

Marine Autonomy Challenge (MAChallenge)

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Chair MASG Council



Society of
**Maritime
Industries**

MASG Council

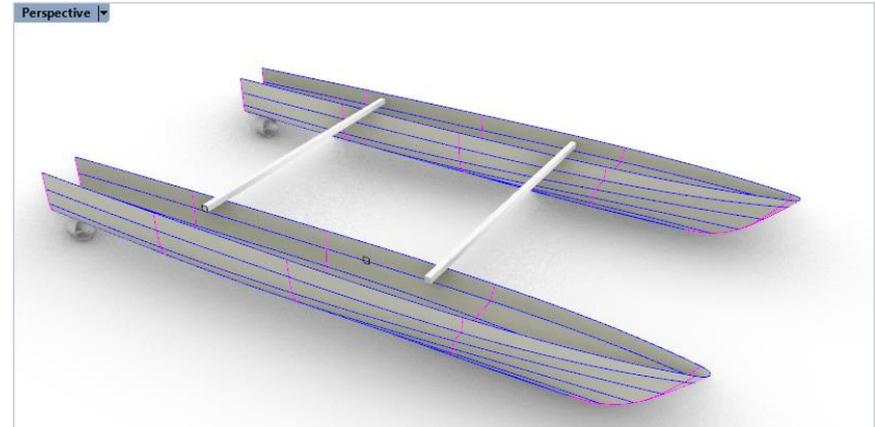
- Maritime Autonomous Systems (MAS) are of increasing importance to a wide range of sectors, including marine scientific and survey, offshore resource exploitation, maritime transport and defence and maritime security operations. The UK is a technology leader in this area and the Maritime Autonomous Systems Group (MASG) Council aims to enhance this reputation and encourage development and take-up of MAS technologies in the UK.
- The Maritime Autonomous Systems Group (MASG) Council guides activities for this market area, utilising the extensive expertise of its council members.
- Activities include:
 - Facilitating outward and inward trade missions to create business opportunities through greater international co-operation
 - Arranging information briefings on key developments in the market
 - Organising networking opportunities with those who have a common interest in maritime autonomous systems
 - A regular programme of meetings on various aspects of MAS developments and operations with senior high calibre speakers. Some of these meetings are restricted to members only
 - Assistance with sourcing relevant contacts within the industry

Why are we launching MAChallenge?

- A key part of the MASG Council's mission is to encourage young technologists to help them develop careers that contribute to the future of the UK's MAS industry.
- The aim of the challenge is:
 - Focussed on autonomy (not platforms)
 - To get students thinking about how autonomy might address the problem of plastics in the ocean
 - To stretch the knowledge of the students and promote creative thinking
 - Encourage team working through a variety of individual skills
 - Connect the brightest young talent coming through the UK's universities with the UK's MAS Industry

Competition Scope

- Powered surface vessel (catamarans) provided to each team
 - Including battery and thrusters
- Teams will need to:
 - Design and install control and sensor systems
 - Demonstrate controlled, safe manoeuvrability of vessels under challenge conditions
- Two phases:
 - Phase I – Video Submission
 - Phase II – On-water competition

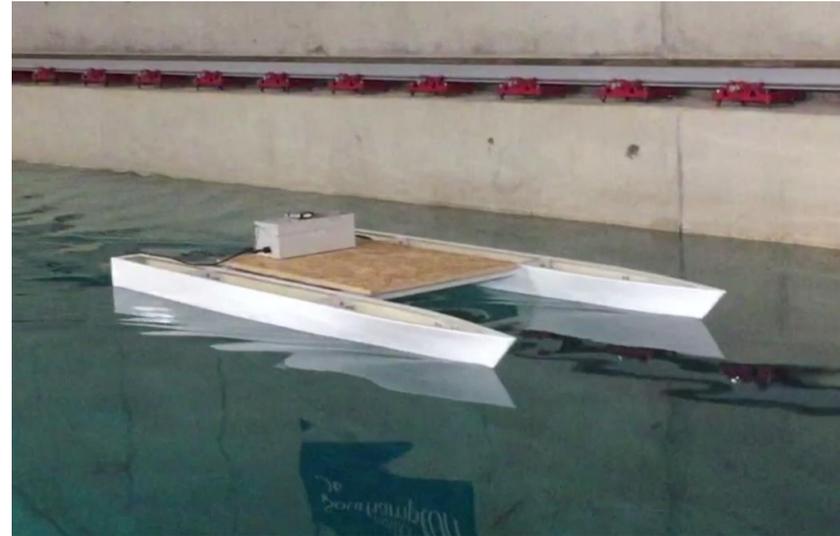


Phase I – Video Submission

- Each team will need to make a 3 min video submission
- Full details are at: <https://www.maritimeindustries.org/Video-Submission-Guidelines>,
- but in essence, the video needs to include:
 - Introduction to team
 - Individual skills
 - Relevant experience/projects
 - Competition strategy
 - Views on what the key issues are likely to be
 - What the team would do with the prize
- Videos must be submitted via Dropbox by **12.00 20 December 2020**

