

iCreate  
  
**DRONE  
CHALLENGE**

**TRACK 1: AERIAL EXCELLENCE**

- Speed • Endurance • Payload

**TRACK 2: COMPONENT INDIGENISATION**

- Propulsion & Power Systems
- Energy Systems
- Avionics & Autonomy
- Sensors & Payloads
- Materials & Structures
- Thrust Vectoring

Take flight to the  
extreme and build a  
record-breaking drone.

Ecosystem Partner



**AIC  
RRU INCUBATION  
FOUNDATION**

Promoting and sustaining national security and police  
entrepreneurship, innovation and indigenisation mission of India

**Faster, Stronger, Longer flying and Indigenised for the future.**



iCreate Drone Challenge is an initiative designed to unleash the innovative potential of India's brightest minds in drone innovations. Our vision is to identify, nurture, and accelerate groundbreaking drone technologies that push the boundaries of performance, efficiency, and affordability — and promote component indigenisation.

We invite innovators, engineering students, startups, and R&D teams from across India to step up and redefine what is possible. This is more than a competition; it is a launchpad for the next generation of drone pioneers.



### Why this challenge matters?

The iCreate Drone Challenge 2025 is a national platform to accelerate India's drone innovation. By pushing the limits of speed, payload capacity, and endurance, it nurtures talent, drives research, and strengthens India's vision of becoming a global drone hub by 2030.

“ *Based on our startup power, India is marching ahead with great speed to become the drone technology hub of the world.* ”

- Prime Minister Narendra Modi



# The Challenge Themes

## TRACK 1: Aerial Excellence

This track seeks to redefine global benchmarks in drone performance across speed, payload, and endurance, pushing the frontiers of aerodynamics, propulsion, energy systems, and structural design to deliver world-leading capabilities.

SPEED



### Theme 1: Speed Challenge

- **Objective:** To design, build, and demonstrate the fastest drone possible.
- **Current Benchmark:** Official Guinness World Record – 263.1 km/h.
- **Focus Areas:** Aerodynamics, propulsion efficiency, material science, and controller stability at high velocity.

PAYLOAD



### Theme 2: Payload Challenge

- **Objective:** To create a drone capable of achieving the highest possible payload-to-weight ratio.
- **Current Benchmark:** The world record for the heaviest payload lifted by a remotely controlled drone stands at 101 kg.
- **Focus Areas:** Powertrain efficiency, structural strength, load distribution and lightweight composites.

ENDURANCE



### Theme 3: Endurance Challenge

- **Objective:** To create a drone capable of achieving the longest possible flight time on a single charge or refuel.
- **Current Benchmark:** The world record for multi-rotor endurance is ~4 hours 40 minutes.
- **Focus Areas:** Energy density (batteries/fuel cells), powertrain efficiency, lightweight structures, energy management systems.



# TRACK 2: Component Indigenisation

This track focuses on developing critical drone components that reduce import dependence and establish global standards, strengthening India's position as a leader in drone technology.

PROPULSION &  
POWER SYSTEMS



## Theme 1: Propulsion & Power Systems Challenge

- **Problem:** Limited availability of efficient, lightweight, high-torque motors, ESCs, and propellers.
- **Focus Areas:** Indigenous motors, ESCs, propeller systems.
- **Example:** High-performance motor with optimised torque-to-weight ratio and custom ESC firmware.

ENERGY  
SYSTEMS



## Theme 2: Energy Systems Challenge

- **Problem:** Short flight endurance and safety risks in conventional battery packs.
- **Focus Areas:** Next-gen batteries (solid-state, LTO), hydrogen fuel cells, smart BMS.
- **Example:** Solid-state battery, Smart Battery Management System; hydrogen fuel cell with lightweight storage and efficient power management.

AVIONICS &  
AUTONOMY



## Theme 3: Avionics & Autonomy Challenge

- **Problem:** Dependence on non-customisable controllers and lack of secure, AI-driven autonomy.
- **Focus Areas:** Indigenous flight controllers, communication systems, navigation, AI/ML autonomy.
- **Example:** Flight controller with AI-based obstacle avoidance and secure navigation module.

