

Landsat 5 image of Lake Eyre, South Australia. Image provided by Geoscience Australia.

Advancing Earth Observation Forum 2022

Convenor's Report

By

Earth Observation Australia Inc

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Executive Summary

Australia's Earth observation (EO) activities are ubiquitous across industry, government, research, education, and non-government groups, and are growing rapidly and significantly. Hence, it is appropriate and timely to host and run a series of events that will enable the EO communities of Australia and our Asia-Pacific neighbours, from producers to end-users, to communicate, coordinate, collaborate, and collectively assess the state of EO in the Australian and Asia-Pacific Region.

The aim of the [Advancing Earth Observation Forum](#) series is to provide strategies to identify how to move forward to improve the science, accessibility, capabilities, and applications of EO in this region, from satellites through to drones, in an environment that is accessible and fosters fairness, equity, respect for diversity, and is free from discrimination, bullying, harassment, vilification, and victimisation.

The Forum's objectives were established over the 2017-2018 period by a core group within [Earth Observation Australia Inc.](#) (EOA), in specific response to the first priority identified in the [Australian Earth Observation Community Plan 2026](#) viz.:

- 1. Connection and Coordination — establishing a consistent vision within the Australian Earth observation community, and delivering processes for internal coordination to ensure effective collaboration, resource use, and advocacy for Earth observation in Australia and internationally.*

This group was unable to identify any Australian or global meetings that enabled all sectors involved in EO to address scientific, collaboration, and coordination topics that help understand and progress the state of EO applications in Australia. Hence the inaugural [Advancing Earth Observation Forum](#) (AEO22) was designed, planned, and held at the Brisbane Convention & Exhibition Centre, with the following objectives:

- To enable everyone in the EO community to actively engage, contribute, learn, and connect with others
- To build professional expertise, contribute to our collective national capabilities in support of the Australian Space Agency, and be an effective partner in the global space industry
- To build a coordinated, collaborative, and effective Australian EO community that moves all participants forward

The AEO22 Organising Committee (OC) was led by four Directors, all nationally and internationally recognised leaders in Earth observation - Prof Stuart Phinn, Dr Renee Bartolo, Dr Glenn Campbell, and Dr Karen Joyce. Other members of the OC included Emerita Prof Megan Lewis, Jo Edkins, Alison Soady, Larissa Mar Fan, Anne Crosby, and Sylvia Michael.

The AEO22 program was delivered over one week from Monday 22 to Friday 26 August 2022. Monday and Friday were dedicated to workshops, attracting 180 registrations. Topics included the Digital Earth Australia platform, validation of surface reflectance across vegetation, fractional cover, planned Australian Earth observation satellite missions, and AI for drone imagery applications. Sessions on Tuesday to Thursday included the Official Forum Opening and Close, Welcome to Country, plenary keynote and ministerial presentations, traditional and interactive technical presentations, panel discussions, and networking opportunities. A highlight of AEO22 was the presentation of the inaugural Earth Observation Australia awards, which recognised outstanding contributions from the EO community in three categories.

All workshops and technical presentations were aligned with the five priority areas of action identified in the [2016 Community Plan](#):

1. Connection and Coordination
2. Securing Australia's Role in the International Earth Observation Community
3. Infrastructure and People
4. Access to Earth Observation Data and Services
5. Generating Value

285 registrations to the Tuesday to Thursday sessions were received, with most people opting to attend all 3 days. Most registrants were from the Research & Education sector, followed by the Commonwealth Government, SME¹ Industry, and State & Territory Governments.

The OC gratefully acknowledges the businesses and organisations that provided in-kind and financial support to ensure the successful delivery of the Forum. Without support from their own organisations and the Forum sponsors, the inaugural AEO Forum would not have been feasible.

AEO22 was a very successful event in many ways – attendance, quality of presentations, quality of facilities and location, networking, and engagement – but also financially, recording a net income of \$134,344 (excl GST). Revenue from registrations totalled \$192,904 (excl GST) and from sponsorship \$166,700 (excl GST), with the major expense being venue hire and catering.

Overall feedback from registrants was very complimentary, congratulatory, thankful, and supportive, confirming that AEO22 was a much-needed event to re-establish connection, communication, and collaboration within the EO community, as evidenced by both the most nominated reason for attending and the most nominated best aspect of the Forum i.e. networking.

AEO22 was the first in a continuing series of biennial AEO Forums to be hosted by Earth Observation Australia and organised in collaboration with local organising committees. This Convenor's Report provides a summary of the aims, content, delivery, and outcomes of AEO22 to inform planning for future forums.

¹ SME Industry refers to Small and Medium Enterprises including businesses with <200 employees, start-ups, consultancies, and micro-businesses.

Document History

Revision Number	Revision Date	Summary of Changes	Author
1.0	22 December 2022	Initial document	Stuart Phinn, Joanne Edkins, Sylvia Michael
1.1	18 January 2023	Incorporation of comments and edits by reviewers	EOA Management Committee
1.2	8 February 2023	Final draft	Megan Lewis, Joanne Edkins, Larissa Mar Fan, Sylvia Michael

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Aims of the Forum

Australia's Earth observation (EO) activities are ubiquitous across industry, government, research, education, and non-government groups, and are growing rapidly and significantly. Hence, it is appropriate and timely to host and run a series of events that will enable the EO communities of Australia and our Asia-Pacific neighbours, from producers to end-users, to communicate, coordinate, collaborate, and collectively assess the state of EO in the Australian and Asia-Pacific Region.

The AEO22 Forum Organising Committee was committed to improving and promoting equity, diversity, and inclusion across all of our activities in science, education, government, and industry. To do this we built a program embracing diverse perspectives on the basis of professional experience, cultural background, disability, gender and sexual orientation or identity, to ensure our delegates had the greatest opportunity for learning, collaboration, and innovation. We aimed to provide an environment that was accessible and fostered fairness, equity, respect for diversity, and that was free from discrimination, bullying, harassment, vilification, and victimisation.

Our goals to increase equity, diversity, and inclusion were:

- To encourage individuality to be valued at all levels
- To generate awareness of diversity, inclusivity, accessibility, and transparency issues
- To actively seek gender and ethnicity, experience and application balance and representation at all levels from the Organising Committee, speakers, presenters, session chairs, and panellists

The [Advancing Earth Observation Forum](#) series will provide strategies to identify how to move forward to improve the science, accessibility, capabilities, and applications of EO in the Australian and Asia-Pacific Region, from satellites through to drones.

Moreover, the series' focus is on continuing to develop Australia's national coordination and strategic directions in Earth observation, in association with the [Australian Space Agency's National Civil Space Priority Areas](#).

Together we will grow our industry, have a common language, ensure research and development support end-user needs and ultimately, advance Australia's capability and reputation in the international Earth observation community.

Background

The Forum's objectives were established over the 2017-2018 period by a core group within [Earth Observation Australia Inc. \(EOA\)](#), in specific response to the first priority identified in the [Australian Earth Observation Community Plan 2026](#) viz.:

1. *Connection and Coordination — establishing a consistent vision within the Australian Earth observation community, and delivering processes for internal coordination to ensure effective collaboration, resource use, and advocacy for Earth observation in Australia and internationally.*

Our group identified there were no Australian or global meetings that enable all sectors involved in Earth observation (government, industry, research, defence, and non-government) to address scientific, collaboration, and coordination topics that help understand and progress the state of EO applications in Australia.

The proposed meetings are significantly different to the previous Australasian Remote Sensing and Photogrammetry Conferences (ARSPC) which were run from 1990 to 2010 by the [Remote Sensing and Photogrammetry Society of Australia \(RSPSA\)](#) and which merged into the [Surveying and Spatial Sciences Institute \(SSSI\)](#). As a result of this merger, ARSPC were discontinued and became part of the [Locate](#) conferences.

In 2015-2018 the Australian EO community established a national coordinating group and in their regular webinars there was a consistent call for a new national coordination meeting. In 2016 the Australian EO community established the [Australian Earth Observation Community Plan 2026](#) which had five community driven priorities, the first of which is **Connection and Coordination**. The inaugural AEO Forum aimed to provide an ability for the EO community to address this priority and implement the plan.

Australia's EO activities across all sectors are growing significantly and are recognised as world leading. Ideally these activities will also extend into our immediate region, Asia, and Oceania, and enable, use, and establish links with government, research, and industry in these areas.

Brisbane hosts many government, research, education, and non-government groups recognised as national and international leaders in EO and hence was chosen as the location for the inaugural AEO Forum.

Initial ideas on the core activities of the forum were:

- To provide an innovative conference that enables the Australian producers and users of EO data to communicate, coordinate, collaborate, and collectively assess the state of EO in Australia and identify how to move forward to improve it
- To determine the state of EO science, research, and operations, and what is needed to improve this through EOA's actions
- To enable the highly diverse users of EO to present their applications and discuss how their access to EO-based services and products needs to be improved
- Present, critically assess, and determine how to apply new EO science and research
- Enable coordination and collaboration to:
 - Develop science
 - Link research to industry and government
 - Build public-private and defence partnerships
 - Build commercial progress and break down barriers
 - Build national coordination and international collaboration

The final primary objectives were:

- To enable everyone in the EO community to actively engage, contribute, learn, and connect with others
- To build professional expertise, contribute to our collective national capabilities in support of the Australian Space Agency, and be an effective partner in the global “Space Industry”
- To build a coordinated, collaborative, and effective Australian EO community that moves all participants forward

The inaugural [Advancing Earth Observation Forum](#) (AEO) was initially to be held as a face-to-face event at the Brisbane Convention & Exhibition Centre (BCEC) in September-October 2020 but was postponed to August 2021 and then again until August 2022, due to the global Coronavirus (COVID-19) pandemic.

