

## SIAE & ATTC DROEVOLUTION 2017 – CHAPTER 1

### Overview

The Air Transport Training College (ATTC) *Dronevolution* is a three-part competition initiated by Singapore Institute of Aerospace Engineers (SIAE) to debut in 2017. The aim is to create awareness of drone technology among youths by reaching out to schools, polytechnics, colleges and university students. Our mission is to establish an aviation stronghold amongst our next generation of professionals.

*Dronevolution* is part of a long-term initiative to launch ATTC as a drone hub. Situated in our very own hangar, budding drone enthusiasts can utilise this platform to meet and collaborate with like-minded individuals as well as cultivate their interest without the constraint of space. The three-part competition concept promotes continuity and comprehensiveness of ideas.

#### ***Chapter 1: Safe Haven – Building a drone home***

Built-to-Order? Create your very own architectural masterpiece and let it become a reality.

#### ***Chapter 2: Squad goals – Design a drone army***

Break new ground and arm your team with cutting-edge features and capabilities.

#### ***Chapter 3: Fight and flight – Exhibit your drone flying strategy and skills***

Pit your drone and piloting skills against the best in the battle of the 21<sup>st</sup> technological century. Will you and your army emerge victorious?

Chapter 1 is set to launch in Oct 2017, with registrations starting 31 Oct 2017. A hangar tour and drone introduction by a team of leading professionals will be conducted for all participants to get a practical feel of the designated arena. Subsequently, teams are given 2 months to work on their designs before judging commences on 01/03/18. The Award Ceremony is scheduled to take place in May 2018.

### Objectives

- Introduce drone technology to the new generation
- Interaction opportunity for drone enthusiasts

### Program

The first of its series, *Dronevolution: Safe Haven* will focus primarily on drone hub layout. The challenge is for participants to engineer a Drone Park, complete with obstacle courses and features entirely up to their imagination. Attractive prizes aside, participants stand a chance to witness the actualisation of their dream drone hub, setting the stage for future drone events. Ultimately, the intention is to build a drone hub for drone lovers, by drone lovers.

Participants start off with given hangar dimensions and a budget. Following a tour and workshop conducted by a team of professionals organised by ATTC, each team is to design a drone park, supplemented with a business and construction plan.

## Competition timeline

- Registration (31 Oct - 31 Dec 2017)
- Tour and workshop\* (Scheduled in Jan 2018)
- Design period
- Entries submission (Ends 1 Mar 2018)
- Presentation (May 2018)

\*All participants are eligible to attend the tour and workshop at the hangar of ATTC free of charge. Interested members of the public are welcomed to attend with a small fee of S\$15 per person.

## Registration

All teams must be registered with SIAE before 31/12/17.

- Each team has to submit one registration form.
- The registration fee amounts to S\$15 per participant.
- All registered teams will be published on SIAE marketing materials.
- All registered teams will stand a chance to win the lucky draw prize.
- By submitting your registration, you have agreed to allow SIAE the rights to use all project materials, videos, mock-ups, photographs association with your participation in the ATTC Drone Competition.
- Register at:  
[https://docs.google.com/forms/d/e/1FAIpQLSe8qONOTPdQGG0WoC\\_Pcja83r4vhVj5QH907Vv1QB4Xv565vA/viewform?usp=sf\\_link](https://docs.google.com/forms/d/e/1FAIpQLSe8qONOTPdQGG0WoC_Pcja83r4vhVj5QH907Vv1QB4Xv565vA/viewform?usp=sf_link)

## Competition outline and criteria

Form a team of 3 to 5 members.

Attend a tour and drone introduction workshop conducted in ATTC's premises.

Submit a design proposal which comprises the business and construction plan to [aero@siae.org.sg](mailto:aero@siae.org.sg) by 1 Mar 2018.

Prepare a presentation, similar to that of a business proposal, detailing the Drone Park design, construction materials and building execution plan. All teams are allocated 15 minutes to pitch their ideas to the judging panel, without any restriction on presentation method. Constructing a prototype of the Drone Park design is highly encouraged (The prototype can be submitted together with the design proposal).

The only restriction to Drone Park design are the following:

Drone Park dimension	5m x 5m x 3m
Budget	SGD\$5000

Note that budget includes all equipment and manpower planning. A breakdown of cost should be included in the proposal.

## Judging criteria

Judging will be based on the following criteria.

<i>Overall design 30%</i>	Layout of obstacle course and level of appeal.
<i>Creativity 25%</i>	Any refreshing yet practical idea, both in design or construction, of Drone Park will be awarded accordingly. (ie construction materials or equipment, consideration of use by different drone types, development of game through modification of pre-existing sports)
<i>Business plan and Sustainability 25%</i>	To understand the teams' motivation, perceived selling point of their design and marketing strategy.
<i>Ease of assembly and Cost 15%</i>	Logistics planning and budgeting is critical to any project success and will be assessed based on feasibility of execution. This includes, but not limited to: <ul style="list-style-type: none"><li>• Manpower required</li><li>• Cost breakdown of equipment and set up</li><li>• Disassembly and storage of equipment</li></ul>
<i>Presentation 5%</i>	Clarify and coherency of presentation, including effort for additional props to supplement proposal.

