UAV & Geospatial Technology:

CHANGING THE BUSINESS PARADIGM

6th August, 2020

VIRTUAL SUMMIT REPORT

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Ministry of Civil Aviation
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Bringing UAVs to a new level, on 6th August, the geospatial and UAV community came together virtually for four hours of knowledge sharing and discussions on enabling policy and regulatory environment, new business opportunities, critical collaborations and partnerships for a robust drone ecosystem in India. The Summit saw the participation of over 1800 attendees.

HILLOL BISWAS | Director (Aircraft Engineering), Directorate General of Civil Aviation

Shared his perspective on Future of Drones, current scenario and future challenges and opportunities

- With the current collaboration between Industry and the Government supported by NITI Aayog and other agencies, India is going to become one of the leader of Drone Technology in the world.
- The current COVID-19 crisis and the locust scenario has surely highlighted the importance of Drones.
- With regard to security concerns with UAVs No Permission No Take-off (NPNT) and Digital sky platform together will ensure that drones don't fly in the augmented areas and this will help create a robust security system for the drone industry.
- While Digital sky platform is not fully functional and operational, DGCA has moved into clearance processes for locust control, mapping by Survey of India on case to case basis.
- Pilot training program will soon start in India and DGCA has published and draft Civil Aviation Requirements on remote pilot training organizations.

AMBER DUBEY | Joint Secretary, Ministry of Civil Aviation

Shared his views on enabling regulatory environment driving new opportunities, collaborations and partnerships

- Drones are eyes, ears and limbs in the sky. It is a very powerful technology.
- In mapping industry clearance is one of the key component but it is a difficult process.
- Ministry of Home, Security agencies, DGCA and Ministry of Civil Aviation are working on ease of clearance process.
- BVLOS are waiting for security clearance and BVLOS committee has identified 20 players for trial. The Ministry has identified the regions and the places where the trials will be conducted.
- For BVLOS, Ministry of Home will give security clearance first to the identified 20 players so that the trials can be conducted soon. By the time the consortium should be ready with their test equipment and plans.
- The players need to do 100 hours of flying. After finishing every 20 hours of flying, there will be a choupal for feedback.
- Unmanned traffic management provides information to the drone operators and organizations coordinating the information. It allows to mark the area which you want to fly. If you go beyond geo-fenced area, it can put penalty for violating the rules.

PANEL 1: UAVs for Defence

MODERATOR:

LT. GEN AKS CHANDELE PVSM, AVSM (RETD)
Former DG, EME, Indian Army, President, Defence, Security and Public Safety, Geospatial Media

PANELISTS:

Nalin Prabhat
IG(Operations), Central Reserve Police Force

Lt. Gen Sanjay Verma
DG Weapons and Equipment, Indian Army

Arun Ramchandani
Executive Vice President, L&T Defense

Sajid Mukhtar
Managing Director, Roter Group

If anybody from industry has UAVs that has operational capability at 4500 meters. with endurances of about 30 minutes with camera capabilities and load carrying capability of 20 kg. We are giving an opportunity to please demonstrate at the location where we are actually going to use it. Please contact the Army Design Bureau or me. - **Lt. Gen Sanjay Verma, DG Weapons & Equipment, Indian Army**

PANEL 2: UAVs for Emergency Response

MODERATOR:

LT. GEN AKS CHANDELE PVSM, AVSM (RETD)
Former DG, EME, Indian Army, President, Defence, Security and Public Safety, Geospatial Media

PANELISTS:

Mohsen Shahedi
DIG, National Disaster Response Force

Col. Vivek Uberoy (Retd) CEO
Alpha-ELSEC, Defence and Aerospace Systems

UAVs are changing the way in which our world operates, from surveillance to providing medical care in remote areas, they are taking many industries by storm. The private sector in Defence has a highly skilled manpower available and is ready to employ its skilled manpower along with cutting edge technology in developing a robust UAV ecosystem in the country. The panel focused on the various uses for drones for surveillance and security operations and the opportunities available for UAV stakeholders in the Defence and Internal security sector. From Make in India to new uses for drones, the panel deliberated on the way the larger ecosystem can come together through an enabling regulatory environment and new partnerships and collaborations to provide greater surveillance and security services.

