private Limited	16-H, A BLOCK, SRI GANGANAGAR, Sri Ganganagar, Rajasthan, 335001	Nano (<250gm) photography/mapping drone for consumer, police & business use.
3	Aarav Unmanned Systems Pvt. Ltd.	No.3, MCHS Layout, 80 feet road, Jakkur, Bengaluru-560064	Insight 2.0 multicopter for surveying and mapping application Zephyr Hybrid for surveying and mapping application.
4	Absolute Composites Pvt Ltd	No. 55/p, Bellahalli, Yelahanka Post Bangalore-560064	Uav
5	AcsI India Private Limited	Plot No 5, LGF, C-6&7, Vasant Kunj, New Delhi-110070	Agriculture, Mapping, Commercial and Enterprise Inspection, Delivery and Defence
6	Aerial Iq India Pvt Ltd	441, Jalvayu Towers, Sadanand Nagar, Bangalore 560038	Drone airframe, DC converters, Electrical PCB, Winch System
7	Aeroarc Private Limited	Plot No 5, LGF, C-6&7, Vasant Kunj, New Delhi-110070	Agriculture, Mapping, Commercial and Enterprise Inspection, Delivery and Defence
8	Aerodyne India Ventures Private Limited	Plot No 5, LGF, C-6&7, Vasant Kunj, New Delhi-110070	Agriculture, Mapping, Commercial and Enterprise Inspection, Delivery and Defence
9	Aerosys Aviation India Private Limited	1st Floor ,B-103, Sector 6, Noida Uttar pradesh -201301	Drone Frame and parts
10	Airosspace R & D Private Limited	NO.F3, 2ND MAIN ROAD, GAJALAKSHMI NAGAR, CHROMPET, Chennai, Tamil Nadu, 600044	Drones for Civil and Military Application
11	ANRA Technologies Private Limited	C-25, 1st Floor, Block-C, Sector-8, Noida, Gautam Buddha Nagar, UP-201301	Small / Medium uavs and associated technology for Traffic Management, Mission Management and End-to-End delivery management
12	Ascom Systems	B-303, Hind Saurashtra Ind Est, Next to Nikon showroom, Marol metro station, Marol, Andheri East, Mumbai, Maharashtra 400059	Drone (trainer-s1)
13	Asteria Aerospace Limited	2nd & 3rd Floor, Tellus Spaces, Khata No. 58/2782/7, Yelahanka New Town, Bengaluru, Karnataka-560064, India	Military Drones and Civilian Drones
14	Astroc As Technology Private Limited	Ground Floor and First Floor, Unit-02, Industrial Park, Uppal, 500039	Drones, UAS and related sub-systems
15	Atom Aviation Services Pvt Ltd	E-523, Third floor ,Ramfal Chowk, Dwarka Sec 7, New Delhi 110075	Drone
16	Automicrouas Aerotech (Op) Pvt. Ltd.	No. 488, Ward 3, Kalady, Ernakulam, Kerala- 683574	Unmanned aerial systems (drones)

S No	Name of Organisation	Address	Key products
17	C E Info Systems Limited	237, Okhla Industrial Estate, Phase -III, New Delhi 110020	Quadcopter Hexacopter Fixed wing Survey / Surveillance / Agriculture Drone
18	CDspace Robotics Private Limited	First Floor, 55/5, Jeelani Punjatan Estate, Thanisandra Main Rd, Bellahalli, Banlgore, Karnataka 560064	SNAP-M Aerial mapping drone, SPOT - Payload delivery drone
19	Centillion Networks Private Limited	Narayani Mansion, Image Hospital Rd, Jaihind Enclave, Madhapur, Telangana 500081	Drones, EOIR Cameras, AI Products, Tac Tower, Aerostat & lidar
20	Daybest Research Private Limited	College Mor, Forbesganj, Araria, Bihar-854318	Autonomous Helicopter UAV, Spraying Drone, evtol
21	Detect Technologies Pvt Ltd	Module No. 2A, Third Floor, IIT-M Research Park Phase - II, Kanagam Rd, Kanagam, Tharamani, Chennai, Tamil Nadu 600113	Drones, IOT devices, IOT cameras
