



BOTLAB DYNAMICS



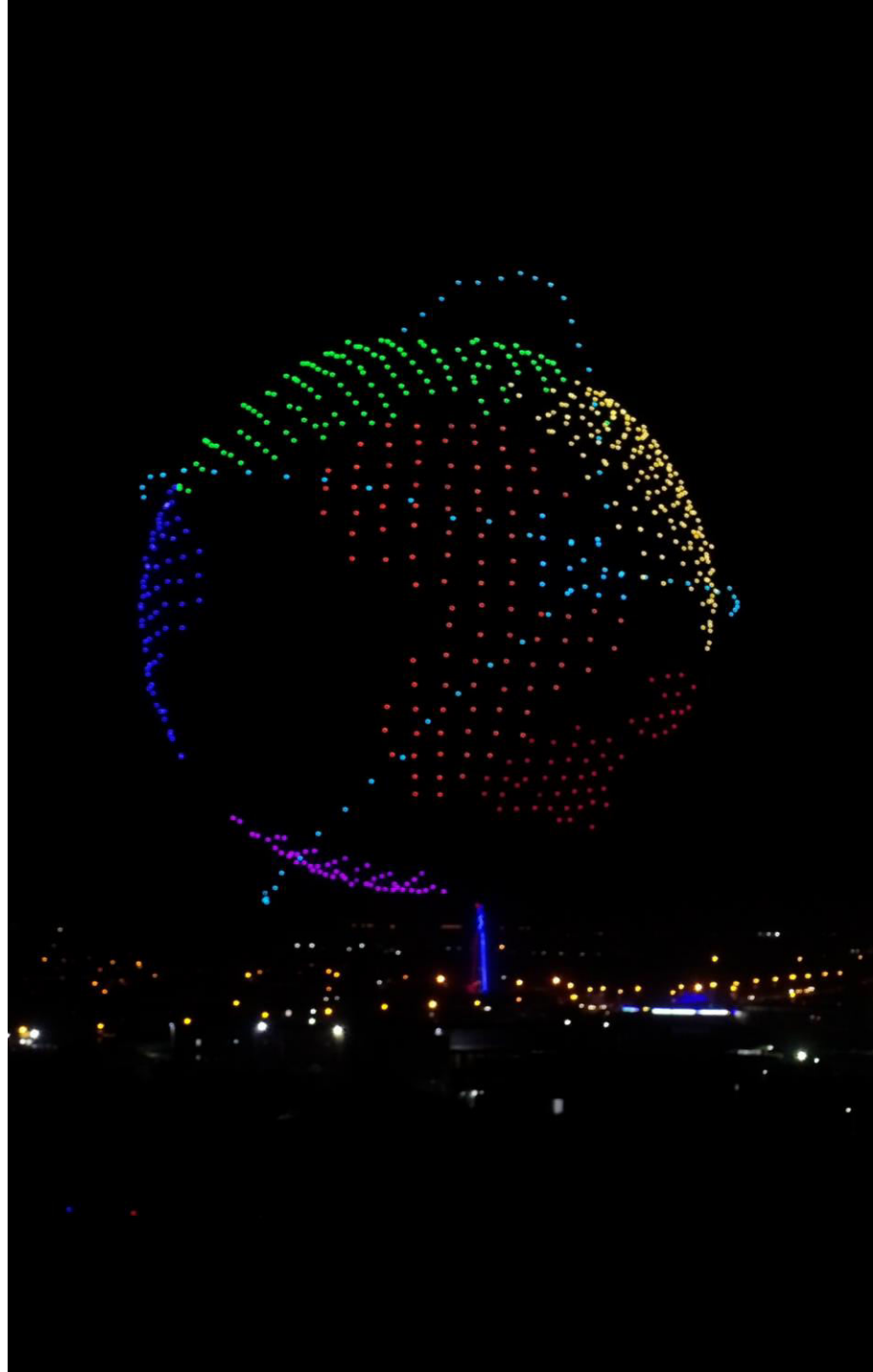
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ABOUT BOTLAB DYNAMICS

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TECHNICAL PREPARATION

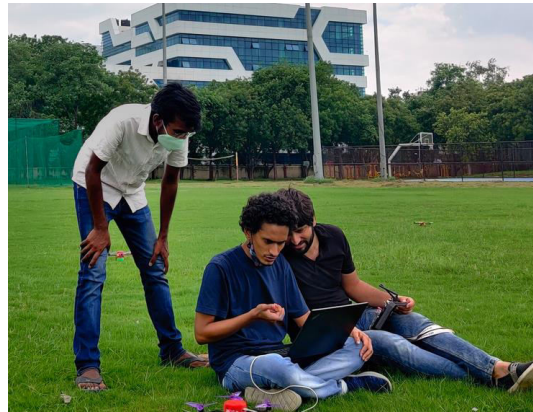


About BotLab

BotLab Dynamics is steadfastly advancing in the realm of drone technology and pioneering the automation of intelligent unmanned aerial vehicles in India.