## Terms and Conditions

The competition is open to all students in Singapore.

- Registration starts 31/10/17 to 31/12/17.
- No more than 5 participants in a team.
- The teams do not have to be affiliated with an educational institution to participate.
- For teams associated with educational institutions, there is no limit to the number of participating teams from each institution.
- All submitted entries, photographs and materials shall be properties of SIAE.
- Each member can only participate in one team within a category.
- Only members and family members of the organising committee are not allowed to participate in the competition.
- SIAE may use these entries at any events at its discretion, without prior written approval from the participating teams.
- Cash prize will be awarded equally to each participant in the team.
- The organizers reserve the right to amend the rules and regulations in the events of any change, all teams will be informed FOUR (4) weeks prior to the start of the competition.

## Prizes

*1<sup>st</sup> Prize:* SGD\$1000 or equivalent

*2<sup>nd</sup> Prize:* SGD\$700 or equivalent

*3<sup>rd</sup> Prize:* SGD\$300 or equivalent

*Prize of Innovation:* Only the Team of Innovation will unveil the Prize of Innovation.

*Lucky Draw Prize:* All registered teams stand a chance to win the lucky draw prize.

Every team will get a participation prize together with the certificate from the Singapore Institute of Aerospace Engineers.

## ANNEX A

### Singapore Institute of Aerospace Engineers

Singapore Institute of Aerospace Engineers (SIAE), a non-profit organization founded in 1975, dedicates to Aviation Safety and promoting aerospace technology. SIAE aims to provide opportunities for aerospace engineers and technicians and related supporting personnel in the aerospace industry to develop their skills through training and educational programmes and conferences and seminars. SIAE also participates actively in government and industry efforts to develop training standards and processes to improve Singapore's competitiveness. Today, SIAE keeps moving forward with the addition of a new subsidiary - **SIAE Consultant Pte Ltd** to the existing subsidiary - **Air Transport Training College** to better serve the aviation industry in the region.

### Air Transport Training College

Air Transport Training College (ATTC) was established in 1999 as the Professional Development Centre of the Singapore Institute of Aerospace Engineers (SIAE). The college is registered with both the Accounting and Corporate Regulatory Authority (ACRA) of Singapore and the Committee for Private Education (CPE).

Within the Singapore Airworthiness Requirement (SAR) framework, regulated by the Civil Aviation Authority of Singapore (CAAS), ATTC is a SAR Part 147 Approved Maintenance Training Organisation (CAAS Approval No: MTO/002). This means that ATTC is approved to offer training programmes that meet SAR-66 basic knowledge and initial skills requirements in Aircraft Maintenance, Repair and Overhaul (MRO) activities. ATTC has also obtained the Republic of Maldives MCAR-147 approval to provide Part-66 basic knowledge and aviation skills training including the conduct of MCAR-66 basic knowledge examinations.

ATTC is concurrently a SkillsFuture Singapore Approved Training Organisation (ATO), having been awarded ATO No.00161 on 2 August 2007. On 1 September 2007, ATTC was appointed by SkillsFuture Singapore (then known as WDA) as a Continuing Education & Training Centre for the Aerospace industry.

ATTC is also registered as a Private Education Institution (PEI) with the Committee for Private Education (CPE) under the Enhanced Registration Framework (ERF) with the registration number 199901790H. This registration is valid from 6 August 2014 to 5 August 2018. ATTC has been awarded the 4-year EduTrust Certification (certificate no: EDU-2-2031) by Committee for Private Education (CPE) which is valid from 28 December 2015 to 27 December 2019.



Cert No: EDU-2-2031  
Validity: 28Dec2015 to 27Dec2019



## **SIAE Consultant Pte Ltd**

As a resource platform for the Singapore aviation industry, SIAE has been frequently approached by individuals, companies and government bodies to provide advisory services. To meet this demand, SIAE has incorporated its second subsidiary named SIAE Consultant Pte Ltd to further promote professional aerospace consultancy services to our clients and to extend our members' business and professional profile within their areas of expertise.

The debut of SIAE Consultant Ptd Ltd opens a grant new era for SIAE with the three entities in place by forming a stable 'Triangular' structure. SIAE is our aviation atmosphere which provides platforms and resources for our congenial partners. ATTC dedicates to continuous aviation education and training with equipped hangar facility to our students and corporate clients. SIAE Consultant carries the mission to help local SMEs and foreign developing aerospace sector in the following fields:

1. Technical Solutions
2. Business Strategies and Organizational Restructuring
3. Process Improvement & Certification
4. Training Programme
5. Project Management
6. Others

With all our members and partners together, there are bound to be wonderful aerospace games ahead of us.