

**Manekshaw Centre, IIT JODHPUR**  
**In Association With**  
**Konark Corps, Indian Army**

**PROUDLY PRESENTS**

**FLYING WINGS**

**NATIONAL LEVEL HACKATHON 2026**

**Startup & Industry Category**

**Registration Start Date**  
**1 March 2026**

**10 May 2026**

**Registration End Date**  
~~**15 March 2026**~~



**FOR WEBSITE**





## MISSION BRIEF

- Flying Wings is a national defence innovation hackathon focused on aerial systems and passive RF/EW intelligence.
- It aims to validate operational concepts, stress-test field proto-types, and fast-track industry-to-defence pathways.

## THE GOLDEN TICKET

- To validate your product to defence-grade benchmarks.
- For demo pilots to interact with army-aligned evaluators and researchers.
- For fast-track TRL and access collaborations.
- For visibility and potential procurement / pilot projects.

## JOINING REQUIREMENTS

- Defence & dual-use startups, MSMEs.
- Industry R&D and product teams.
- Professionals in UAVs, Autonomy, RF/EW, Sensing, AI, navigation.

## REWARDS

- Trophies & certificates for winners in each vertical.
- Direct engagement opportunities with the Centre & Army contacts.
- Possibility of pilots and further tech maturation support.



# CHALLENGE ZONES



**BUILD • NAVIGATE • DETECT**

Three operations testing low-cost airframes, GPS-denied autonomy, and passive RF/EW intelligence. Deliver testable, offline, unclassified prototypes.

## OPS 1 - CARDBOARD DRONE

Forge a battle-ready cardboard UAV to carry a 2 kg payload in nose cone.

Range  $\geq 10$  km

Speed : 50-60 km/h

Payload : 2 kg at nose

Airframe  $\geq 70\%$  cardboard

Durability : Survive 2 m drop

Empty Weight < 5 kg

Wing Span < 2.5 m

## OPS 2 - GPS-DENIED NAVIGATION

Develop a flight capable of navigating autonomously without onboard GPS reception.

Flight Time  $\geq 15$  min

Range  $\geq 1000$  m

Initial coordinates to be provided at start  
Navigate 5 assigned destinations  
Autonomous Return-to-Home

Allowed Sensors

Vision • LiDAR • IMU • Odometry • UWB

## OPS 3 - DRONE IN EW ENVIRONMENT

Choose One Track

Track 1

Track 2

Track 3

Spectrum Intelligence

Direction Finding

Anti-UAS Early Warning

RF detection, classification  
& signature library

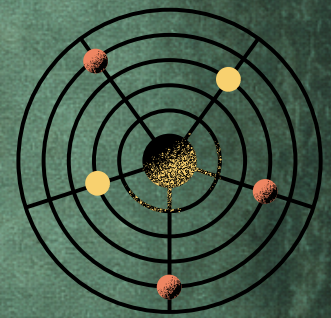
Passive AOA/TDOA  
bearing estimation

Detect UAS RF activity  
& raise alerts  $\leq 2$  sec

$P_d \geq 0.90$  |  $F_1 \geq 0.80$

RMS bearing error  
 $\leq 5^\circ$  for  $SNR \geq 10$  dB  
RMS bearing error  $\leq$   
 $10^\circ$  for  $SNR 0-10$  dB

( $F_1 \geq 0.85$ )



Deliverables

- Docker prototype
- JSON/SQLite logs
- Minimal UI/CLI
- Technical brief
- Short explanation

Startup & Industry Category

## THE COMPETITION MARCH!

- **Round 1:** This will be a virtual round, demo, proof of concept runnable artifacts – 7+7+1 minutes (10 slides presentation + Q&A + changeover).
- **Round 2:** Live demos, bench tests, awards, site acceptance.

## TIMELINES

- **Round 1 (virtual)** – 16 May 2026
- **Round 2 (IIT Jodhpur campus)** – 17 – 18 July 2026



## FEES & REGISTRATION

Participant type	Round 1	Round 2
Startup / Industry	₹7,000/ team	₹20,000/ team

## SPONSORSHIP

- **Platinum | Gold | Silver** – speaking slots, demo stalls, logo placement.
- **Startup exhibition:** curated stalls.

## CONTACT US

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TO REGISTER