BotLab Dynamics is a drone start-up from IIT Delhi which is in the limelight for pioneering in the drone show vertical. We are the leaders of drone swarm technology and a DGCA and DIPP approved drone start-up. We have built our hardware and software components in-house which gives us the flexibility to adapt easily to the market needs.

After extensive research and development, we are capable of precisely positioning the drones that can be choreographed to display complex characters in the sky.



Why BotLab?

BotLab has designed and built the entire technology (hardware and software) inhouse from scratch

BotLab had its first major break by hosting **India's largest drone light show** with 1,000 drones at Rashtrapati Bhawan for India's beating the retreat ceremony in January 2022.

The show made India the fourth nation in the World to do so.

On 22nd June 2022, BotLab marked another milestone by hosting **Africa's largest drone light show** in Djibouti.

IIT-Delhi
Startup

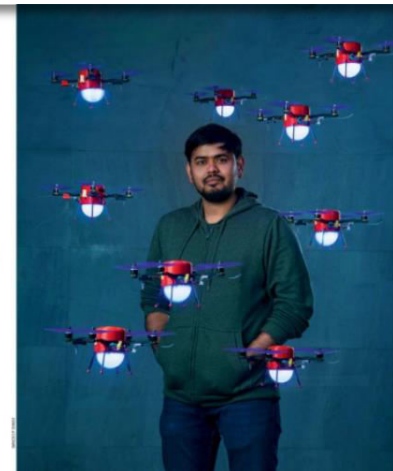
Made in
INDIA
DGCA
approved
drones

Team of 47
Engineers
and
Designers



Recognition and Rewards

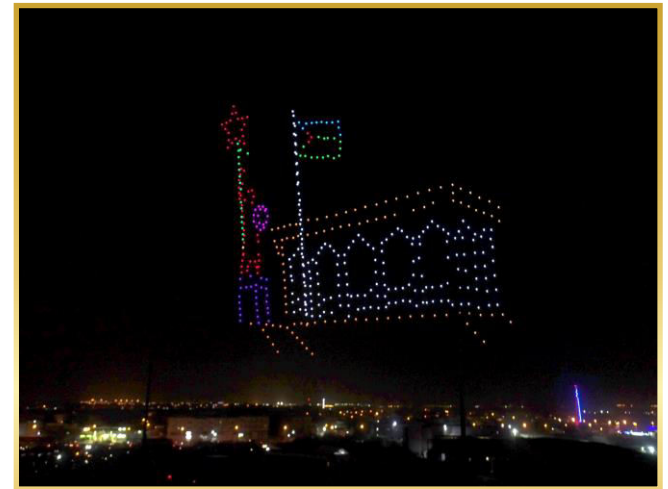
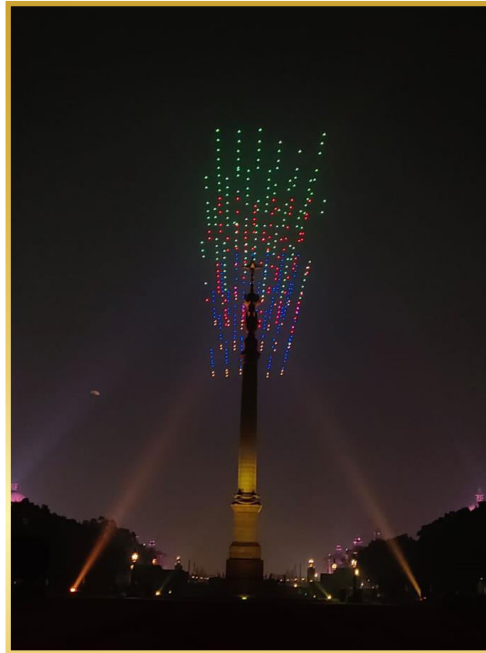
1. Top 10 researcher in 2016 for Academia Industry training organized by DST, Swissnex
2. Awarded Nidhi Grant of INR 50 Lacs
3. Awarded Prime Minister's Award in 2019
4. Awarded IDEX Grant of INR 1.5 Crores for R&D on underwater drones
5. Top 100 innovators in India by India Today
6. Funding by Technology Development Board (TDB) for hosting Drone Light-Show at Rashtrapati Bhawan
7. Appreciation letter from Defence Secretary for making India the fourth nation to host a 1,000-Drone Light-Show
8. Women in Civil Aviation awarded by Civil Aviation Minister in March 2022
9. National Tech Excellence Award for Women 2022 by Technology Development Board in May 2022



