



# UAV Civil & Military INDIA 2016

Conference & Exhibition

Manekshaw Centre, New Delhi, India  
26-28 September 2016



Defence Infrastructure Planning &  
Management Council (India)



CENJOWS  
Centre for Joint Warfare Studies

In Collaboration With



PROGRESS HARMONY DEVELOPMENT  
Estd. - 1999

PHD Chamber of Commerce & Industry

Calling civil & military manufacturers to showcase their products



## Includes Flying Demonstration of Micro UAVs

### The First and Longest Running UAV Event in India

- Unmanned aerial vehicles • Rules & regulations
- Control/guidance systems • Electro-optics • Payloads
- Target vehicle • Training and simulation • UAV components & accessories • Ground support equipment

Exhibition Partner



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AeroVironment's RQ-11 Raven



Searcher Mk II

## Fifth Edition of UAV India 2016 Civil & Military

The seminar will focus on the development, military and civil employment and potential of UAVs in India, including unmanned combat air vehicles, micro and mini UAVs, payloads (sensors, survey & surveillance equipment, EW, weapons), ground stations (data links, launch and recovery systems), aerial targets and maritime unmanned systems.

### Military Uses of UAVs

The armed forces are convinced that UAV technology is very useful and successful in different types of operations. In addition, maritime operations, as well as surveillance and reconnaissance operations in India are boosting the demand for medium altitude long endurance UAVs and tactical UAVs

The infantry has decided to scale three mini UAVs to every infantry battalion. Within the next three years the Indian defence ministry will stage five additional tenders for the purchase of a combined 600 mini UAS systems to be operated by the air force, infantry and artillery units and the federal police. These deals will be worth a total of \$1.25 billion, with all production to be performed in India.

The Indian military depends heavily on UAVs for surveillance. The requirement has become more pronounced for the years ahead, and the IAF alone plans to buy about 300 additional UAVs, including combat rotary and micro-UAVs.

While the requirements are clear, the moot point is what the road map for their procurement. This seminar will address these issues.

### Civil Uses of UAVs

The rapid development of UAVs promises to change the way a host of services will be delivered in the security, transport, gas, oil, mining, agriculture, survey & mapping, disaster management and specially the infrastructure sector. With versatile payloads like high-resolution cameras, sophisticated sensors and array of functions, with increased endurance, the boundaries of employment of UAVs will only expand through innovation and ingenuity. For example, in the gas and oil sector, they can assist in leak detection, inspection, monitoring, collection of data and so on. Three-axis stabilized, high-resolution still and video cameras, over 10x optical zoom. Thermal FLIR, near-IR, CO2 sensors, methane sensors, hydrocarbon sensors and air quality samplers payloads now help in generating GIS-tagged images, terrain analysis, video analytics, remote sensing, topography, thermography and so on.

Technology has reached a point where UAVs provide clear economic benefits for a wide range of applications over traditional alternatives. In addition UAVs will replace resources involved in "dull, dirty and dangerous" work.

Of course, regulations and safety measures have to mature. It is hoped that these and the development of the complete eco-system will keep pace with the speed at which manufacturers UAVs are being commercially made available.





# Why You Should Attend



UAV India has developed as a well-attended and eagerly awaited annual conference & exhibition. Built on IMR Media's well-known quality of events, UAV India promises to bring excellent networking and business opportunities, as well as insight, to the unmanned vehicles community.

## Exhibition

UAV India 2016 will bring together Indian and international vendors, government delegates, civil and armed forces officers, developers, users, technical experts and students to interact and identify requirements, projects & programmes, technologies and products on offer in the market. It will also promote the proactive participation of the industry in the development of unmanned aerial vehicles.

UAV India 2016 is an ideal opportunity to meet key military/ civil/ government decision makers, end users of UAVs/ drones and the world's leading manufacturers.