To ensure that the EO community remained engaged and connected during the second postponement and to lead into the August 2022 face-to-face forum, two additional events were held:

- A one-day fully online event on 25 August 2021 – the **AEO Mini Forum 2021**, and
- A series of **Building the EO Community** webinars from October 2021 to July 2022

Details and recordings from the Mini Forum and community webinars are available on the Forum website [here](#) and [here](#), respectively.

The inaugural AEO Forum was held Monday 22 to Friday 26 August 2022 and attracted 285 registrants. Details of registrations are included on pages 15 to 16.

Organising Committee

The 2022 Forum Organising Committee (OC) was led by four Directors, all nationally and internationally recognised leaders in Earth observation:

- Prof Stuart Phinn - The University of Queensland and Earth Observation Australia Inc. (EOA) Immediate Past President and The University of Queensland (UQ) Chair
- Dr Renee Bartolo – Department of Climate Change, Energy, the Environment and Water (previously the Department of Agriculture, Water and the Environment) and EOA Management Committee (MC) Member
- Dr Glenn Campbell – The University of Southern Queensland
- Dr Karen Joyce - James Cook University, She Maps, GeoNadir, and EOA MC Member

Other members of the OC included:

- Emerita Prof Megan Lewis - The University of Adelaide and EOA President
- Jo Edkins - The University of Queensland (UQ) and EOA Treasurer
- Alison Soady – She Maps
- Larissa Mar Fan - UQ and EOA
- Anne Crosby – GeoNadir
- Sylvia Michael - UQ and EOA Secretary

Originally the OC engaged the services of a Professional Conference Organiser (PCO) to perform administrative and operational duties, however this arrangement ceased in April 2021.

The initial Steering Committee (SC), formed in 2018, also included:

- Prof David Antoine – Curtin University
- Dr Petra Helmholz – Curtin University / SSSI Remote Sensing and Photogrammetry Commission Chair
- Prof Laurie Chisholm – University of Wollongong
- Prof Albert Van Dijk – Australian National University
- Dr Marta Yebra - Australian National University
- Associate Prof Arko Lucieer – University of Tasmania
- Dr Peter Scarth – The University of Queensland
- Dan Tindall (or nominee) - Queensland Government
- Steve Jacoby - Queensland Government
- Dr Alex Held – CSIRO

Assistance to the SC was provided by the following EOA Working Group and Steering Committee members, and local EO industry, government, and science representatives:

- Dr Michael Hewson - Central Queensland University
- Dr Arnold Dekker - SatDek
- Dr Adam Steer - Spatialised
- Prof Graciela Metternicht – University of New South Wales
- Mr Peter Kinne – DigitalGlobe
- Dr Kimberly Clayfield - CSIRO
- Dr Dipak Paudyal – ESRI Australia
- Claire Martin – Brisbane Convention & Exhibition Centre (BCEC)

In addition to the face-to-face AEO22 event, the OC was responsible for the successful planning and delivery of the fully online [AEO Mini Forum 2021](#) and [Building the Earth Observation Community Webinar Series](#).

Program Overview

AEO22 was held over five days from Monday 22 to Friday 26 August at the Brisbane Convention & Exhibition Centre.

Monday and Friday were dedicated to workshops and attracted 180 registrations.

Workshop topics included:

- *Introduction to the Digital Earth Australia platform, datasets and mapping portal*
- *Introduction to the Digital Earth Australia analysis platform – the DEA Sandbox*
- *Validation of surface reflectance across vegetation*
- *Building collaborations and capacity in remote sensing of bushfires*
- *Deep Learning for the Real World - a start to finish workflow*
- *The many faces of fractional cover: demonstrating methods of access and analysis*
- *Earth observation and Remote Sensing Toolkit. Simple and efficient geoprocessing using the Rust programming language.*
- *Planned Australian Earth observation satellite missions*
- *AI for Drone Imagery Applications*
- *The National Spectral Database - An introduction for remote sensing scientists*

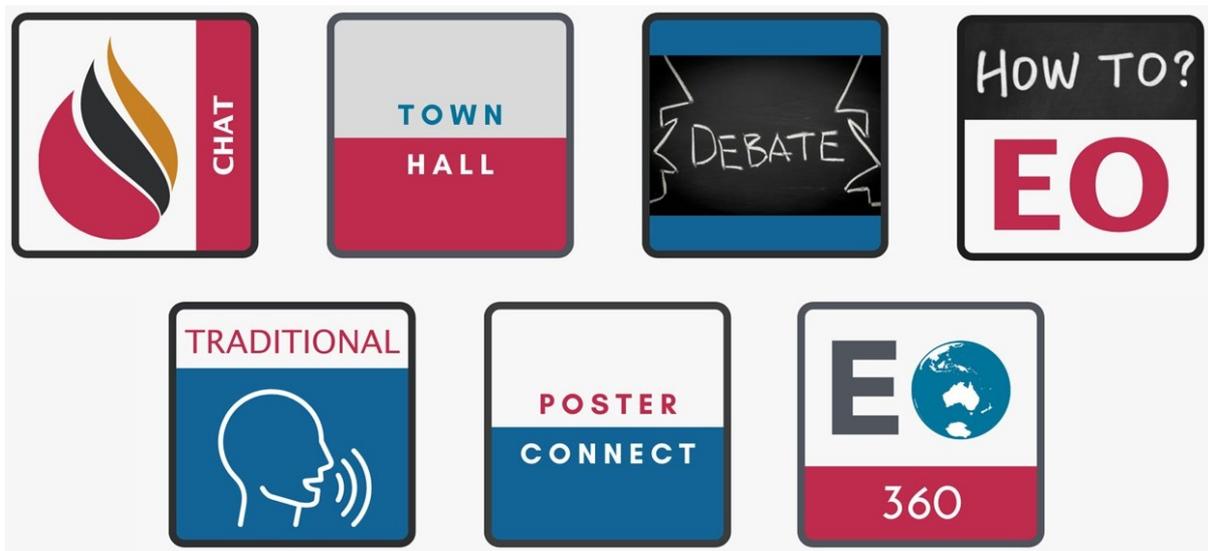
Forum sessions were held on Tuesday to Thursday and attracted 285 registrations from all sectors including government, research, academia, industry, and not-for-profits. We were also very excited to welcome 12 international representatives.

Sessions on Tuesday to Thursday included:

- The Official Forum Opening on Tuesday and Close on Thursday
- Plenary keynotes from:
 - Dr Anastasia Volkova “*Becoming Ubiquitous: How Global Climate Agenda Is Advancing Earth observation*”
 - Ms Dee Mack “*Connection to Country and Collective Wisdom*”
 - Dr Renee Bartolo “*Seeing the trees through the leaves – the journey of an Earth observation scientist in the realm of drones and AI*”
- Early career engagement which provided an opportunity for students and young professionals to enhance their skills and awareness of the EO industry, and learn and collaborate with senior EO professionals
- A Fireside Chat: an informal interview with Professor Richard Lucas, Ser Cymru Chair, Aberystwyth University, Wales
- A Town Hall with panellists from key agencies that are driving development of Australia’s EO capabilities: Dr Alex Held (CSIRO), Agnes Lane (Bureau of Meteorology), Dr David Hudson (Geoscience Australia), Professor Megan Lewis (EOA), Dr Amy Parker (CSIRO and EOA), Professor Stuart Phinn (The University of Queensland and EOA)
- A Debate “*That ‘digital twin’ is more hype than help*”
- EOA Awards presentations
- Five "How to EO" presentations: short technical talks and demonstrations on a variety of topics

- A total of 120 multi-stream presentations in three formats:
 - 50 x Traditional format presentations delivered in ten sessions as fifteen-minute presentations followed by audience questions
 - 35 x EO360 presentations delivered in seven sessions as six-minute presentations followed by nine minutes active audience interaction and engagement. EO360 was a new and very interactive format that was well received by presenters and audience alike.
 - 25 x Posters presented in two Poster Connect sessions allowing interaction with the authors and networking

Figure 1 – Presentation Format Icons
 Top row, from left to right: Fireside Chat, Town Hall, Debate, How to EO
 Bottom row, from left to right: Traditional, Poster, EO360



The request for abstract submissions for Traditional, Poster, EO360, and Workshop presentations opened in March 2022. All submissions were reviewed as follows:

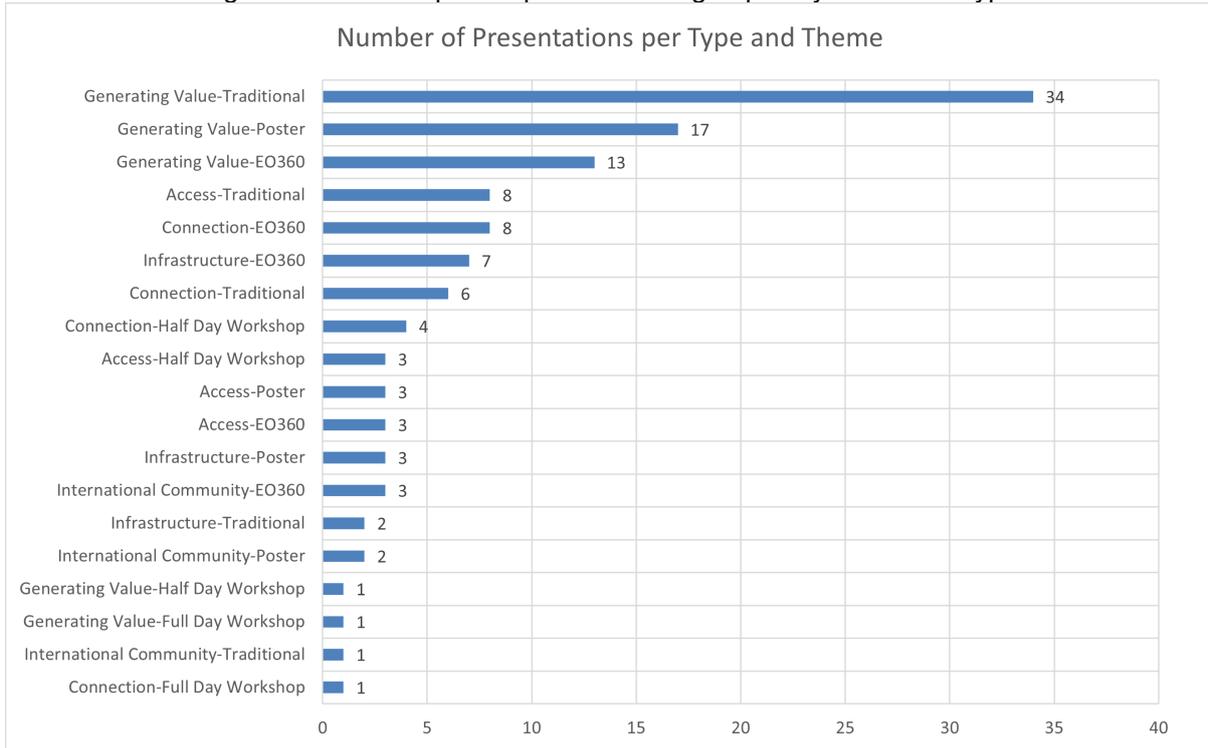
- Potential presenters were requested to submit abstracts, three key highlights, up to five keywords, and their preferred form of presentation via the online abstract portal
- All submissions were reviewed by a panel of expert reviewers, allocated to each submission based on topic and their experience. The program lead ensured that reviews were independent, with no person reviewing any submissions that could be associated with that reviewer in order to avoid conflicts of interest.
- Successful submissions were advised by email