DRONE LIGHT-SHOWS

Drone Light-Show is the new, buzzing, and trending experience in the entertainment sector!

Swarm of drones are choreographed according to a scripted story board based on the theme of the event



We intend to **replace firework shows** (which cause pollution and have a large carbon footprint) with environment friendly, well-choreographed and more **entertaining Drone Light-Shows**



Record breaking Drone Light Shows...

INDIA'S LARGEST DRONE LIGHT SHOW



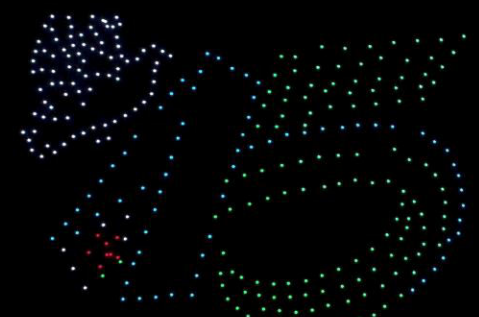
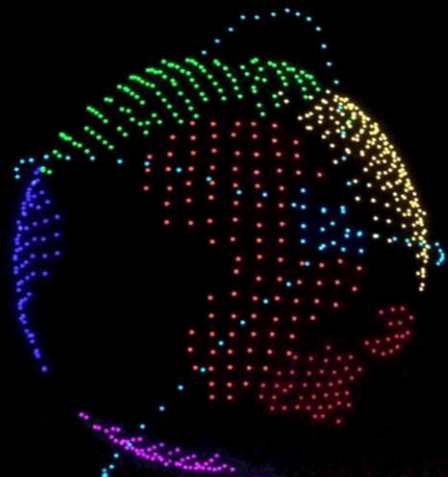
India became the 4th Nation in the World to host a 1,000 drones light show with its indigenously built drones





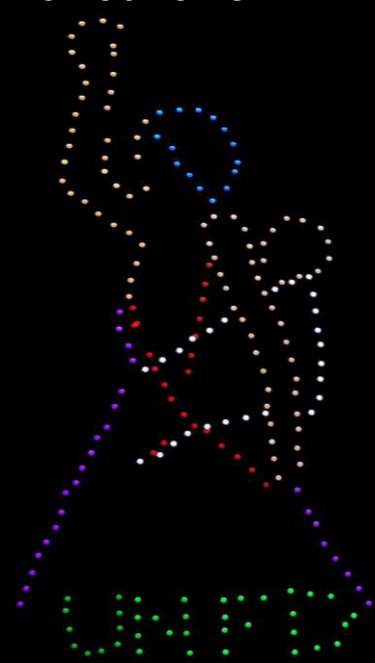
Hosted India's biggest game reveal with
INDIA'S FIRST QR CODE IN THE SKY
Mahalaxmi Racecourse, Mumbai 17th May 2022





ANNIVERSAIRE

AFRICA'S LARGEST DRONE LIGHT SHOW
on 26th June 2022



I Love
Djibouti

Why to host a drone light show?



Brands hosting Drone Light Shows are being perceived as **Industry Leaders**

It represents the Brand's alignment with the **FUTURE**

The drones choreographed to display characters based on the Brands' theme will be visible to the city and aired live on social media channels to create a viral buzz among the audience

The audience will be visually captivated by the formations which may include the following:

1. Globe
2. Map of India
3. Brand Logo
4. Brand USPs
5. Message/s for the audience



OFFERINGS

SPECIFICATIONS

- Flight Time: **8-10 minutes**
- **1,000+** max. no. of drones
- **6-8 formations**
- Up to **3-5km visibility range**
- Up to **600 ft. altitude**
- Up to **500 m. size of formation**

1. Script Writing
2. Storyboard
3. Animations
4. Voice-Over
5. Music Choreography
6. Pre-Production
7. Post-Production
8. Technical Preparation on-site
9. Testing on site
10. Full dress rehearsals
11. Final Show

We require 4-6 weeks to prepare and host a spectacular drone light show

Drone light shows can be harmonized with **music, voice-over, laser, or backlight illumination** to add the excitement and impact of the show



Preparation

To host a spectacular
Drone Light Show

LOCATION SURVEY

The location survey takes from five to seven days in common scenarios.

