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The UAS Challenge

Mentoring Programme – The Institution of Mechanical Engineers

OVERVIEW

IMechE has decided to implement a Mentoring Programme to support and assist teams participating in the UAS Challenge through their time on the Challenge.

This document is primarily designed to brief anyone who will be a mentor, but it will also help teams and their academic leads to understand what the programme is, and what is expected of all parties involved in the relationship.

1. OUTLINE OF THE UAS CHALLENGE MENTORING PROGRAMME

The Mentoring Programme pairs an Industry Partner with up to 10 teams on a random basis. The Industry Partner in turn will delegate the mentoring role to a suitable candidate(s) within their organisation. The period of engagement in the programme is set at a minimum of 3 months up to a maximum of 9 months. Ideally, an individual is assigned to a single team to gain the maximum benefit from this programme for industry as well as the mentee – team.

The role of the mentor is:

To provide the team with a point of contact for general queries regarding general guidance on plan, design, build, testing and marketing of the UAS for the purpose of the Challenge.

To help the team integrate with the concept of the Challenge and its guidelines.

To provide general guidance, advice and a professional role model in terms of a career in engineering.

The programme is coordinated by Jelena Gacesa (Operations Manager, Education Programme IMechE) and supported by the line managers of the assigned mentors within the participating organisations.
2. AIMS AND OBJECTIVES

By providing a platform for a mentoring relationship, it is intended that:

The team will feel closely connected with industry throughout their time on the UAS Challenge;

Relatively straightforward queries regarding basic ideas, concepts and intentions are supported in an informal manner; the initial confusion and uncertainty faced by new teams joining the UAS Challenge is lessened;

The team’s overall experience of the Challenge is enhanced and a wider view of the corporate world is developed;

The Industry Partners will find this an enriching experience for their own staff teams, in providing a role model for young undergraduates, and a platform for mentoring in a practical and flexible manner;

The Industry Partners will be able to use this initiative for their staff personal development programmes and integrate it in annual objectives and appraisals;

The Industry Partners will have first-hand opportunities to add to their talent pipeline from the assigned teams.

3. SELECTION AND PAIRING

At IMechE: A quota of teams will be allocated to the Industry Partners that have picked a sponsorship tier giving them the option of mentoring. The allocation will be by draw, conducted by an independent senior staff member of IMechE. This aims to avoid any bias and to maintain an open and transparent process.

Each Industry Partner will be notified of their allocation by the Programme Coordinator.

Within the organisation: Mentors may be selected as per the organisation’s resources, capacity and network.

Some points to consider in the selection of mentors are:

The individual’s technical knowledge, skills and or expertise in the UAS or related field;

The individual’s interpersonal skills; and

Their understanding and commitment to the organisation’s graduate recruitment programme and/or talent acquisition programme.
4. ROLE AND RESPONSIBILITIES OF THE UAS CHALLENGE MENTOR

The mentor's primary role and responsibilities are detailed below.

The role of a mentor is distinct from the role of an academic lead, manager, coach, judge, scrutineer of the Challenge:

No judge/scrutineer of the Challenge may take up the role of a mentor.

A MENTOR is an experienced engineer, who is offering advice on the all-round development of a team in their primary objective of competing in the UAS Challenge as a worthy contender.

The mentor is not the team’s coach or academic lead. All questions relating to the rules, technical specification and logistics will still be fielded by the Steering Group of the UAS Challenge. All academic links will be fulfilled by the team’s academic lead.

The mentor may not take up any other responsibilities in relation to the team and will not be held accountable for the team’s performance at the UAS Challenge in any aspect of the competition.

The mentor will be required to provide a one page report on their experience and perspective on the mentoring experience via the Industry Partner to IMechE at the end of the Competition. Reports are due 60 days after the competition.

5. MEETING YOUR MENTEES

Following notification of the allocated teams by IMechE, the first attempt to contact their respective teams by mentors is recommended within 30 days. Organisations may meet jointly with multiple teams at the same time, if it is more convenient.

While this programme does not stipulate mandated visits and contact frequencies, it is expected that at least one contact session is achieved.

Mode: Face to face, telephone or digital, as is suited.
A. CONTENT OF MEETINGS AND DISCUSSIONS

While the first meeting is to be an introductory session, it may be used to set expectations and share thoughts and ideas for the journey ahead. Setting guidelines for contact and sharing direct contact information is recommended.

Mentors are not expected to answer questions relating to the Technical Specification and or Rules of the UAS Challenge; these should continue to be directed to the IMechE for the Steering Group to consider and respond to.

Mentors may address issues relating, but not limited, to, aspects such as team work, time management, project management, cost control, regulations, technical efficiencies, communications, presentation and marketing, motivation, transition from graduate to employee, engineering as a profession, overcoming challenges in an engineering career, industry information and innovation.

Mentors may provide advice and guidance to teams, however they shall not unduly influence the design, build or testing of the craft being entered into the competition.

Mentors may not spend more than a day with the team assigned in any given month.

Mentors must not support the assigned team financially.

B. FREQUENCY AND TIMING OF MEETINGS

Mentors should aim to meet their assigned team at least once in the term of their mentoring period.