All accepted Workshop and Traditional, Poster, and EO360 presentation submissions were aligned by the program lead to the five priority areas of action that were identified in the [EOA 2016 Community Plan](#):

1. Connection and Coordination
2. Securing Australia's Role in the International Earth Observation Community
3. Infrastructure and People
4. Access to Earth Observation Data and Services
5. Generating Value

The linkage of the session themes to these priority areas of action serves to remind us and confirm important issues that were identified by the Australian EO community in 2016, and the Forum itself represents a significant commitment to facilitate **Connection and Coordination** within the Australian and international EO communities.

Figure 2 – Workshops and presentations grouped by theme and type



A summary of the final Forum program is provided in the following table. The full Forum program and presentation abstracts are available on the Forum website [here](#).

Table 1 – Program at a Glance

Monday 22 August	Tuesday 23 August	Wednesday 24 August	Thursday 25 August	Friday 26 August
	Women's networking & light bite	Netwalking	Diversity & Inclusion breakfast	
Workshops	Exhibition open Official forum opening Keynote address Parallel sessions – EO360 and Traditional How to EO Fireside chat	Exhibition open Keynote address How to EO Parallel sessions – EO360 and Traditional How to EO Town Hall	Exhibition open Keynote address How to EO Parallel sessions – EO360 and Traditional How to EO Debate Forum close	Workshops
Registration desk open	EOA awards			
Exhibition opening & welcome	Poster connect	Poster connect		
		Drone networking event		

Several side track networking opportunities were held during the week:

- *Exhibition opening & welcome*
- *The Women's networking & light bite* hosted by She Maps
- *Netwalking*
- *The Drone networking event*
- *The Diversity & Inclusion breakfast* hosted by the Australian Association for Uncrewed Systems (AAUS)

More information about these is available [here](#).

In addition, the Brisbane Convention & Exhibition Centre (BCEC) was an ideal Forum venue, with its location close to cafes, restaurants, and accommodation, allowing networking to continue outside of the Forum hours in a relaxed social environment.

Presentation sessions were held in the BCEC Auditorium and Boulevard Rooms, in close proximity to each other and the centrally located Exhibition area. All lunch and tea breaks were held in the Exhibition area, as well as the *Exhibition Opening and Welcome* and *Poster Connect* networking sessions. The proximity of these spaces allowed for easy movement between sessions, and continued to support and reinforce the overall connection, communication, and collaboration concept of the Forum.

Profit and Loss Statement

AEO22 finances were managed by The University of Queensland. Table 2 summarises the revenue, expenses, and final financial position for AEO22.

Table 2 – Profit & Loss

Revenue	
Registrations	192,904
Sponsorships	166,700
Seed funding - Queensland Govt	10,000
Underwriting - UQ	50,000
Net Sales	\$419,604
Expenses	
Venue and catering	149,628
On site expenses	4,013
Delegate materials	779
Program	1,500
Sponsorship and exhibition	9,593
Marketing and promotions	1,482
Design and printing	365
Conference Administration	
Travel	11,511
Professional services	30,515
Miscellaneous	764
Professional conference organiser	75,110
Total Expenses	\$285,260
Total	
Net Income (Loss) GST exclusive	AUD\$134,344

Registrations

Workshops were held on Monday 22 August and Friday 26 August. A total of 180 registrations were received for the 8 half-day and 2 full-day workshops held. Due to insufficient registration numbers leading up to the event, four other workshops were cancelled.

Early Bird registrations were open from 11 April to 23 June, Standard registrations from 24 June to 15 August, and Late registrations from 16 August. Late registration remained open until Thursday 25 August.

A total of 285 registrations were received. Of the 285 registrations, 12 were international participants, 41% were EOA members prior to the start of the Forum, and 9% became EOA members during or post AEO22.

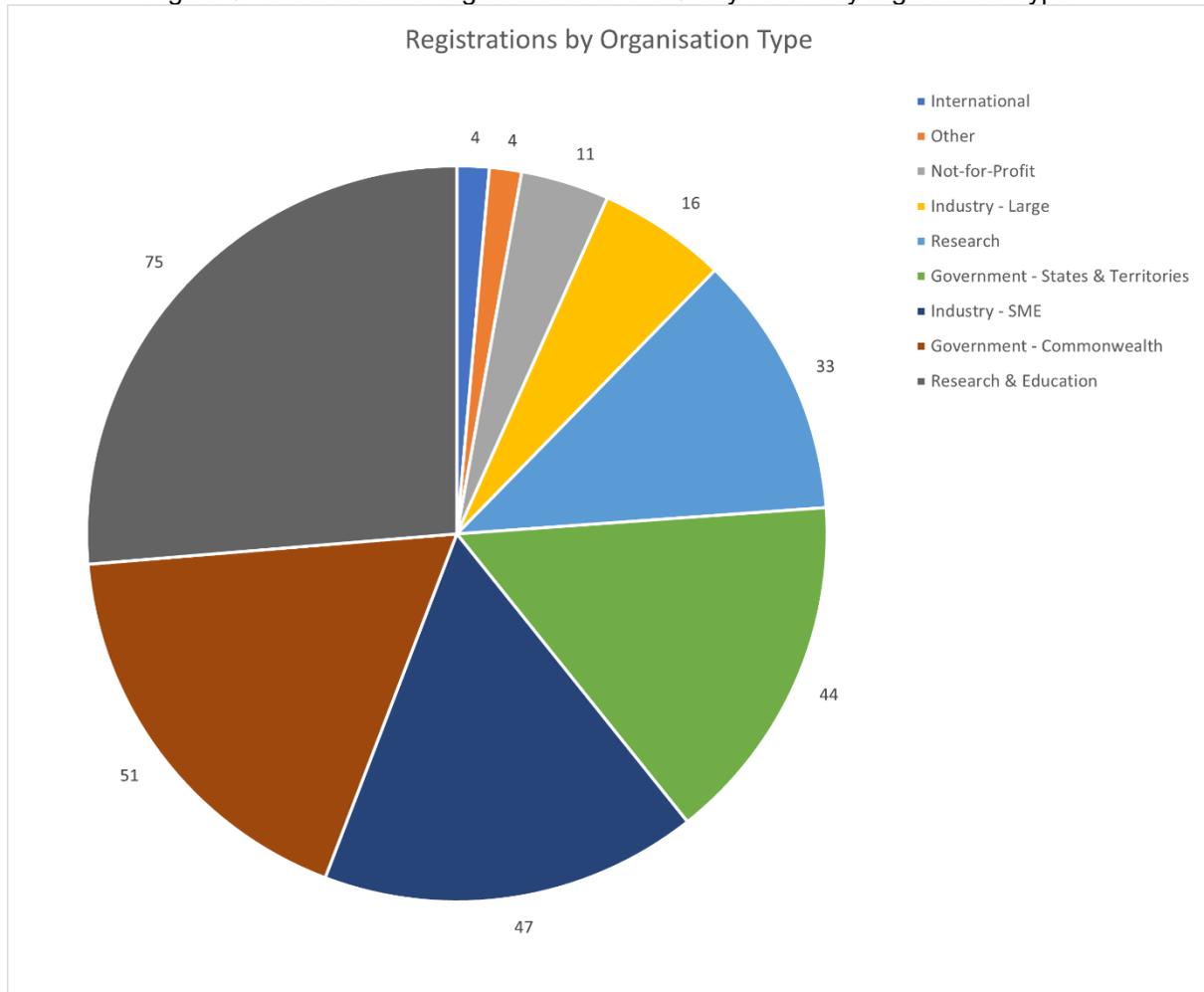
The following table and figure show the breakdown of registrations by registration type (Table 3) and organisation type (Figure 3).

Table 3 - Breakdown of registrations for the 3-day Forum by type

Registration Type	Number	Sub-totals
Early Bird Full	127	
Early Bird Student	17	
Early Bird Full Single Day	6	
Early Bird Student Single Day	1	
Early Bird Sub-total		151
Standard Full	41	
Standard Student	4	
Standard Full Single Day	15	
Standard Student Single Day	1	
Standard Sub-total		61
Late Full	7	
Late Student	1	
Late Full Single Day	4	
Late Sub-total		12
Complimentary Full ²	47	
Complimentary Student	14	
Complimentary Sub-total		61

² Complimentary registrations were included in some sponsorship packages, as well as being offered to volunteers and members of the OC.

