

# Application Programme Interfaces for Robotic & Autonomous Systems (API4RAS)

Call to Action

## Agenda:

1. Introductions (3 mins)
2. Meeting aim & Objectives (3 mins)
3. API4RAS task Summary (5 mins)
4. Task Approach & Methodology (2 mins)
5. Task Output and outcomes (2 mins)
6. FCG CoE Context (5 mins)
7. Task Schedule (2 mins)
8. Ways of working (2 mins)
9. Call to Action (2 mins)
10. Contact details



# Introductions



- Col Dan Anders-Brown (FCG Sponsor)
- Iain McDowell (MOD Task Lead)
- Mark Cornforth (Industry task Lead)
- Steve Green (TD-Info facilitator)

Please all add your: Name, Organisation and Role/interest in this task in the MS Teams Chat.

# Application Programme Interfaces for Robotic & Autonomous Systems (API4RAS)

## Aim

The aim of this meeting is to outline our plans to create a joint MOD & Industry paper outlining best practice from cross sector API strategies and making recommendations for Defence Robotic & Autonomous Systems Capability Development

## Objective

1. Provide context and challenge
2. Outline task approach and timelines
3. Elicit support to co-create an API4RAS paper

## Context

- For many years Defence has looked to adopt open and modular systems architectures to enabling technology insertion, accelerating capability development and managing cost through access to commercial solutions.
- Today's capability is becoming more digital and digitised in nature and therefore as part of the architectural approach there is a need to understand the potential for Application Interfaces (API).
- As part of the Expeditionary Robotics Centre of Expertise and Multi Domain Integration Programmes FCG want to investigate the potential of open APIs in enabling agile development and interoperability across its range of currently independent robotic systems.

## Requirements

- This task will consider wider sector API strategies, industry leading practices, observations and lessons from Robot Dog Olympic Hackathon event and current architectural approach to RAS capability in Defence to make recommendations and potential call for action in adopting an API framework across its RAS capabilities.

# Task Approach/Methodology

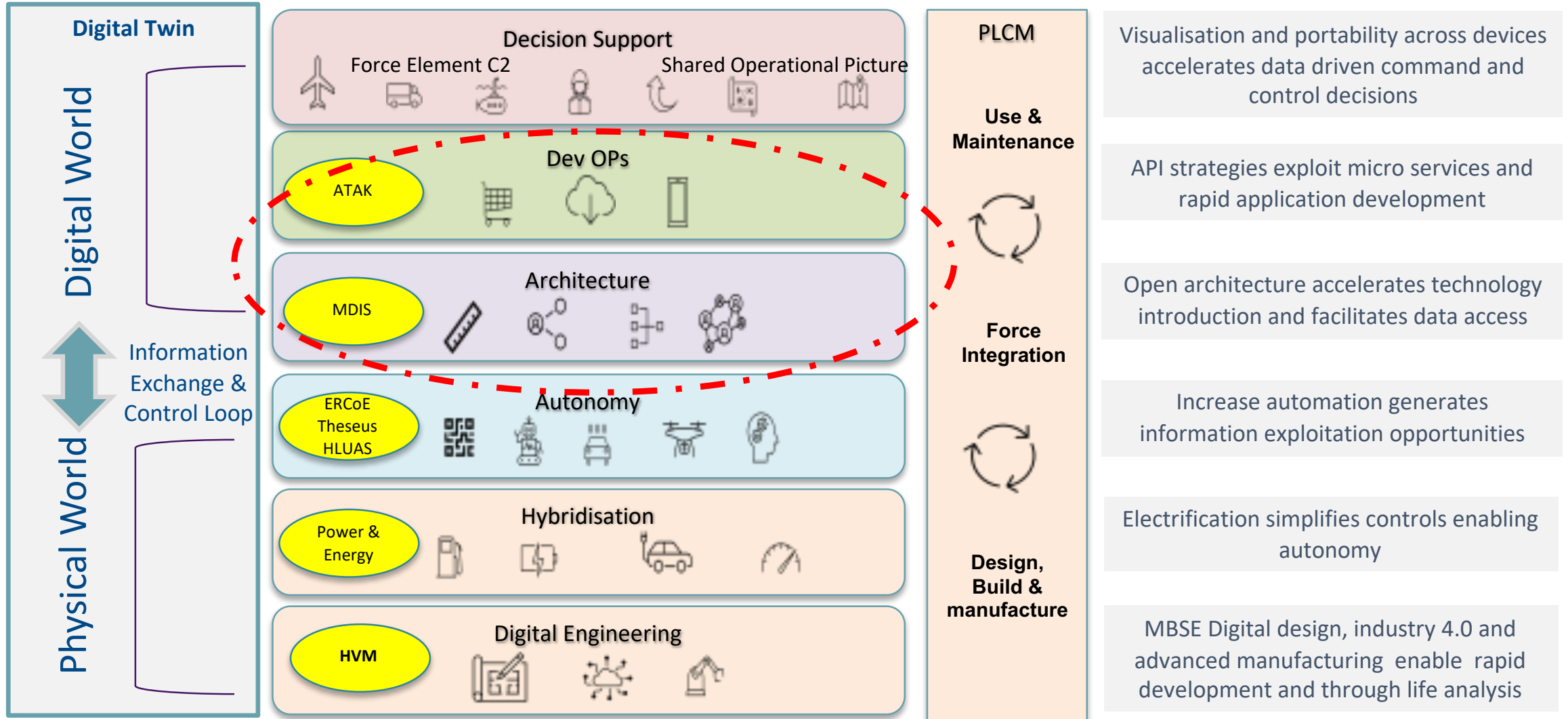
Over a 12- 16 week period the task team will undertake the following:

- Scope and Bound Defence RAS API vision and challenge
- Conduct a cross sector API literature trawl and document review
- Review good practice (and pitfalls)
- Establish API strategy and framework Map and gap against Defence RAS challenge space
- Document findings including conclusions, recommendations, and call to action

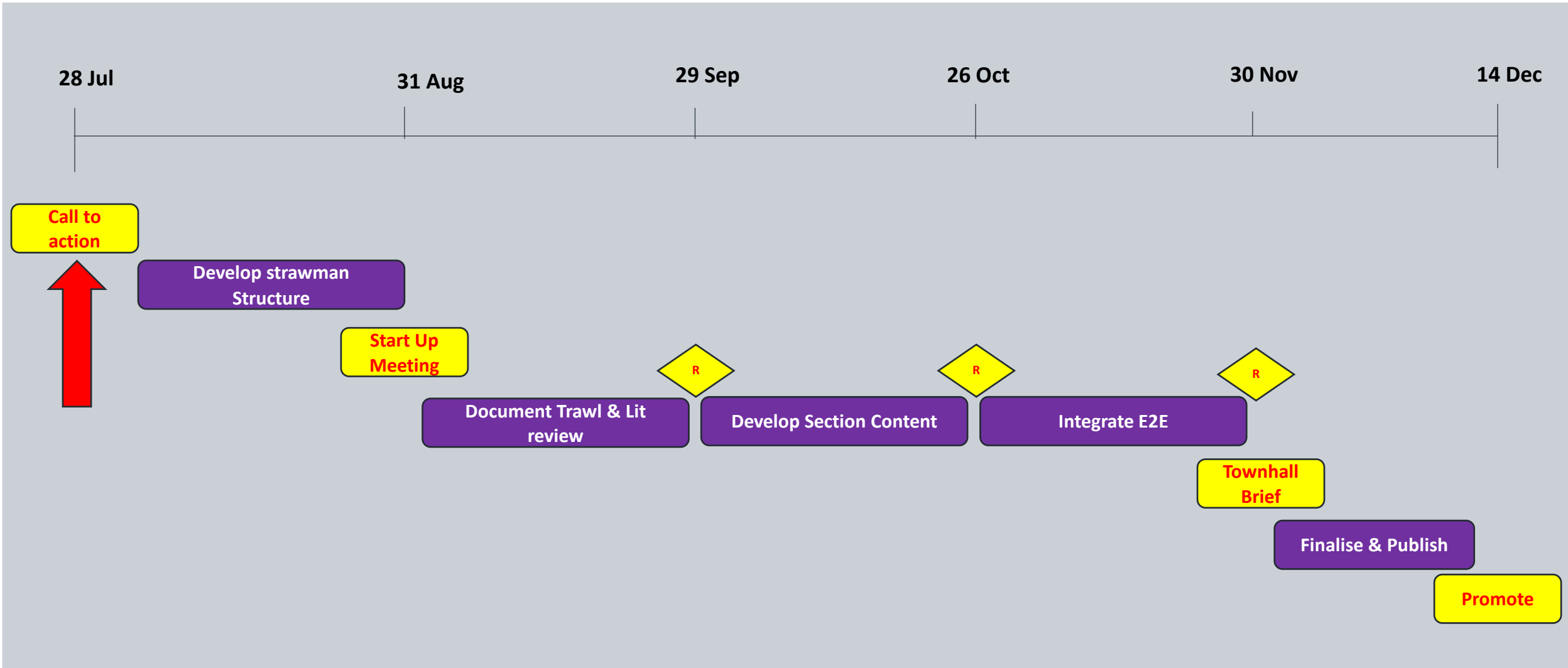
The paper will describe the defence challenge, provide examples of API practices across sectors and make recommendations for how Defence API strategy and development framework could accelerate RAS:

- Accelerating Capability Development
- Enabling Interoperability
- Assure openness and modularity
- Create conditions for Agile Development Operations
- Set standards for information exchange requirements and application interfaces.

# FCG RAS COE Context



# API4 RAS Task Schedule





## Communication

- The outcomes will be presented at a Team Defence Information out brief session
- The paper will be available for download from the TD-Info website
- The paper will be distributed to a selected MOD and Industry target group
- The recommendations will inform future FCG RAS direction and activities

## Ways of Working

- All outputs will be publicly available
- Content will be created collaborative
- Content is to be peer reviewed and agreed
- Regular touch point 'Teams' calls will be scheduled to assess progress and direct the work
- Outputs will be released under creative commons licence  
[https://en.wikipedia.org/wiki/Creative\\_Commons\\_license](https://en.wikipedia.org/wiki/Creative_Commons_license)

## Levels of Support

- Task Lead. Have final editorial rights and lead the task. (Up to half a day a week).
- Authors: Develop written prose for sections of the document. (1-2 days a month)
- Reviewer: Peer review of document as it develops from strawman to final draft (half day a month)
- Contributors: Provide documents, reports and case studies to the early stages and build the cross-sector evidence base (limited time at early stages of task plus attendance at final presentation)
- Interested parties: Join at start up, attend the final presentation out brief and receive the report (minimal effort just tracking activity and exploiting the outputs)

## Start Up Meeting

31 August 2022

Limited places at TDInfo Office and online

[Register to attend](#)

## Additional Information

Download the [Draft Tasking Form](#)



# Contact



## MOD Sponsor

- Col Dan Anders-Brown

## Task Leads

- Industry - Mark Cornforth
- MOD - Iain McDowell

## TD Info

- Steve Green
- [steve.green@teamdefence.info](mailto:steve.green@teamdefence.info) or [steve.green166@mod.gov.uk](mailto:steve.green166@mod.gov.uk)
- 07950400211