22	Drona Aviation Pvt Ltd	Office 101, Sajjangad Apartment , Siddharth Nagar, Majiwada Thane 400601	Drones for education. Pluto drones Nano and micro drones
23	Dronix Technologies Pvt Ltd	No 7, KRJ Building, 3rd Floor, Welder Street, Mount Road, Chennai - 600002	Unmanned aerial vehicle
24	Dynamatic Technologies Ltd	Dynamatic Park, Peenya Industrial Area, Peenya Bangalore -560058	Unmanned Aerial Vehicles & Systems (all variants), Unmanned Ground Vehicles & Systems (all variants), Anti Drone Systems, Loiter Munition Systems, ROV & Systems (all variants)
25	Eagleeye Drones Pvt. Ltd.	No17, 6th Main, Paramahansa road, Yadavgi, Mysore	Drones, Drones systems, Drone airframes, Drone avionics, Robotics
26	Endureair Systems Private Limited	H.No. 11/3 , Sadanand Nagar, Kanpur, Uttar Pradesh, India, 208007	Structural components, carbon fiber sheets, tubes, wings, canopies, etc.,
27	Freebird Aerospace India Private Limited	505 B, Gundecha Symphony, Veera Desai Road, Andheri West Mumbai 400053	Drones, uavs
28	Garuda Aerospace Pvt Ltd	24, 46, KB Dasan Rd, Seetammal Colony, Seethammal Colony, Lubdhi Colony, Alwarpet, Chennai, Tamil Nadu 600018	Unmanned vehicles
29	General Aeronautics Pvt Ltd	F-86, First Floor, ITI Vinyas Building ITI Campus, Doorvaninagar, K.R Puram Bangalore, Karnataka, 560016	Agriculture Drones, Logistics Drone, Security and Surveillance Drones, Mapping Drones
30	HC Robotics Private Limited	1-90-2/10/E, Narayani Mansion, Vittal Rao Nagar, Madhapur, Telangana 500033	Drones, Cameras, Tac Tower, Aerostat, lidar & AI Products
31	Hubblefly Technologies Private Limited	C-13, Ground Floor, Panchsheel Enclave, New Delhi - 110017	Drones, airframes
32	Ideaforge Technology Private Limited	EL-146, TTC Industrial Area, Electronic Zone, Mahape, Navi Mumbai, Mumbai Suburban,	Ninja UAV, SWITCH UAV, Q-Series Drones (q4c, q2c, q4i, Q6), netrav4, netrav3, netrav2, RYNO

S No	Name of Organisation	Address	Key products
		Maharashtra, 400710	
33	Indrones Solutions Private Limited	Shop No H-103, Nerul Railway Station Complex, Above Dwarka Hotel, Sector 16a, Nerul West, Navi Mumbai 400706.	Multicopter uav, fixed wing, uav sigma 25s, uav sigma 25g, uav sigma 75, uav sigma 55, uav vector vtol, uav talon mapper
34	Iotechworld Avigation Pvt Ltd	1643, Sector 52, Gurugram-122001	Drones, remote piloted aircraft system
35	Jane Aerospace Private Limited	Ave Maria Complex, 100 ft Road, Jalahalli Cross Rd, Chokkasandra, Peenya, Bengaluru, Karnataka 560057	Training drone
36	Jatayu Unmanned Technologies Pvt. Ltd.	64A, Virwani industrial estate off western express highway, Goregaon East, Mumbai, Maharashtra-400063	Drone and Anti drones systems
37	Kadet Defence Systems Private Limited	89/2 Rampura, Bidarahali Hobli, Bengaluru 560049	Aerial Targets for Training, Tactical Grade uavs, Catapult Launchers, Towed Decoys
38	Kite Aero Private Limited	B - 23, NARAYAN NAGAR - 3, NEAR NARAYAN SCHOOL, SHAKTINATH, BHARUCH - 392001, GUJARAT, INDIA	Civilian and military nano, micro, small, medium and large category rotary wing, fixed wing and hybrid drones, agriculture drones, special purpose drones, anti drone systems, utm systems, vlos and bvlos systems, etc.