Figure 3 - Breakdown of registrations for the 3-day Forum by organisation type



Support

AEO22 would not have been successful or feasible without the generous and critical support from the following organisations:

- The University of Queensland including the Remote Sensing Research Centre and The Joint Remote Sensing Research Program
- James Cook University
- The University of Southern Queensland
- Department of Climate Change, Energy, the Environment and Water (previously the Department of Agriculture, Water and the Environment)
- She Maps

These organisations provided:

- Public liability insurance
- Administrative and organisational support
- Financial and accounting services
- Legal and contract services
- Registration software platform access, training, and advice
- Website hosting and maintenance
- Webinar hosting (for the AEO Mini Forum 2021 and Building the Earth Observation Community Webinar Series)
- Social media content, scheduling, and distribution
- Communications and associated software
- Computer and office facilities

Sponsorship

We were fortunate in obtaining sponsorship from 21 organisations, totalling \$166,700 (excl GST).

Figure 4 – AEO22 Sponsors



- Australian Association for Uncrewed Systems (AAUS)
- Australian Institute of Marine Science (AIMS)
- APAC Geospatial Pty Ltd
- Astron Environmental Services
- Australian Space Agency
- Australian Space Data Analysis Facility
- Aviation Australia
- Bureau of Meteorology
- CSIRO
- Curtin University
- Department of Agriculture, Fisheries and Forestry (DAFF) and Department of Climate Change, Energy, the Environment and Water (DCCEEW) (previously the Department of Agriculture, Water and the Environment (DAWE))
- DUG Technology
- ETMC Technologies Pty Ltd
- Geoscience Australia
- Maxar
- Planet
- Queensland Government
- She Maps
- SmartSat CRC
- Terrestrial Ecosystem Research Network (TERN)
- University of Southern Queensland

Furthermore, Geoscience Australia (Founding Sponsor) and the Queensland Government (Partner), provided seed funding which allowed access to the cash budget system used at The University of Queensland.

The Forum presentations were accompanied by an Exhibition held in the area between the main auditorium and the smaller meetings rooms, from Monday evening until Thursday afternoon. Of the above sponsors, the following twelve had booths:

- APAC Geospatial Pty Ltd
- Astron Environmental Services
- Australian Space Data Analysis Facility
- Aviation Australia
- Bureau of Meteorology
- CSIRO
- Department of Agriculture, Fisheries and Forestry (DAFF) and Department of Climate Change, Energy, the Environment and Water (DCCEEW) (previously the Department of Agriculture, Water and the Environment (DAWE))
- DUG Technology
- ETMC Technologies Pty Ltd
- Geoscience Australia
- Queensland Government
- University of Southern Queensland

Marketing and Communications

The channels used to promote AEO22 and communicate key messages were:

- Direct emails to people who had registered to attend and/or be included in the expression of interest mailing list
- Social media: [LinkedIn articles](#) and Twitter
- [Website](#)

Electronic Direct Marketing (EDM) Emails:

There were 1691 subscribed contacts in the Forum Expression of Interest (EOI) database as at November 2022.

Between September 2021 and August 2022, 37 email campaigns were sent to this audience, with (on average) a 36.3% open rate and a 4.8% click rate.

LinkedIn:

Between October 2021 and October 2022, the EOA LinkedIn page had 1121 unique visitors, 95045 impressions, 1539 reactions, 56 comments, and 163 shares.

Over this period 11 articles were posted. In the lead-up to the Forum, updates were posted daily.

As at November 2022, EOA had 1586 followers.

Twitter:

Since the establishment of the AEO Twitter profile in February 2020 there were 380 tweets and 604 followers.

During the month of August 2022 there were 43 tweets which resulted in 21700 impressions, 234 likes, 100 click links and 76 retweets.

Feedback

Overall feedback was very complimentary, congratulatory, thankful, and supportive. This feedback validated the decision to twice postpone the event until a face-to-face format was feasible and safe.

The OC acknowledge and greatly appreciate the feedback received from a variety of sources including:

- Unsolicited verbal and emailed communications
- Social media tweets, posts, shares, and likes
- Responses to daily and exit surveys (summarised below)

Detailed feedback is provided in Appendices 1 to 3, including responses from the daily and exit surveys, as well as collated feedback from participants and the OC to the questions:

- What worked?
- What didn't work?
- What could we change?

Daily Surveys:

Participants were invited to complete a short feedback survey via the Forum App on the evenings of Tuesday 23 and Wednesday 24 August. These surveys included two questions viz. *Favourite Session* of the day and *Any feedback or suggested improvements?*

For the first question (*Favourite Session*), participants were invited to nominate one or more favourite session/s in no priority order. 239 responses were received with most votes going to the Traditional (20%), EO360 (17%), and keynote presentations (16%), respectively.

The answers to Question 2 (*Any feedback or suggested improvements?*) were in freeform text and the 97 responses were categorised into 12 classes:

- Awards
- Boulevard Room B3
- Food
- Forum App
- Interaction/engagement
- Networking
- Other Feedback
- Overall
- Posters
- Program Content
- Program Format
- Program Overview

Positive feedback was received for the Overall, Interaction/engagement, Networking, and Awards classes; mainly positive with some negative feedback for the Program Content, Program Format, Food, and Posters classes; and negative feedback for the Forum App, Boulevard Room B3, and Program Overview classes.

Wherever possible, the OC attempted to respond to feedback received the next day.

A full analysis of the daily surveys is provided in Appendix 1.

Exit Survey:

Participants were encouraged to complete a 14-question survey at the close of the Forum on Thursday 25 August via the Forum App or a Google Form which was available shortly after the Forum close. In the following analysis, the survey questions and responses are grouped into related topics.

Appendix 2 provides a full analysis of the exit survey, with the salient points listed below.

Questions about what attracted attendees:

- What attracted you to register and attend AEO22? (multiple choice)
- Did you get out of AEO22 what originally attracted you to register and attend? (multiple choice)

Most respondents listed *To network with peers and sponsors* (33% of responses) and *To update myself on current research and activities in EO* (31% of responses) as reasons to attend.

Only one of 68 respondents found the Forum did not satisfy their reason to attend.

Questions about communications and promotion:

- How did you find out about AEO22? (multiple choice)
- Did we get the frequency of promotion of AEO22 right? (multiple choice)
- What is your preferred type of communication? (multiple choice)
- Do you have any other comments or advice in relation to communication? (freeform text)

Most attendees heard about the Forum from colleagues (55%) or from promotion by EOA through newsletters and/or emails (42%) and felt that our promotion activities were of a suitable frequency (89%).

89% of respondents nominated email as their preferred form of communication with a few respondents noting that some communications could have been sent earlier, such as information on the Forum App, and program and workshop details.

Questions about the event organisation:

- How did you find the registration process? (multiple choice)
- How would you rate the event organisation / running of the event? (multiple choice)
- Any comments or advice on the organisation and running of the Forum? (freeform text)

Most respondents were complimentary on the event organisation, however almost half of respondents found the registration portal average (43%) or difficult (4%).

Special mention of facilities provided or suggested are listed in Appendix 2.

Questions about the event / program content:

- Are there additional activities we should include in future Forums? (multiple choice)
- What was the best aspect of AEO22 for you and why? (freeform text)
- Which aspects of AEO22 do you most think could be improved and how? (freeform text)
- Do you have any suggestions for the 2024 Forum e.g. location, time of year, frequency, venue, topics etc.? (freeform text)

These questions were about both the current and future forums.

Over 68% of respondents requested additional networking opportunities for future forums with some requesting a closing event and/or a Forum dinner. Networking was also the majority response (37%) for the best aspect, followed by the program content including the variety of topics, the keynote speakers, and the workshop topics (28%).

Suggested improvements included the availability of a paper program and an increase in representation from First Nation peoples, upstream and downstream applications, crewed airborne sensors, students, and government decision- and policy-makers.

The Forum App was noted as needing work as well as some improvements to the workshops such as providing catering, delivering them throughout the week, and providing an earlier and more detailed schedule.

Other suggestions are included in Appendix 2.

The final question in this group was related to AEO24 and a complete list of suggestions is provided in Appendix 2.

[Final request for comments:](#)

- Any other comments? (freeform text)

Most comments reiterated those made previously, however the following two are new and therefore worth noting here:

- Implementation of communities of practice by EOA for meetups during Forums
- Stronger focus on taking action, problem solving and implementable solutions that come from using Earth observation as a tool

Impact

AEO22 was a much-needed event to re-establish connection, communication, and collaboration within the EO community. This is evidenced by the most nominated reason for attending and the most nominated response to the questions about best aspect and additional activities i.e. networking.

All workshops and non-plenary sessions were themed and linked to the five priority areas of action of the [Australian Earth Observation Community Plan 2016](#):

1. Connection and Coordination



2. Securing Australia's Role in the International Earth Observation Community



3. Infrastructure and People



4. Access to Earth Observation Data and Services



5. Generating Value



The linkage of the session themes to these priority areas of action serves to remind us and confirm important issues that were identified by the Australian EO community in 2016, and the Forum itself represents a significant commitment to facilitate **Connection and Coordination** within the Australian and international EO communities.

The Forum also provided an avenue for participants to showcase and discuss their research and work with peers, customers, and users in a relaxed, inclusive, safe, and highly interactive environment. Face-to-face communication allows detailed discussion that is not possible through written or time-limited online formats. These discussions were also facilitated by the Forum format, such as the highly interactive EO360 and Poster Connect sessions, the in-session breaks, and the competitions during the plenary sessions.

The success of the Forum, in terms of both technical content and networking, resulted in greater awareness and interest in EO, as evidenced by an immediate increase in EOA membership. As at 21 August 2022 EOA had 656 subscribed members. This number increased by 11% to 728 members by the end of 2022.