## Opportunities

A wide range of branding, exhibition, partnership and sponsorship opportunities are on offer, allowing your organisation to get the most out of this key event in the unmanned aerial vehicles calendar.

## Who will be exhibiting?

- UAV manufacturers
- UAV component & accessories suppliers
- Payload manufacturers and suppliers
- Integrated systems suppliers
- Control/guidance systems suppliers
- Electro-optics/IR suppliers
- Ground support equipment
- Training and simulation providers
- Electronic warfare systems suppliers
- Target vehicle suppliers
- Weapons systems providers
- UAV associations

## Special Workshop with Decision-Makers

On Day 2 of the event, a special workshop can be organised with select delegates involved in decision making and procurement. Sponsors and exhibitors will be consulted.

## Who will you meet?

### Military - officers dealing with:

- UAVs in Army, Navy, Air Force, Paramilitary
- Border management
- Surveillance; BSF, ITBP, CRPF, NSG
- Maritime & Coastal security; Coast Guard
- Critical National Infrastructure
- Special Operations
- Combat engineering, mining, bridging.
- Procurement of UAVs
- Target Acquisition
- Training and simulation companies
- UAV operators
- Operational commanders
- Research & Development; DRDO

### Civil - officers dealing with:

- Government officials from DGCA, Civil Aviation Ministry
- Officials from the Science & Technology Ministry
- Officers from National Disaster Management Authority
- Police, Law enforcement, traffic management and security
- Conservation, Environmental, pollution control organisations
- Critical National Infrastructure
- Procurement officers
- Firefighting services
- Agriculture and forestry
- Oil and gas
- Emergency Services
- Media and Broadcasting
- Mining
- Surveying and mapping
- Photographers
- Engineering students
- UAV enthusiasts

Manekshaw Centre, Delhi Cantt





## DAY 2 Programme – Tuesday 27 September 2016 Civil Uses of Unmanned Aerial Vehicles

0830 – 0930 hrs Registration and Tea.

### Inaugural Session (0930 – 0950 hrs)

0930 – 0940 hrs Welcome Address: **Arvind K Arora**, Director General, DIPM Council (India)

0940 – 0955 hrs Inaugural Address: **Sh Ashok Gajapathi Raju Pusapati**, Minister for Civil Aviation, Govt of India.

0955 – 1010 hrs Keynote Address: **Smt M Sathyavathy**, Director General Civil Aviation, Ministry of Civil Aviation.

1010 – 1025 hrs Industry Perspective (Event Sponsor).

### Session 1 - Industry Presentations (1025 - 1145 hrs)

1025 – 1035 hrs Chairman's Opening Remarks. **Lt Gen Dr VK Saxena, PVSM, AVSM, VSM, Retd, Adviser BEL.**

1035 – 1055 hrs Industry Presentation.

1055 – 1115 hrs Industry Presentation.

1115 – 1135 hrs Industry Presentation.

1135 – 1155 hrs Industry Presentation

1155 – 1205 hrs Questions & Answers

1205 – 1230 hrs Refreshments & Exhibition

### Session 2 - Potential Civil Uses of UAVs and Risks (1230 - 1335 hrs)

1230 – 1240 hrs Chairman's Opening Remarks

1240 – 1255 hrs "UAVs in Maintenance of Law & Order", Speaker from Delhi Police.

1255 – 1315 hrs **Sanjay Nayyar**, Secretary North East Centre for Technology Application & Reach (NECTAR), Dept of Science & Technology.

1315 – 1330 hrs Inspector General (Training) Border Security Force HQ. "BSF's Experience in the Use of UAVs"

1330 – 1340 hrs Questions & Answers

1340 – 1430 hrs Lunch & Exhibition

### Session 3 - Regulations and Infrastructure Issues (1430-1600 hrs)

1430 – 1440 hrs Chairman's Opening Remarks

1440 – 1455 hrs **Dr Sudipto Mukherjee**, Professor, IIT-D.