39	Kitemaps Aerial Mapping Services Pvt. Ltd.	2nd Floor, 242, Binnamangala Layout, Indiranagar, 6th Cross, CMH Road Bangalore, Karnataka, 560036	Cargo drones
40	M/S Matrix Geo Solutions Private Limited	A1/87, 1st floor, Sewak park, Dwarka Mor, New Delhi, 110059	Drones, lidar Systems, RGB Payloads, GNSS Modules, Drone Parts and Frames
41	M/S Skynetra Private Limited	A1/87, 3rd floor, Sewak Park, Dwarka mor, New Delhi, 110059	Drones, lidar System, GNSS Modules, Drone Parts and Other electronic Equipments.
42	Maari Agri	Survey No 72, Chilakur Village, Pellakur Mandal, SPSR Nellore Dist, Andhra Pradesh 524129	Agriculture Drones and other Drones
43	Magic Myna Private Limited	No 203, Aashritha Apartments, 3rd Cross, Neeladrinagar, Electronic City, Bengaluru, Karnataka, India, Pin 560100	UAS, Drones and Air Mobility devices
44	Marut Dronetech Private Limited	<u>Marut Dronetech Private Limited, T-Hub, IIIT-Hyderabad Campus, Gachibowli, Hyderabad, Telangana 500032</u> <u>prem@marutdrones.com</u> <u>+91 99858 55494</u>	Spraying Drones, Afforestation Drones, Planting Drones, Medical Delivery Drones, Seeding Drones, Surveillance Drones, Survey Drones, Training Drones, Firefighting Drones, Mapping Drones, Drone lidar system, VTOL and Fixed-wing
45	Mistral Solutions Private Limited	#60, "Adarsh Regent" 100 Feet Ring Road, Domlur Extension, Bangalore 560071	Drones - Multicopter, Fixed Wings, vtols (micro, Small, Medium, & Large), uavs, UGV.
46	Multiplex Drone Private Limited	NO 180, 1ST MAIN ROAD MAHALAKSHI LAYOUT BENGALURU BENGALURU URBAN KARNATAKA 560086	Drone Frames, CF Sheets and Frames, Nozzles
47	Neosky India Limited	5th Floor, Tower- B, World Mark-1, GMR Aerocity, New Delhi -110037	Drones (nano, micro, small)
48	Newspace Research and	2385, E Block, 60 Feet Road,	Unmanned aerial systems

S No	Name of Organisation	Address	Key products
	Technologies Pvt Ltd	Sahakarnagar,, Bengaluru, Karnataka, 560092 INDIA	
49	Omnipresent Robot Technologies Private Limited	11, IDBI bank Building Basement, DDA Community Center, Okhla Phase 1, New Delhi - 110020	Drones, Robots, IOT Products, Customized Hardware Solutions, Artificial Intelligence based software, GIS, Remote Sensing etc.
50	Pashaan Technologies Pvt LTD	62 vrindawan colony, katol road, Nagpur Maharashtra-440013	
51	Prime Uav	SF-1, Khodiyar Arcade, GIDC-1, Mehsana-384002, Gujarat	Agriculture Drone, Customized Drone Frame, Rescue Drone, Heavy Payload Aerial Platform, Drone Tracker, Charger and Assembly of Lithium Polymer and Lithium Ion Battery
52	Rchobbytech Solutions Private Limited	W 110 New Teaching Block, IIM Calcutta Innovation Park, Joka, Kolkata 700104	Agriculture Drones, Surveillance and Mapping Drones.