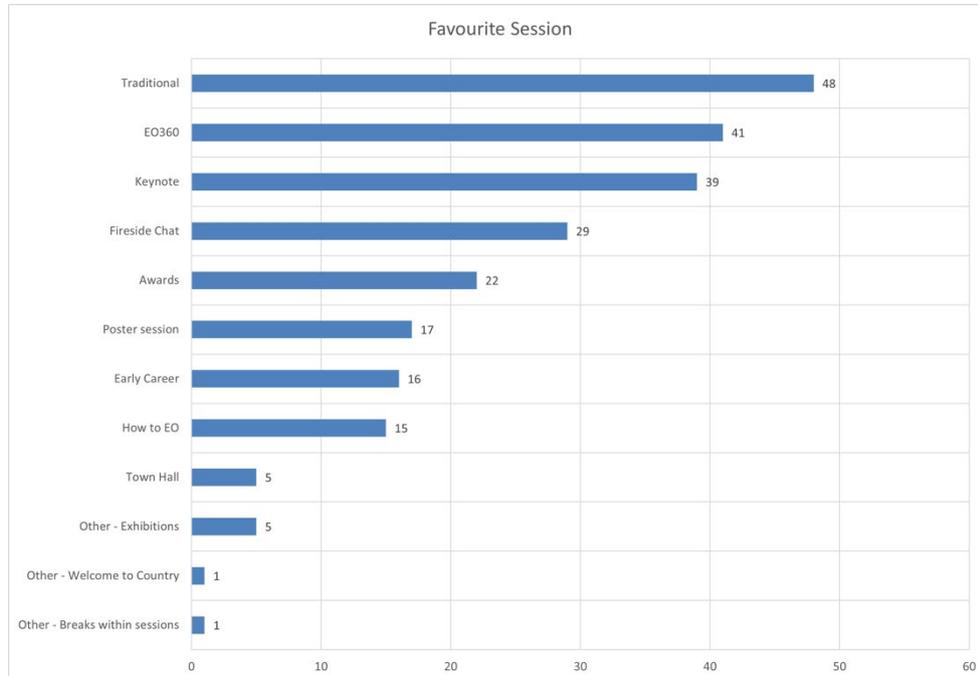
Furthermore, this success builds momentum to continue the AEO Forum series moving forward, with several people offering suggestions for AEO24 in the exit survey and in communications with the Forum directors.

Appendices

Appendix 1 – End-of-day Surveys

End of day surveys question 1 - Favourite Session - 239 responses

People could choose to nominate as many as they liked in no priority order

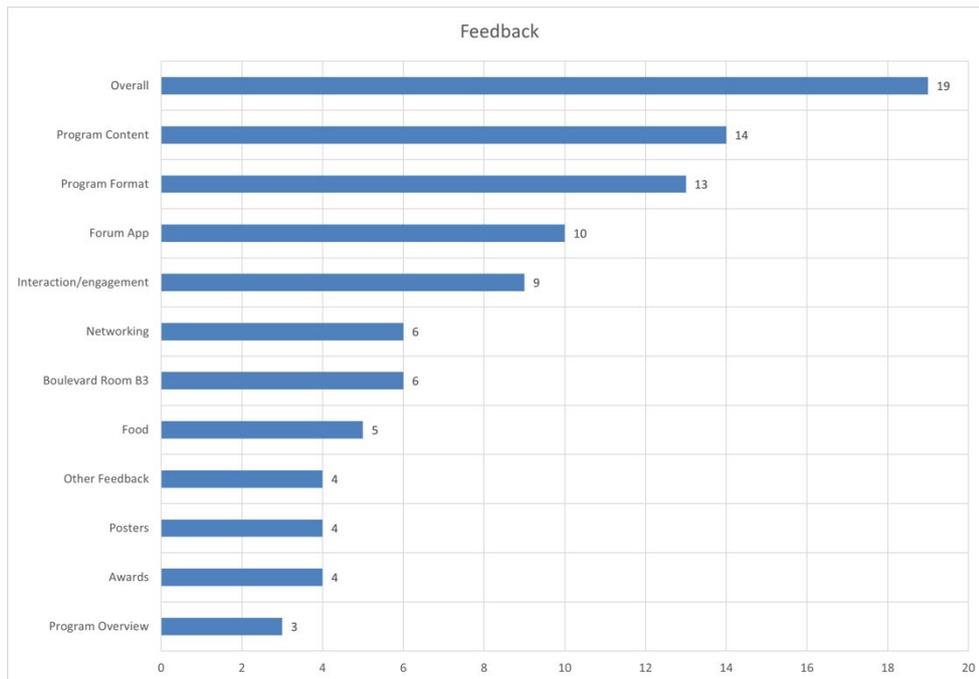


End of day surveys question 2 – Any feedback or suggested improvements? – 97 responses

These answers were freeform text. The analysis was made using the following categories, which were found to account for the majority of comments:

- Awards
- Boulevard Room B3
- Food
- Forum App
- Interaction/engagement
- Networking
- Overall
- Posters
- Program Content
- Program Format
- Program Overview

An additional category (Other Feedback) includes specific comments which are included in full below.



All feedback was positive in the following categories:

- Overall
- Interaction/engagement
- Networking
- Awards

Most feedback was positive in the following categories with negative comments including their number, listed:

- Program Content:
 - One presentation was commercial and not as expected (1 comment)
 - Earth observation content or relevance lacking in one keynote and the fireside chat (2 comments)
- Program Format
 - EO360 format was unstructured (1 comment)
 - Parallel sessions were a little overwhelming (1 comment)
- Food
 - Requested more healthy options e.g. fruit, cheese, crackers, yoghurt (2 comments)
- Posters
 - Lack of gender diversity (1 comment)

All feedback was negative in the following categories:

- Forum App
 - Didn't work well
 - Was hard to navigate
 - Repetition
 - Difficult to personalise
- Boulevard Room B3
 - Room was too small, badly set-up for number of people wanting to attend session
 - Very noisy in smaller rooms during discussions (1 comment)

- Program Overview:
 - Access to a daily program overview was lacking e.g. on display boards each day

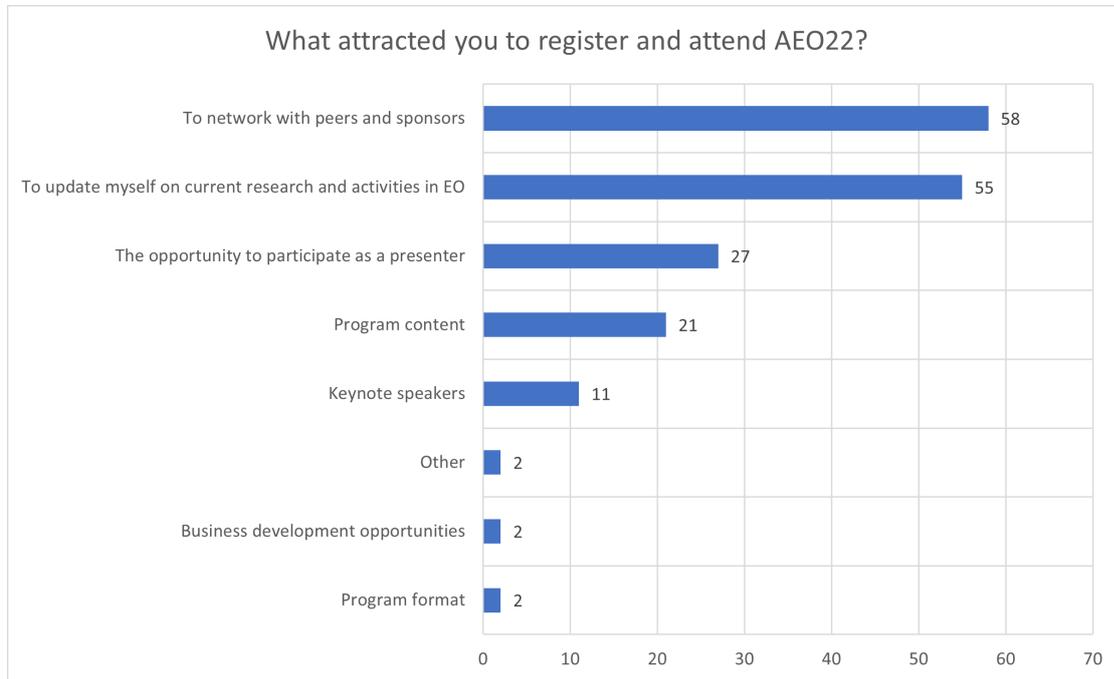
Other Feedback included:

- Even the smallest bit of background is really important for ECRs and non-experts. (How to EO, surface reflectance workshop). Don't assume everyone knows who you are, what you do and why it is important. We can't contribute if we are lost.
- Great user engagement talk from FrontierSI, however there wasn't enough time for an in-depth discussion, it would be great to have more time for facilitates discussions.
- Perhaps the move breaks could be shorter.
- The early career session was a fun and interactive way to meet people and discuss EO with peers. I think more sessions like this for the broader EO community (not just early careers) are a great structured way to network and a fun part of the day.