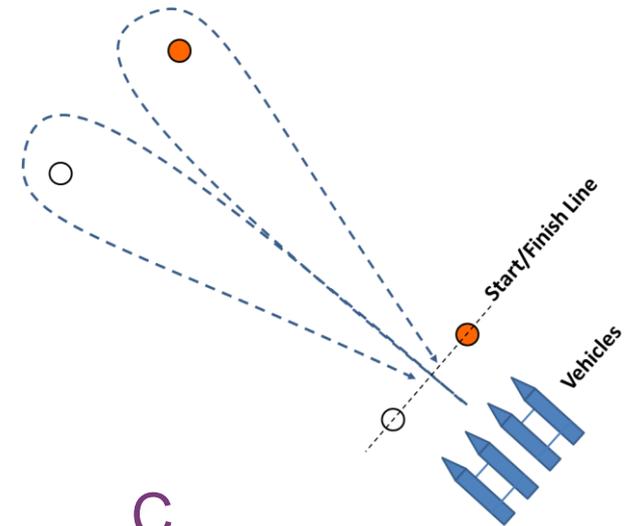
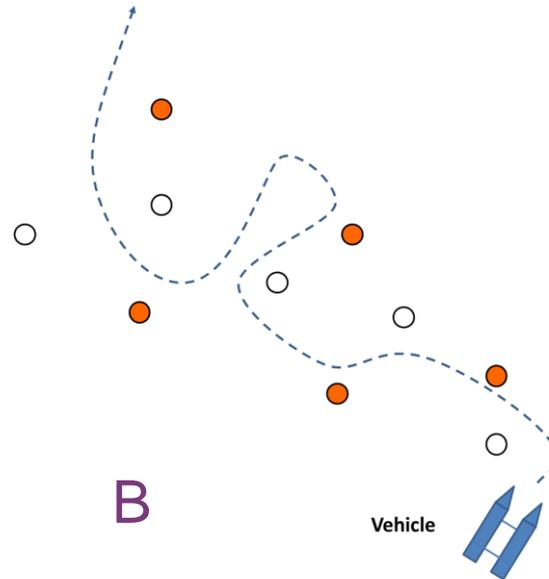
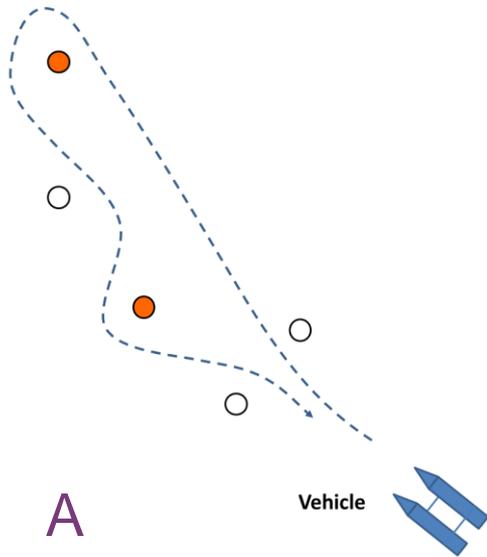
Phase II

- Five teams will be selected to proceed to Phase II
- The successful teams will be announced during January 2020
- An 'expert' industry mentor will be assigned to each team
- Each team will be provided before the residential event with a common platform comprising:
 - Catamaran GRP hull (ca. 2m long)
 - Propulsion system built into the vehicle. This will consist of two Blue Robotics T200 thrusters and associated electronic speed controller (ESC) providing differential steering.
 - Battery for propulsion including a charger.
 - User supplied/funded components – max £500
- Phase II will culminate in an on-water competition:
 - Calshot Outdoor Activity Centre
 - 19-21 June 2019
 - Accommodation and food will be provided (but not travel)
 - Teams to bring their own tools
 - Each team to complete a series of challenges – see next slide
 - Prize of £2,000 to winning team



Phase II Challenges

- A. Manoeuvring and Collision Avoidance
- B. Identify “plastics” (buoys of specified colour)
- C. Race between teams



We need industry to be involved

- Sponsorship – thanks to the companies who have already signed up!
- In-kind contributions
- Team mentoring
- Exhibit area during final competition weekend

Key Dates

- October 2019 – MAChallenge launch
- 20 December 2019 – Final date for video submissions
- 23 January 2020 – Announcement of finalists
- 19-21 June 2020 – On-water competition at Calshot

Thanks to our Sponsors

- Gold



THALES

- Silver



QINETIQ



- Bronze



AutoNaut



SEA-KIT



Thanks also to our supporters



Thanks for listening – any questions?

- Please visit <https://www.maritimeindustries.org/Maritime-Autonomy-Challenge> for up to date information, including the rules
- Please help advertise the competition!
- Please contact MAChallenge@maritimeindustries.org if you're interested in participating or supporting MAChallenge 20