This may take more time in cases where the location is unique or challenging.

for example, if the formation sight is above water, then additional preparation time is required for on-sight calibration and system qualification.



The take-off and landing site must be a flat-surface. If the surface isn't flat, we would require carpet or wooden planks to ensure an ideal surface



ENVIRONMENT CONSTRAINTS

Launch Site

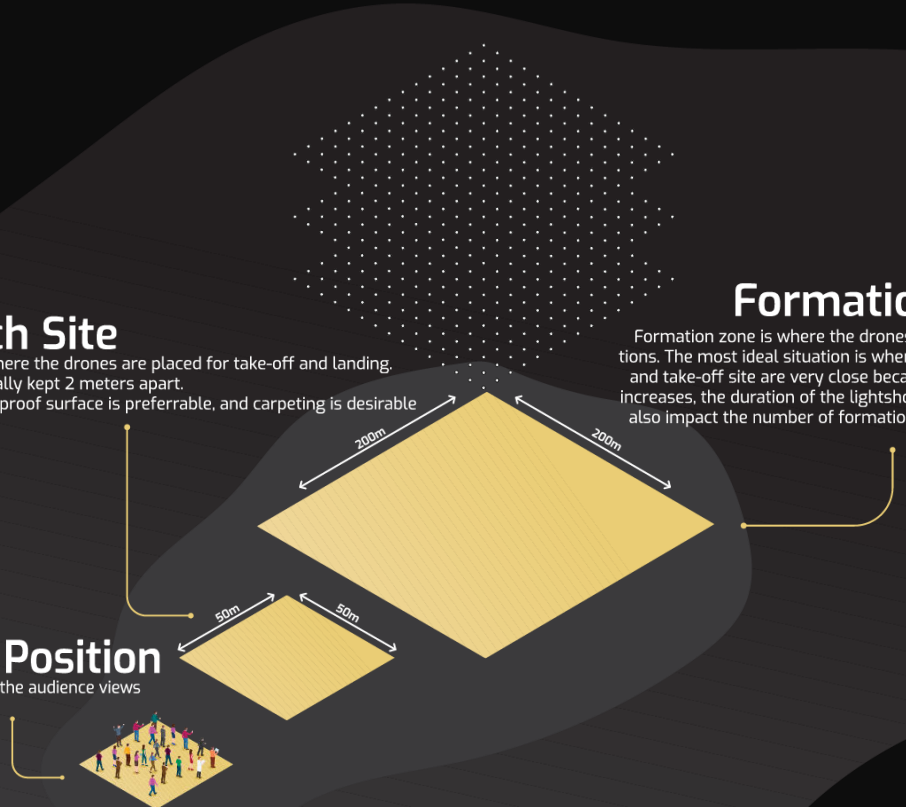
The location where the drones are placed for take-off and landing. Drones are ideally kept 2 meters apart. A flat dry dust-proof surface is preferable, and carpeting is desirable

Formation Zone

Formation zone is where the drones initiate the formations. The most ideal situation is when the formation site and take-off site are very close because as the distance increases, the duration of the lightshow decreases which also impact the number of formations that we can host