Appendix 2 – Exit Survey

Questions about what attracted attendees

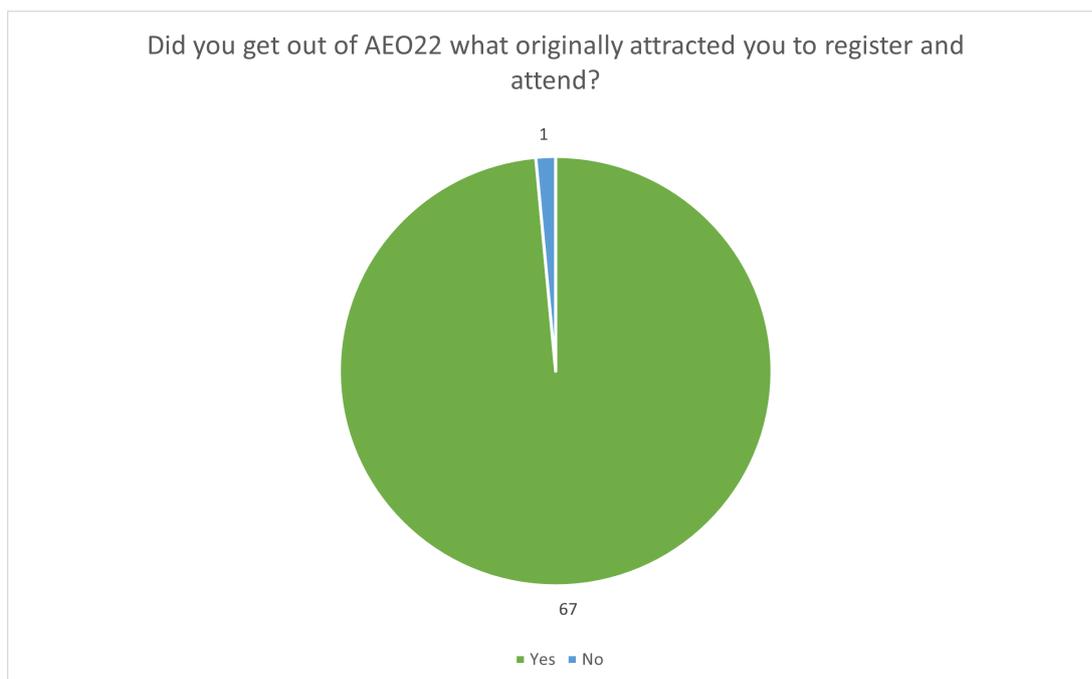
Question 1 – 178 responses



Other reasons:

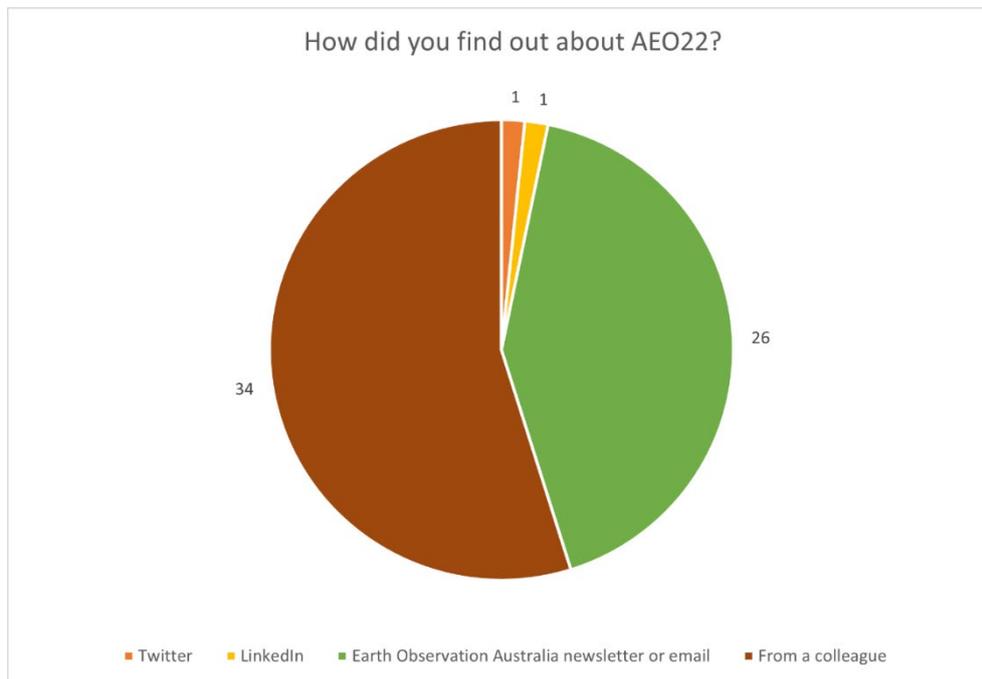
- To meet with others face to face and discuss our interest and share knowledge
- Workshops

Question 2 – 68 responses

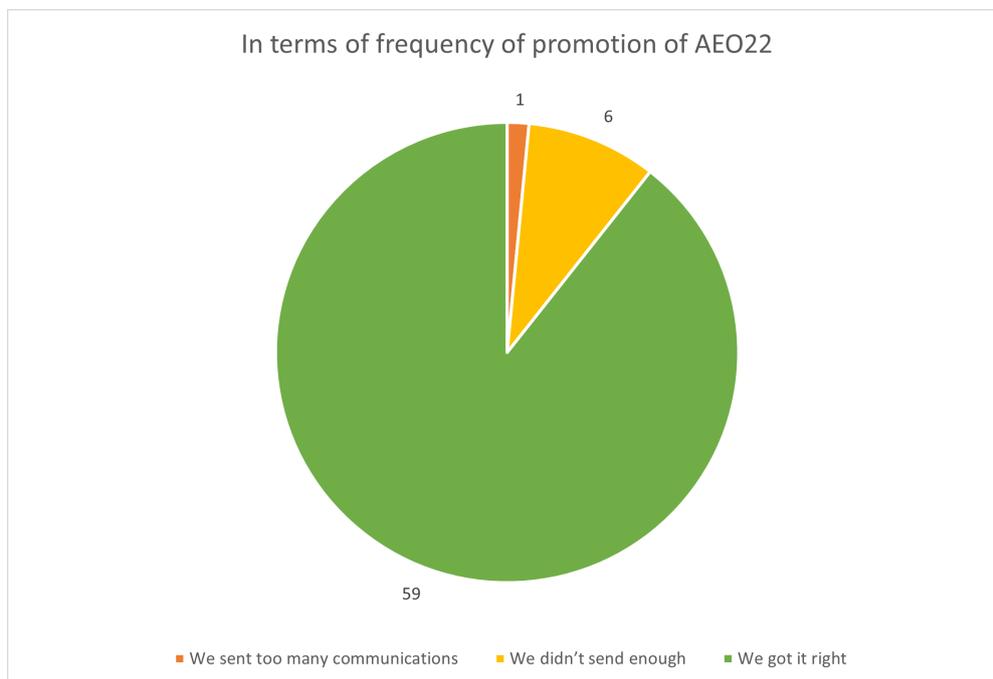


Questions about communications and promotion

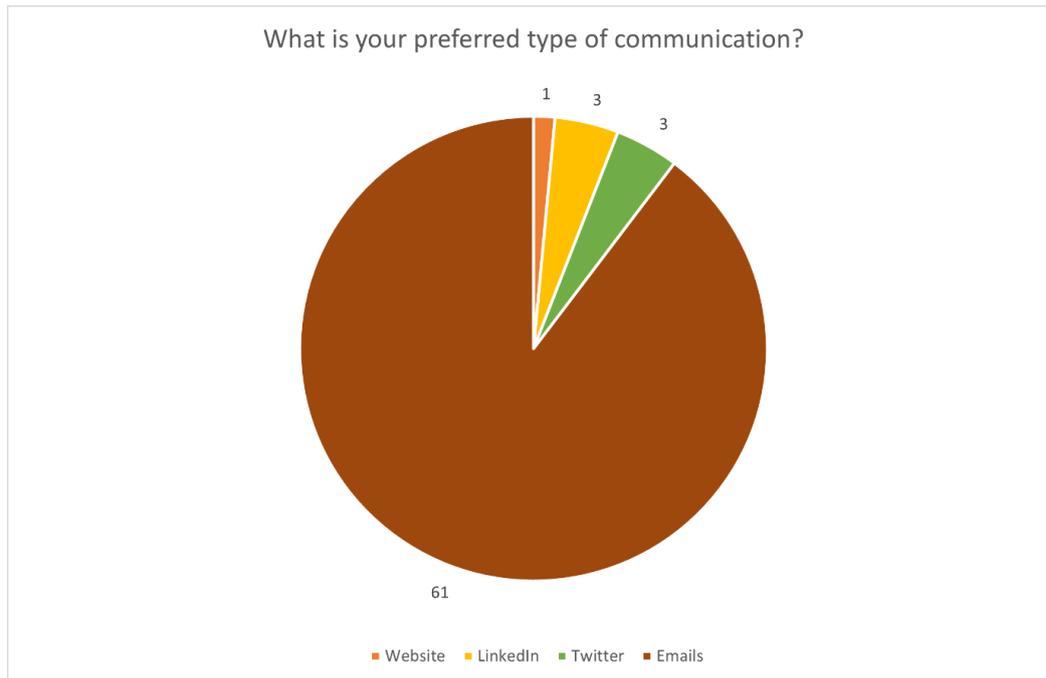
Question 3 – 62 responses



Question 4 – 66 responses



Question 5 – 68 responses



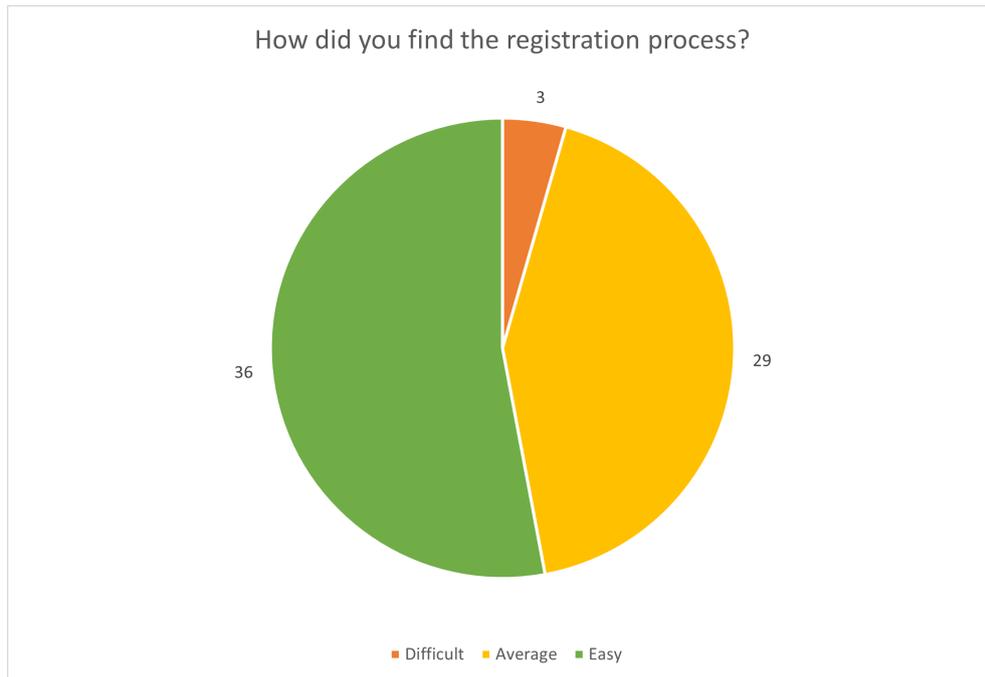
Question 6 – Do you have any other comments or advice in relation to communication? - 18 responses