53	Rfly Innovations Private Limited	NO. 43, 648/17, T.V.K STREET, PADUR, CHENNAI - 603103	Rfly-micro drone, rfly-pro small drone, rfly-lazer lidar, rfly-falcon heavy lift drone, rfly-tether drone
54	Rfly Innovations Pvt Ltd	NO. 43, 648/17, T.V.K STREET PADUR CHENNAI 603103.	Rfly-micro drones, rfly- pro small drones, rfly-tether drones, rfly-lazer lidar drones, rfly-falcon heavy lift drones
55	RFLY Technology Prvate Limited	Flat 702, Building nov20A, MHADA, NTPC compound, Powai, Main 400076	Micro Drones, Small drones
56	Rospace Aerotech Pvt. Ltd.	3, 10 /5 ,9th Cross, Laxmi Layout , Gandhi Nagar Road , Munnekolola, Marathahalli, Bangalore -560037	Drones : Multirotor, Fixed wings, vtols, Rotor crafts(Micro, Small, Medium, Large), uavs, Prototype platforms, R&D testing designs
57	Rosys Virtual Solutions Pvt Ltd	38-21-14, Bapuji Nagar, Marripalem, Industrial Estate P.O, Visakhapatnam Andhra Pradesh	Drones and associated sub systems including a patented Drone navigation system
58	Roter Precision Instruments Private Limited	261, Old Tehsil, Behind Eidgah, Delhi-Dehradun Main Road, ROORKEE-247667	TRINITY F90+ consisting of Locking Mechanism Plate, Pin 2x12, Screw M1, M2, Spar Insert L & R, Wing Spar, Spar End Cap, Centering End Cap, Spar Insert R & L, Outer Wing Spar, Aileron Spar, Locking Mechanism, Spar Adapter R & L, Wing D-Box R & L, Elevator Spar, Elevator Connection, Press Nut Ede1st. Pin M2x16, Grommet, Rivet, Circlip, Press Nut Edelst., Main Tube & Spar End Cap, trailing edge reinforcement, Plain Bearing IGUS, Belt Tensioner, Pin, Payload Clamp, Clamping Disc R & L, Antenna tube 60mm, GPS Antenna, Cover Motor Wire R & L, Payload Cover front, Cover Battery, Locking Mechanism, Button Mask Battery, Button Mask Payload, Button Battery, Button Payload, Pitot Mount R & L, Pitot Adapter R & L, Pitot-Static tube outer tube & tube probe, Pitot-Static tube & Sinter Part, Hose 255mm & 270mm, Main Wing D-Box R & L, Autopilot Mount, RFID board, Battery management Board, GSM Tracker Board, Rugged Controlled, Camera Controller Module, Auto Pilot Firmware, Qbase

S No	Name of Organisation	Address	Key products
			Flight planning Software.
59	Sihag Innovations Private Limited	First floor, Tau devilal market, fatehabad	Drones and uavs
60	Sudarshan Aerospace Private Limited	B - 23, NARAYAN NAGAR - 3, NEAR NARAYAN SCHOOL, SHAKTINATH, BHARUCH - 392001, GUJARAT, INDIA.	Civilian and military nano, micro, small, medium and large category rotory wing, fixed wing and hybrid drones, agriculture drones, special purpose drones, anti-drone systems, utm systems, vlos and bvlos systems, etc.