It is recommended that interactions between the Mentors and their teams be limited to an average of one day a month at most in order not to impose too severe an overhead on the Mentors in anticipation of their own workload and other commitments.
6. EXPECTATIONS FROM THE RELATIONSHIP

**IMechE**: The IMechE is responsible for facilitating an informal mentoring platform, for selected Industry Partners. IMechE is not responsible for the conduct of the relationship between the Industry Partner and the Team apart from the initial allocation, sharing contacts and intervening in the event of any dispute arising about the programme.

**Industry Partner**: The Industry Partner is responsible for taking on board the allocated team(s). It is also responsible for assigning a mentor to each team. Further, the Industry Partner is responsible for creating a valued experience both for the team and themselves.

**Mentor**: The Mentor is responsible for contacting the team and providing overarching guidance from an industry perspective to the team, leading by example in behaviour and content of the mentoring meetings, as set out in section 5 of this document.

**Team**: Teams are responsible for funds, the planning and design, building and testing of the craft and to maintain contact with the IMechE on questions relating to the rules, technical specification and logistics of the competition. Teams are expected to gain the most from the mentoring relationship in advice, guidance and exposure to the corporate perspective in this competition by ensuring they maintain contact and engage actively with their mentor.

7. AVAILABLE SUPPORT

If you are having any trouble with the interpretation of these guidelines, or with any aspect of the Mentoring Programme or the relationship, contact Jelena Gacesa, who will be happy to give you guidance.

8. TERMINATION OF THE RELATIONSHIP

The mentor relationship between the Industry Partner and the team will be terminated at the end of the competition year.

If a team or mentor wishes to terminate the relationship prematurely, this may be done by notifying the Coordinator.

No reasons will be sought or proffered; no discussion will ensue; no blame will be apportioned.

Contact the Programme Coordinator if you wish to trigger this process.
Note: Many mentors form separate, social relationships with the team which may continue beyond the confines of this programme. This is entirely up to the parties.

9. REVIEW OF THE RELATIONSHIP

At the termination of the relationship, the Programme Coordinator will ask (the mentor) and the team to separately fill in brief questionnaires aimed at improving the Mentoring Programme. It does not involve divulging issues discussed between the mentor and the team.

10. OTHER TOPICS COVERED IN THIS BRIEFING DOCUMENT

A. Listing of Terminology

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘IMechE’</td>
<td>The Institution of Mechanical Engineers, 1 Birdcage Walk, Westminster, London SW1H 9JJ.</td>
</tr>
<tr>
<td>UAS Challenge</td>
<td>The Unmanned Aircraft Systems Challenge – an annual student competition run by the IMechE.</td>
</tr>
<tr>
<td>Industry Partner</td>
<td>Sponsor of the Challenge – A corporate entity that enters into a contract for sponsoring the competition.</td>
</tr>
<tr>
<td>Mentor</td>
<td>Any individual who is identified by the Industry Partner to take on the role and responsibilities defined here in relation to the UAS Challenge Mentoring Programme.</td>
</tr>
<tr>
<td>Team(s)</td>
<td>A group of university undergraduates registered as a single unit to participate in the UAS Challenge competition in any given year.</td>
</tr>
<tr>
<td>Programme Coordinator</td>
<td>An individual who is assigned the role of coordinator of the Mentoring Programme by the IMechE. Currently: Jelena Gacesa, Operations Manager- Education Outreach, IMechE, 0207 304 6867 <a href="mailto:jelena.gacesa@imeche.org">jelena.gacesa@imeche.org</a></td>
</tr>
<tr>
<td>Judge/Scrutineer/Steering Group</td>
<td>UAS Challenge officials – volunteers and members of the IMechE leading the UAS Challenge.</td>
</tr>
</tbody>
</table>
# B. Mentor’s Report – single page

<table>
<thead>
<tr>
<th>UAS Challenge Mentor’s Report</th>
<th>Year:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company Name:</td>
<td></td>
</tr>
<tr>
<td>University &amp; Team Name:</td>
<td></td>
</tr>
</tbody>
</table>

## Format – Overview of the Mentoring Relationship:

*Please list what you set out to achieve and how*

## Key Successes:

*List 3-5 points you felt worked well in this mentoring relationship*

## Areas that could have improved:

*List 1-3 points that on reflection you think could have worked better*

## Suggestions to improve the programme:

*Please share with us any ideas to improve the experience for you and the teams in future*
# C. Format - Review Questionnaire for Teams

<table>
<thead>
<tr>
<th>UAS Challenge Mentoring Programme Team Evaluation</th>
<th>Team Details:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year:</td>
<td>Name:</td>
</tr>
<tr>
<td>Mentors Name:</td>
<td>Key Email Address:</td>
</tr>
<tr>
<td>Company</td>
<td>Phone Number:</td>
</tr>
</tbody>
</table>

**What did you expect from the mentoring programme:**

1. 
2. 
3. 

**What did you find most challenge in the UAS Challenge as a team?**

**What 3 areas was your mentor excellent in?**

1. 
2. 
3. 

**Areas that could have improved:**

*List 1-3 points that on reflection you think could have worked better*

**Suggestions to improve the programme:**

*Please share with us any ideas to improve the experience for you and the teams in future*
D. FAQ

Containing frequently asked questions regarding the Mentoring Programme.
(This will be built from questions as they arise within each new term of the programme.)