CHALLENGES:

- → Most UAVs are GSM based. The GPS connectivity is hampered during the cloudy weather conditions
- → Limited operational time i.e. a crucial issue that affects the continuity of observation
- → The weak payload hampers rescue and relief
- → Inability to change the landing point after take-off
- → Adverse effect of jammers as it affects the operation ability of UAVs
- → UAVs are very expensive

THE DISCUSSION CAME UP WITH THE REQUIREMENTS THEY ARE LOOKING FOR.

- → Affordable technology
- → Reliable technology
- → Interchangeable payloads
- → Foliage penetrating radars
- → Ground penetrating radars which can help in ID Detection
- → Stability
- → RVT is must with the possibility single and multi UAV inputs

PANEL 3: Developing New Business Models for Collaboration and Business Opportunities

KEYNOTE SPEAKER:

PROF. M.K SURAPPA
Vice Chancellor, Anna University

MODERATOR:

PANKAJ MISHRA
Deputy Surveyor General, Survey of India

PANELISTS:

Prof. Senthil Kumar
Director CASR, Department of Aerospace Engineering

Tejas Kulkarni, Head Strategy, MAKAIR

Prasanna Shivaramaiah, GM & Head – New Business Accelerator, Cyient

Kamal Sharma, CEO, Kambill Systems

The UAV industry and the market in India are at a very promising stage and there is an immense potential for growth. The UAV market in India is projected to grow at a CAGR of 18% during the period from 2017 to 2023. The biggest issue that must be addressed within the industry is that of building a national policy that promotes the ease of doing business for the UAV ecosystem stakeholders. Currently, the mechanism of a single window has not been implemented and users are required to approach multiple government agencies to get approvals and get clearances. The panel focussed on the new business models, collaborations and partnerships that can potentially be developed between the UAV industry, the Government and other key industries and how these can result in a lucrative value chain for the larger ecosystem.

- The application areas which drone technology has offered in past 2 years are tremendous. It has the potential for high cadastral mapping, urban planning applications and monitoring activities.
- We need to educate our customers that what is possible now, what is achievable and what cannot be done. Business models need to be multi-fold.
- Due to the restrictions in regulatory environment, majority of the projects of UAVs can be brought into Government sector as private sectors is still not very clear about the policies, restrictions, how they can use this technology, challenges. Most of the government departments. Are keen to buy drones rather than giving opportunities to service providers.
- Government can give opportunities to the service providers by providing retainers contract for long term which will result in visibility to the service providers.

EXCLUSIVE TALK ON 'SWAMITVA YOJANA'

LT. GEN GIRISH KUMAR VSM (RETD), Surveyor General of India

- Swamitva is a Hindi word meaning ownership. The project is implemented in 6 states – Maharashtra, Karnataka, Uttar Pradesh, Uttarakhand, Madhya Pradesh and Haryana. It helps to map rural inhabited lands using drones as it gives high, absolute and relative accuracy. It will ensure streamlined planning, revenue collection and provide clarity over property rights in rural areas. This will open up opportunities for applying for loans from financial institutions by the owners
- Survey of India has also come up with different models to encourage start-ups

PRESENTATION: Drones for Infrastructure

MODERATOR:
ANANYA NARAIN

Business Unit Head – AEC, Geospatial Media

PANELISTS:

B P Awasthi, Chief Project Director, Indian Railways

Akhilesh Srivastav, Chief General Manager IT, NHAI

Anuj Mascarenhas, Managing Partner, Quad Perspective

Prashil Agarwal, Director, MAKAIR

Infrastructure is one of the co-sectors of the economy and the role of drones is of paramount importance. UAVs are equipped with various kinds of advanced surveying systems making them cost effective for data acquisition, data delivery and sharing. Drones play a crucial role when it comes to mapping of assets.

- → NHAI is one of the organization which is using drones the most to monitor construction of highways across the country. It is in mandate in DPR to use drone technologies from the planning stage.
- → UAVs play an important role from inspection stage and during the lifecycle of assets
- → Drones enable infrastructure managers both to inspect more frequently and to obtain better data, they provide more timely understanding of what needs attention