SENSORS &  
PAYLOADS



## Theme 4: Sensors & Payloads Challenge

- **Problem:** High cost and limited access to modular, mission-specific sensors.
- **Focus Areas:** Affordable, modular payloads – imaging, LiDAR, thermal and multispectral.
- **Example:** Affordable multispectral sensor with plug-and-play payload interface.



## Theme 5: Materials & Structures Challenge

- **Problem:** Heavy, costly, non-modular airframes limit scalability and resilience.
- **Focus Areas:** Crash-resistant, lightweight composites, modular frames.
- **Example:** Modular composite frame with high strength-to-weight ratio.



## Theme 6: Thrust Vectoring Challenge

- **Problem:** Limited agility and stability in extreme conditions due to reliance on propeller speed alone.
- **Focus Areas:** Thrust-vectoring systems for advanced maneuverability and stability.
- **Example:** Tilt-rotor multirotor enabling inverted flight, wall-contact manoeuvres, and precise orientation control.



# Challenge Structure & Timeline

iCreate Drone Challenge will be a pan-India event conducted in multiple phases:

- 1** Registration opens:  
**1 October 2025**  
Team applications to be submitted via iCreate's online portal.
- 2** Application close date:  
**15 November 2025**
- 3** Zonal qualifier rounds:  
**15-30 November 2025**  
Physical demonstrations in 4 zones across India.
- 4** Prototype acceleration programme at iCreate:  
**1-30 December 2025**  
Shortlisted teams from all zones will be invited to a fully sponsored residential programme at iCreate.
- 5** Demo day:  
**9 January 2026**  
Refined prototypes will be showcased to investors, industry leaders, and government bodies.

## Eligibility Criteria

Startups, innovators, student teams, and R&D groups registered in India, who can demonstrate their prototypes at the zonal qualifier rounds.

## How to Apply

Register on the official portal: [www.idc.icreate.org.in](http://www.idc.icreate.org.in)

OR SCAN QR CODE TO APPLY



Completed application form should include:

*Mandatory:* Team profile, technical details, pitch deck.

*Optional, but strongly recommended:* Preliminary prototype or concept video.





## Benefits & Support

Participants will get all-round support and opportunities through iCreate's ecosystem:

- Opportunity to pitch for a funding pool of ₹2 crore from iCreate.
- Free access to a fully residential prototype acceleration programme at iCreate, worth ~₹6 L per team, with access to:
  - State-of-the-art lab access and technical mentorship
  - Access to software credits for design and simulation
  - Rapid prototyping facilities
  - Expert guidance in prototyping, business modelling, and IP strategy
  - Mentorship and industry connections
  - Access to national and international experts
  - Component sourcing support
  - Opportunity for paid pilots with industry and government bodies
  - And for the best innovations, the opportunity for incubation with iCreate, India's leading deeptech startup incubator
- Connections to a vast network of angel investors, VCs, and corporate partners.
- National recognition, awards, and certificates of excellence.



## About iCreate

iCreate (International Centre for Entrepreneurship and Technology) is India's leading incubator providing deeptech startups the fastest runway to commercialisation. With a focus on hardware-based innovations in Mobility, ClimateTech, and HealthTech, it follows a high-touch, entrepreneur-first approach in nurturing startups. Since inception, it has supported over 878 innovations and 60 patents through incubation, acceleration programmes, mentorship, market connects, and funding. iCreate's state-of-the-art 40-acre campus was inaugurated by Prime Minister Narendra Modi in 2018.

iCreate has served as the knowledge partner to the Vibrant Gujarat Global Summit, and as the Secretariat for Startup20 under India's G20 Presidency. It currently serves as the India Taskforce Lead for Inclusion & Sustainability under Startup20 South Africa. It has partnerships with leading global institutions, and a strategic partnership with CSIR, India's apex organisation for science and technology. iCreate has been recognised as the Impact Incubator of the Year at the Micelio Mobility Awards 2024, and is the recipient of the National Award for Technology Business Incubator 2020.



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