61	Techeagle Innovations Private Limited	A S TOWER, 3RD Floor, Khasra No-34/21/3/2, Near N.K. Tower, sector 45, Gurugram, Haryana,122003	Hybrid Fixed wing VTOL UAV/Drone, Multirotor UAV/Drone, Fixed Wing UAV/Drone
62	Technit Space and Aero Works Private Limited	334/21, west of rasara kothi, garul par, deoria 274001	Maruthi 2.0, heavy duty logistics drone
63	Tecrient Space Private Limited	FN-5, AISHWARYA PARK, NEAR AARAMBH COLLEGE, BEHIND PENDHARKAR COLONY, NASHIK Road, NASHIK MAHARASHTRA - 422101	Pi-VTOL (Hybrid VTOL UAV for Mapping & Surveillance) Pi-Seed (Aerial Seedball Plantation UAV) Pi-Mapper (Fixed Wing Long Range Mapping UAV) Pi-agrispray (Agricultural Spraying UAV)
64	Thanos Technologies Private Limited	Flat No.101, Gayatri Nest, Municipal No.2-48/46/GN/101, Telecom Nagar, Gachibowli, Hyderabad - 500032, Telangana	Agricultural spraying drones drone pilot training drones surveillance/inspection drones
65	Theta Enerlytics Pvt. Ltd.	A-10/3, Front Ground Floor, Vasant Vihar, South West, New Delhi - 110057	Drones
66	Throttle Aerospace Systems Pvt Ltd	#659, MVS Arcade, 5th Main Rd, B Channasandra, OMBR Layout, Bengaluru, Karnataka 560043	Drones for Civil (Rotary, Hybrid)Drones for Military (Rotary & Hybrid)Drones for deliveryCargo drones / e-vtols
67	Trithi Robotics Pvt Ltd	869 11th A cross 23rd Main JP Nagar 2nd phase Bengaluru	Agriculture spray drones, multispectral sensor drones
68	Tunga Aerospace Industries Private Limited	1 ST FLOOR, BLOCK E, MODULE E1-05, IITM RESEARCH PARK, KANAGAM ROAD, TARAMANI, CHENNAI, TAMILNADU -600113	Unmanned aerial vechicle
69	Uav Systems Private Limited	B2-231/5 NEW BADAMTALA BIDHANGARH KOLKATA	Drone & anti drone, electric vehicle, batteries
70	Uavgarage Private Limited	2501, BLDG NO 3C, INDIABULLS GREEN, KON RASAINI ROAD, PANVEL, Raigad, Maharashtra, 410207	Battery packs
71	Vecros Technologies Private Limited	No 4, 2nd FLOOR, TBIU COMPLEX SYNERGY BUILDING, IIT CAMPUS, HAUZ KHAS, New Delhi, Delhi, 110016	Insight- An autonomous Drone Insight mini - caged drone for oil inspection
72	Vtol Aviation India Pvt. Ltd.	At Plot & Survey No 48, Panvel Bypass Toll Plaza, Ajivali, Taluka-Panvel, Dist-Raigad, Navi Mumbai 410216, Maharashtra, India.	Uav, drone, autopilot, pdb, esc, rf antenna, telemetry, camera payloads, gimbals, battery pack

S No	Name of Organisation	Address	Key products
73	Vymanik Aerospace Technologies Pvt Ltd	TBIKIET, Muradnagar Phase 1 Ghaziabad Uttar Pradesh 201206	Drones
74	Vyom Vista	House No. 380, C P Colony, Morar, Gwalior, Madhya Pradesh - 474006, India	Uav frames
75	Zen Technologies Limited	B 42, Industrial Estate Sanath Nagar, Hyderabad	Simulators, training equipment, drone systems and anti-drone systems
76	Zmotion Autonomous Systems Pvt Ltd	No 30, Veerasagara, Yelahanka Newtown, Bangalore - 64	Loitering ammunition system, quadcopter, heavy lift drones
77	Zuppa Geo Navigation Technologies Pvt Ltd	Plot no-60,2nd main road,VGP Layout Part-3,Palavakkam Chennai-600041.	Zuppa ajeet mini drone & vertical drone

Note:

The above list is **illustrative and not exhaustive**. It has been prepared in consultation with drone startups and industry bodies.