Audience Position

The location from where the audience views the drone light show



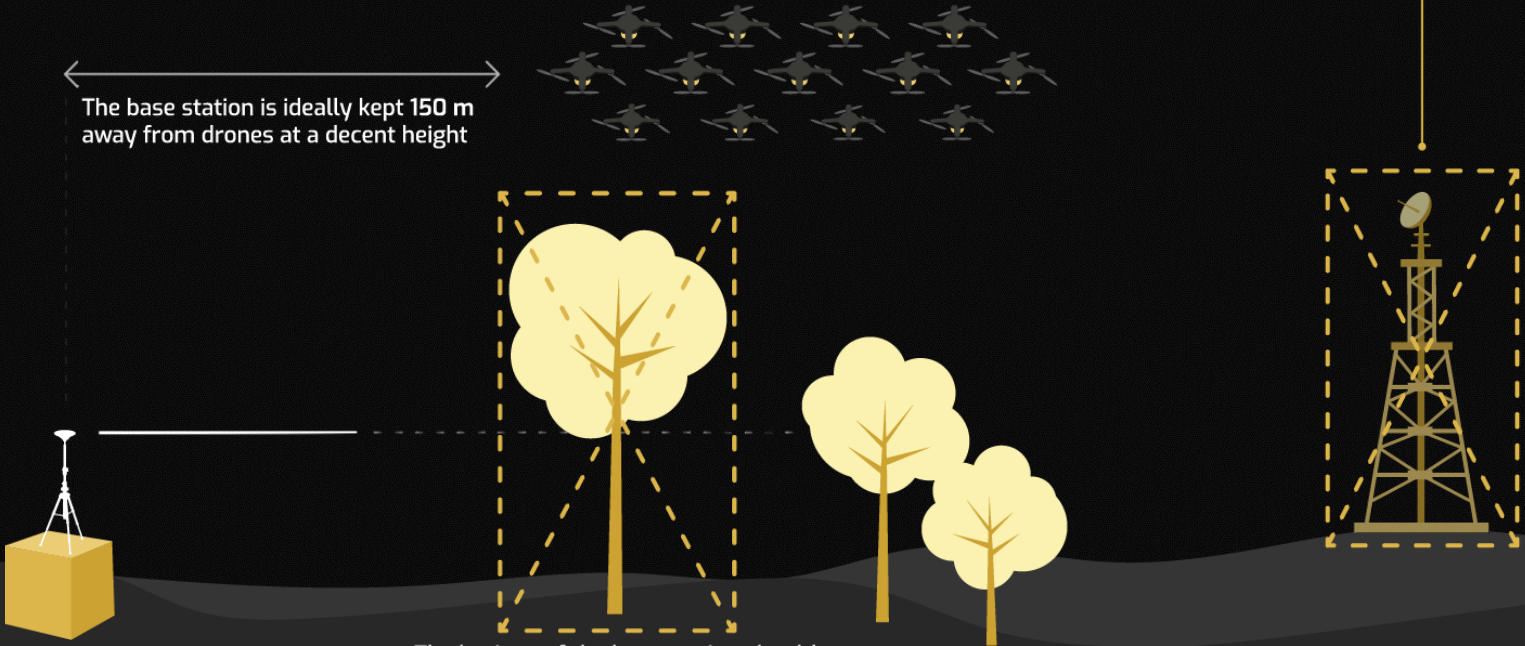
• Ideal wind speed should not be more than 5m/sec

• A typical drone show is 8-10 mins. and the duration might reduce depending on the temperature and altitude

• Flight Zone is finalized after survey from the BotLab team

There should NOT be any possible interferences like JAMMERS for GPS or mobile networks as we require connectivity during the setup process

The base station is ideally kept 150 m away from drones at a decent height

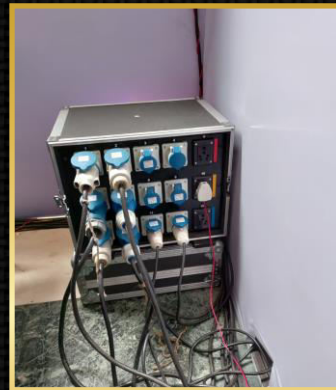


The horizon of the base station should NOT have any obstruction within 20°

LOGISTICS

A storage space is required for the equipment and drones with the following facilities:

- ✦ Min. 1,000 Sq. Ft. for 500 drones
- ✦ Power Supply ~ 5kw
- ✦ Min. 6+ sockets (16A)
- ✦ Appropriate security for the equipment and drones
- ✦ Tables (Min. 6)
- ✦ Chairs (Min. 12)



- ❖ The storage space should be close to the flight site to save on the commute
- ❖ No unauthorized personnel will be allowed access to the storage space
- ❖ BotLab team should be able to access the equipment and drones at anytime

LOGISTICS

- ✦ BotLab will indicate the timeline in advance about the arrival of the team and equipment
- ✦ BotLab should be allowed access to the site for survey and tests whenever needed
- ✦ In case a storage space is not available, alternative arrangements such as tents/trucks etc. should be arranged along with power supply (extension cords/generator)
- ✦ Appropriate lighting and air conditioning for the team
- ✦ Proper internet access should be enabled for the team during the setup and the show
- ✦ Local transportation for the team's commute from the show site and accommodation
- ✦ Barricading for keeping the audience to enter the flight zone





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