

# Programme Discussion Report

Mark Symes | Programme Workshop

## Workshop Report

One of the key underlying principles of ARIA's solicitation is fair, open and transparent competition, as such we are publishing a summary of the outputs of programme discussions.

<b>SECTION 1: Programme Discussion Overview</b>	<b>2</b>
Background	2
Key Discussion Points	2
Outcomes	2
<b>SECTION 2: Agenda</b>	<b>3</b>
Day 1 Agenda   [25/01/2024]	3
Day 2 Agenda   [26/01/2024]	3
<b>SECTION 3: Attendee Overview</b>	<b>4</b>
Organisations	4
Attendee Feedback	5

## SECTION 1: Programme Discussion Overview

Programme / PD	Mark Symes - Managing our climate and weather through responsible engineering
Date	25/01/24 - 26/01/24
Location	St. Leonards Hall, Edinburgh, EH16 6AY, Scotland, UK
Goal	To test the opportunity space and programme hypothesis
Pre reads	Attendees considered a number of questions in advance

### Background

If an abrupt alteration in a climate system were to unfold, we would have no tools to mitigate the effects. Through research, we could understand the science behind how we might intervene to responsibly manage the climate and weather.

The core beliefs that were discussed at the workshop:

1. Climate tipping points (abrupt changes to the Earth's climate) like the melting of large ice sheets or sudden changes in ocean currents have happened in the past. The next one could be imminent, but we have no options for how we might intervene on the timescales required to avert disaster.
2. Through carefully-considered engineering solutions, it may eventually be possible to actively and responsibly control the climate and weather at regional and global scale.
3. Modern computing allows us to model the climate with unprecedented precision, providing a basis for increasingly confident prediction and validation of research-scale climate control experiments. Coupled with the imperative to address the consequences of anthropogenic climate change there is a unique combination of push-pull factors pushing us to explore the development of a new climate control R&D community.

## Key Discussion Points

- The Opportunity Space and its core beliefs
- Technical feasibility of intervening to prevent climate tipping points through engineered solutions
  - Relevant technologies
  - Novel approaches
  - Crossover technologies which could be applied to multiple use cases
- Programmatic structure and funding
  - Types of project, duration of projects, breadth of programme
- Responsible engineering and scientific approaches.
- Social sciences
  - Relevant disciplines
  - Integration into programme

## Outcomes

The programme workshop was successful in the following ways:

- ARIA's mission and the early thinking around the development of this programme were successfully disseminated to key stakeholders within the field. This will help pull in key creators and spread the word to the community
- The programme's core beliefs were tested, and in some areas modified to reflect expert opinion.
- Technical and engineering solutions that the programme may look to fund research into were discussed and debated.
- Social and ethical topics were raised and discussed, which gave insights into key areas that the programme must have to be successful.
- The scope of the programme was discussed and suggestions for refining a programme from the opportunity space were debated.
- Information of the size and scale of potential research and engineering activities was gathered to inform programme budgeting.
- Contact details from participants were shared with consent, in order to foster collaboration.

*In summary the workshop was incredibly significant in building towards a programme.*

## SECTION 2: Agenda

### Day 1 Agenda | [25/01/2024]

Time	Agenda Item
10:30 - 11:00	Arrivals - light breakfast
11:00 - 11:15	Welcome + housekeeping
11:15 - 11:40	Opportunity space + workshop briefing
11:40 - 12:00	Ilan, ARIA CEO <> Mark Q&A
12:00 - 12:10	Quick break
12:10 - 13:10	Lightning talks round 1
13:10 - 14:00	Lunch
14:00 - 14:50	Lightning talks round 2
14:50 - 15:20	Networking break
15:20 - 16:40	Breakout slot 1
16:40 - 17:00	Closing
17:00 - 18:30	Evening buffet at the venue

## Day 2 agenda | [26/01/2024]

<b>Time</b>	<b>Agenda Item</b>
08:30 - 09:00	Arrivals: light breakfast served
9:00 - 09:15	Welcome + housekeeping
09:15 - 10:50	Breakout slot 2
10:50 - 11:15	Coffee break
11:15 - 12:10	Breakout slot 3 Part 1
12:10 - 13:05	Lunch
13:05 - 14:30	Breakout slot 3 Part 2
14:30 - 15:00	Closing + feedback