1455 – 1510 hrs Speaker from Indian Railways.

1510 – 1525 hrs Speaker from GAIL/ONGC.

1525 – 1540 hrs Speaker from Ministry of Commerce.

1540 – 1550 hrs Questions & Answers.

### Valedictory Session (1550 - 1600 hrs)

1550 – 1610 hrs Valedictory Address: **Dr VK Saraswat**, Member NITI Ayog & Chief Patron DIPM Council (India).

1610 – 1620 hrs Closing Remarks: **Lt Gen Vinod Bhatia**, PVSM, AVSM, SM, Director CENJOWS.

1620 – 1625 hrs Vote of Thanks: **Pradeep Agarwal**, President & CEO (Hony), DIPM Council (India).

1625 hrs Refreshments and Close.

## DAY 3 - Wednesday 28 September 2016

### Exhibition and Demonstrations

0930 – 1630 hrs Demonstration every 30 mins.



# WHAT'S NEW IN 2016



## DEMO ZONE

A safe, netted large area on the exhibition floor where exhibitors who book 30-minute sessions demonstrate their UAVs.

This year, the zone will include an obstacle course, allowing our show partners to demonstrate the agility of their platforms, as they navigate themselves through, around and over a variety of zone features.

Display screens are also being added, streaming real-time footage directly from the UAV's sensors. Audiences will see first-hand, the accuracy and efficiency of UAV collated data output.

To book a slot in the Demo Zone email [chetan@idyb.com](mailto:chetan@idyb.com)

## USER & UNIVERSITY ZONE

We encourage UAV users and researchers to take a small space in our user & university zone. This ever-popular part of the floor is a great space to share ideas and meet innovators and to find out how new technologies are being combined in imaginative ways.

## POSTERS DISPLAY

A first for 2016, the poster zone is open to researchers, academics, and individuals who have a particular project or research area that they'd like to share with the industry. To book a slot in the poster zone, please email [chetan@idyb.com](mailto:chetan@idyb.com).

## START UP ZONE

We have a range of small booths available for start-up businesses at the subsidised rate of Rs 57,500 (includes Service Tax). Only companies registered on or after 1 Jan 2012. To book a slot in the start up zone email [chetan@idyb.com](mailto:chetan@idyb.com).

## UAV India 2016 Advisory Committee

### Chairman

Dr V K Saraswat, Member NITI Aayog and Chief Patron DIPM Council (India).

### Members

Lt Gen Vinod Bhatia, PVSM, AVSM, SM, Retd, Director Centre for Joint Warfare Studies.

Lt Gen Sanjeev Madhok, PVSM, AVSM, VSM, Retd, former GOC-in-C Army Training Command.

Lt Gen VK Saxena, PVSM, AVSM, VSM, Retd, former DG, Air Defence & Chairman (Innovation) DIPM Council (India).

Air Marshal PK Roy, PVSM, AVSM, VM, VSM, Retd, former AOC-in-C Andaman and Nicobar Command.

Arvind K Arora, IDSE (Retd), Former DG (Pers), Military Engineer Services & Director General DIPM Council (India)

J Bhattacharjee, Prof Amity University and Chairman (Technical), DIPM Council (India).

A K Singh, IDSE, Director General (Personnel), Military Engineering Service.

A Arul Dhas, President, IDSE Association.

Dr Sudipto Mukherjee, Professor IIT-Delhi.

## UAV India 2016 Organising Committee

Maj Gen Ravi Arora, CEO IMR Media

Pradeep Agrawal, IDSE, President & CEO (Hony), DIPM Council (India).

Girraj Goyal, IDSE, Secretary General (Hony), DIPM Council (India).

Dr Pankaj Chandna, President Pan-NIT Alumni Forum & Professor, NIT Kurukshetra.

Anup Srivastava, DIPM Council (India).

For further details on Sponsorship, Exhibiting and participation as delegates, please contact:

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