These are summarised in the following dot points:

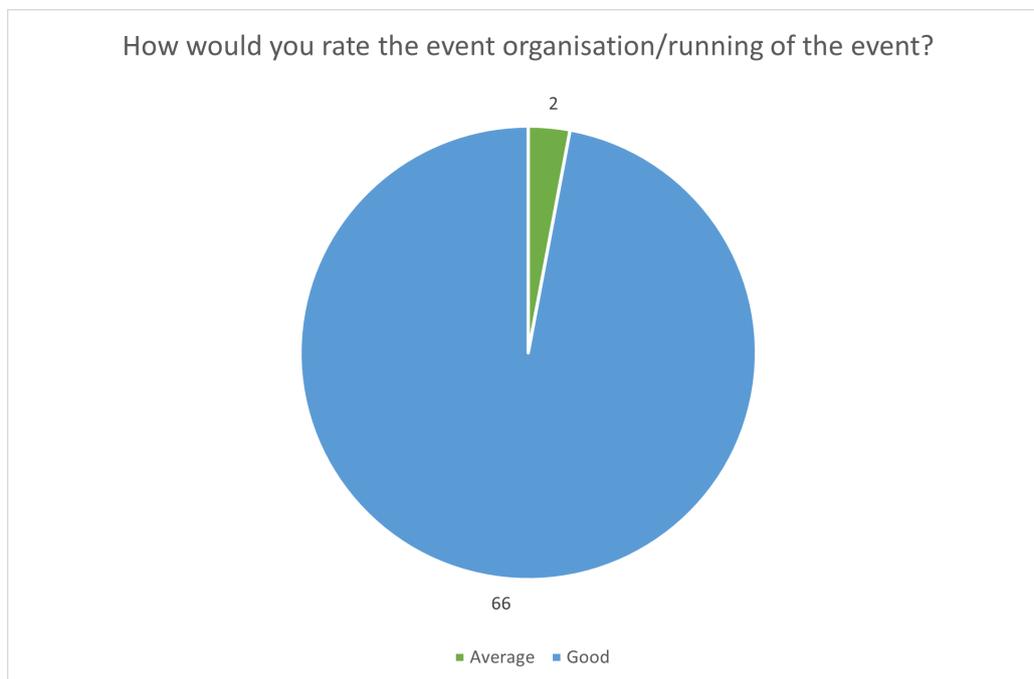
- Messages suggested as an alternative / additional / faster form of communication
- Repetition of communications e.g. reminders to register when registration already completed
- Earlier communications
- Earlier access to the program including workshop cancellations
- More frequent program updates
- Specific contact details for specific issues
- App available earlier, could have been utilised more, and promoted better
- Good social media announcements and advertising, and combination of LinkedIn and email communications a good idea
- Some emails too wordy resulting in important information being lost
- Some communications not sent to everyone

Questions about the event organisation

Question 7 - 68 responses



Question 9 - 68 responses



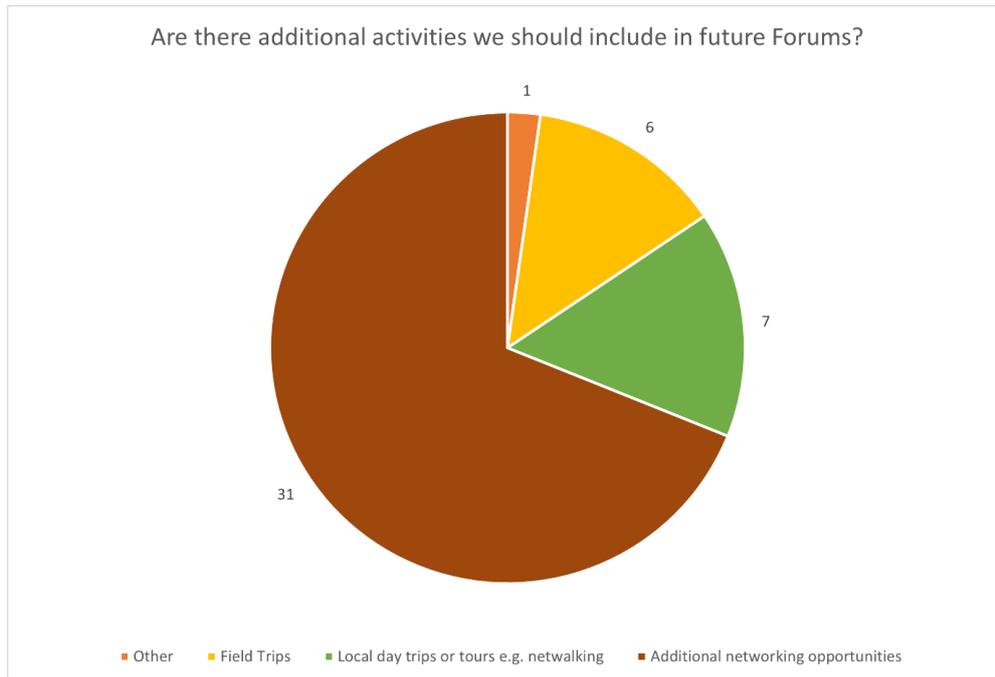
Question 10 – Any comments or advice on the organisation and running of the forum? - 30 responses

These are summarised in the following dot points:

- Organisation excellent, congratulations
- Appreciated attempts to fix any issues each day
- Appreciated bag check facility
- Access to proceedings
- More details about what registration included
- More charging stations
- Creche would be appreciated
- Quiet room
- Provided Wi-Fi was good
- Longer lunch breaks
- Networking and workshop events run throughout the year, in addition to the Forums
- Location and floor plan good
- Notice board great idea
- Inefficient (workshop) day one registration process
- 5-minute breaks in sessions a good idea

Questions about the event / program content

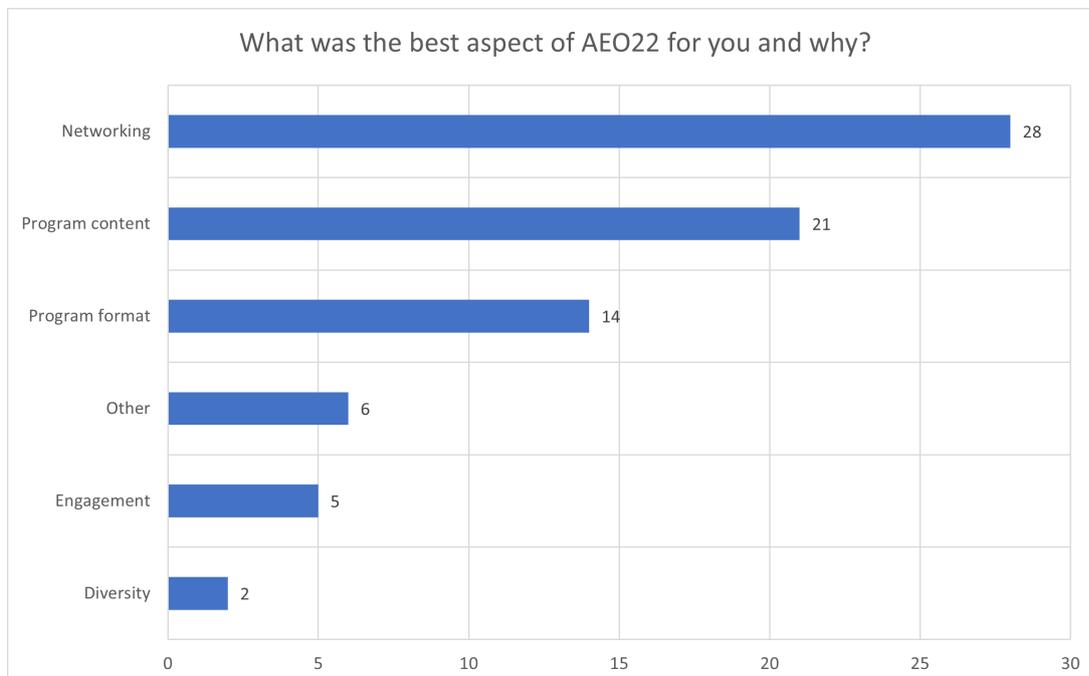
Question 8 – 45 responses



Other suggestions:

- Closing drinks

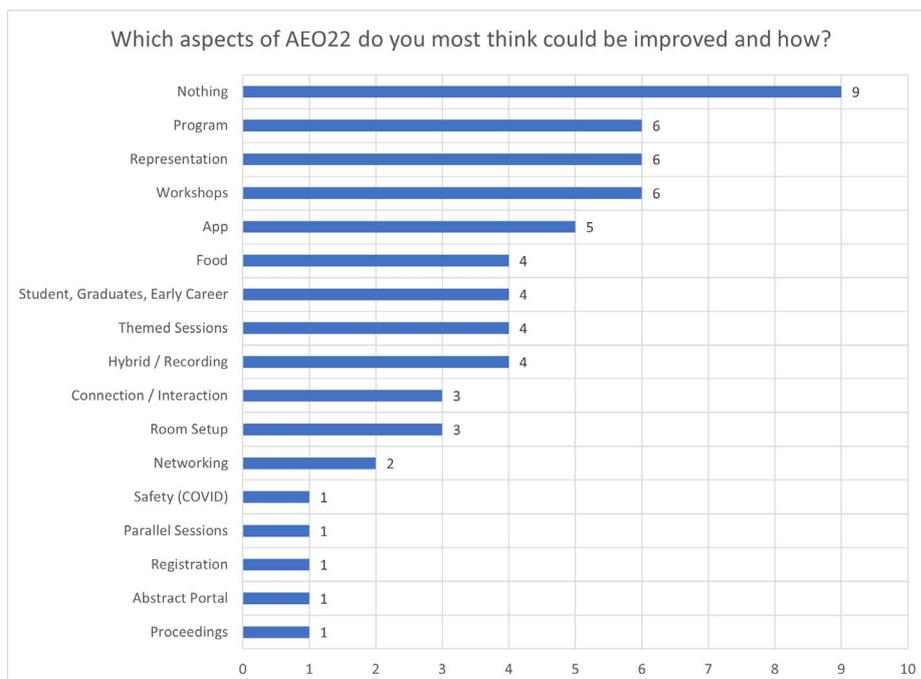
Question 11 – 76 responses



Details are summarised in the following dot points:

- Re Networking (28 comments):
 - Networking opportunities (note responses to additional activities question above)
 - Face-to-face event
- Re program content (21 comments):
 - Program content and variety of topics
 - Keynote speakers
 - Workshops topics
- Re program format (14 responses)
 - Variety of sessions
 - EO360 format
- Other (6 responses):
 - Overall experience
 - Forum's positive outlook
 - Boulevard Auditorium
 - Stuart Phinn and Karen Joyce plenary session hosts
 - Floor plan
 - Catering
- Re Engagement (5 responses):
 - Open discussion
 - Interaction between attendees, presenters, and other attendees
 - Interaction in plenary sessions
 - Interactions supported by the program formats
- Re Diversity (2 responses):
 - Diversity of participants (speakers and attendees) in terms of sectors, applications, backgrounds, and career stages

Question 12 – 61 responses



Comments are categorised by the above classes and are summarised (excluding “Nothing”) in the following dot points. It should be noted that some of the comments following align with those earlier in this report, however all comments are recorded as responses to their related questions and not collated.

- Program (6 responses):
 - Availability of a paper program
 - More detailed session descriptions
 - Stretch breaks in sessions a good idea
 - More training for EO360 presenters, some had insufficient time for discussion
- Increased representation (6 responses):
 - Attendance generally
 - First Nation peoples’ perspectives
 - Upstream and downstream
 - Crewed airborne
 - Government decision- and policy-makers
 - Students
- Workshops (6 responses):
 - Earlier and more detailed schedule
 - Catering provided
 - Interspersed within the program instead of on separate days
 - More hands-on and content to fit within the time allocated
- App (5 responses)
 - General improvement required
- Food (4 responses):
 - Over-catered ³
 - Fruit available at tea and lunch breaks
- Student, graduates, and early career attendees (4 responses):
 - More networking opportunities
 - “Sponsorships” for students
 - More specific activities
- Themed sessions (4 responses):
 - Have presentations in the same theme / topic to reduce the need to change rooms within a session
- Hybrid / Recording (4 responses):
 - For those unable to attend the Forum
 - For presenters and attendees at other sessions
- Connection / Interaction (3 responses):
 - More trivia etc. games
 - Digital interactive options for “quieter” attendees e.g. online polling, word clouds
 - Follow-up website for attendees to connect with each other
- Room Setup (3 responses):
 - Overcrowding in some of the smaller rooms due to the room setup
 - Request an indication of preferred sessions prior to the forum to assist with the allocation of rooms
- Networking (2 responses):
 - Closing social function
 - More networking events for all attendees

³ From BCEC: *All the food waste accumulated during prep and post functions is captured as organic waste and removed off site through waste management company Veolia. Any food that can still be consumed is diverted to [Oz Harvest](#).*

- Safety (COVID) (1 response):
 - Due to overcrowding in smaller rooms
- Parallel Sessions (1 response):
 - Remove parallel session option to increase interaction for all attendees
- Registration (1 response):
 - First day onsite was unstructured
- Abstract Portal (1 response):
 - Could be improved
- Proceedings (1 response):
 - Association with a publishing company to publish presentations

Question 13 – Do you have any suggestions for the 2024 Forum e.g. location, time of year, frequency, venue, topics, etc? - 47 responses

The following lists summarise the responses for several aspects of AEO24.

Location:

- Adelaide
- Brisbane
- Canberra
- Darwin
- Hobart
- Perth
- Regional Centre, easily accessible e.g. Cairns

Season:

- Winter in warmer areas e.g. Brisbane, Darwin, Perth
- Spring in colder areas e.g. Canberra, Hobart

Venue / Organising Committee:

- Brisbane Convention & Exhibition Centre
- University of Tasmania
- Australian Antarctic Division

Frequency:

- Annual
- Biennial

Duration:

- One week
- Shorter if same number of presentations

Topic / content:

- End user case histories / applications
- Tropical environment from EO
- Australian Space Agency
- Lidar workshop / networking event
- Enforcement and compliance
- Case histories / applications in climate change
- Case histories / applications in biodiversity loss
- Meteorological content
- Conservation
- Upstream EO
- Ocean and atmosphere

- Asia Pacific
- Lidar
- Mine Rehabilitation
- Bushfire and water resource monitoring
- Coastal ocean

Other comments:

- No parallel sessions
- Workshops useful
- Ensure no clashes with other events e.g. FOSS4G
- Keynote from leading expert from ESA / NASA / USGS / Planet
- Sponsor students
- More EO360 format
- Conference dinner

Final request for comments

Question 14 – Any other comments? - 29 responses

- Well run, enjoyable, and successful
- Thanks from the community
- Implementation of communities of practice by EOA for meetups during Forums
- Catering excellent
- Recording of plenary sessions and poster presentations would have been good
- Stronger focus on taking action, problem solving and implementable solutions that come from using Earth observation as a tool
- Central location close to cafes and other places of interest, and the ability to travel safely on public transport or by foot

Appendix 3 – What worked? What didn't work? What could we change?

The below notes are a summary and collation of feedback from Forum participants and lessons learnt by members of the Organising Committee (OC).

Items are grouped by question and then by subject. The same subject group may not appear in each question group.

What worked:

Program

Format

- Allowed interaction, engagement, and innovation of presentation style
- Provided a choice of presentation format without assigning an “importance” scale

Welcome to Country

- Choice of presenter
- Their presentation and engagement with the audience

Keynotes

- Choice of presenters
- Their presentation topics
- Their engagement with participants following their presentation and in the case of Anastasia and Renee throughout the Forum

Award presentations

- Engaging and worthwhile to recognise significant contributors to the EO community
- Took a while to get momentum for the awards prior to the Forum but ended up being in the top 5 of participants' favourite sessions as captured by the daily surveys
- Subsequent awards should be more popular and attractive

Venue, location, and timing

Venue

- Central location close to public transport, cafes, and accommodation
- Most comments on catering were positive
- Greatly supported the OC through 2 postponements

Posters

- Inclusion of the posters in the exhibition area raised “importance” of poster presentations and engagement with participants

Exhibition

- Design and build
- Exhibition builder and venue had good relationship
- Good engagement with OC to design and build an effective exhibition area that supported the overall connection, communication, and collaboration concept of the Forum
- Greatly supported the OC through 2 postponements

Location and timing

- Accessible to all national and interstate participants
- Good season choice for weather
- Not as expensive as other locations for the OC or participants

Networking and social events

- Very important aspect of the Forum
- Very popular
- Good variety and number, although could be more

Event management and staffing

- End of day surveys useful for a health check and to make any possible improvements the next day
- Volunteers
 - Very helpful to the OC
 - Were very eager to learn and network with peers
 - Appreciated the complimentary registrations as they might not have been able to attend otherwise

Facilities

Photographer

- Provided both posed and informal shots
- Facility to download the photos at no additional cost
- No printing costs
- Participants appreciated the media wall backdrop

Quiet spaces

- Good place for people to unwind whether they had sensory-overload or not
- A closed room may provide a better option

What did not work:

Event management and staffing

Registration check-in

- Long delays on Monday registrations for workshops due to only three staff available to distribute name badges and direct participants to their rooms

App design

- Inexperience with the software and lack of development time contributed here
- Participants appreciated attempts to improve this each day

What could we change:

The following are suggestions for improvement or desired facilities based on experience at AEO22. These changes may not be feasible or relevant for future forums, depending on the operating model and local circumstances.

Program

Include programs that are accessible for vision and hearing impaired

Include closed captions of presentations for deaf, hearing impaired, and sensory/processing disabilities

Event management and staffing

Need to identify OC and / or registration staff on-site better

The budget process

Include budget allocation and plan for more inclusivity and accessibility initiatives

Website and app testing for accessibility improvements

Re the event software (the issues below were due to inexperience with the software used at AEO22 and would be addressed moving forward)

- Need to streamline the online registration process
- Better define the registration portal access and maintenance responsibilities and ensure backup staff engaged and available
- Improve the abstract portal for submitters and reviewers
- Include a downloadable program / program highlights for people to print out
- Earlier engagement with the exhibition build team and exhibitors

Need to distinguish groups of exit questions better next time e.g. some of the comments about the event organisation were more relevant to the program content and were moved there in the analysis

Sponsorship

Design better standard and tailored packages

Engage early, especially for seed funding

Communications

Start the social communications earlier

Advertise the program, including workshops earlier

Venue, location, and timing

Food and beverage (F&B) offerings during networking sessions

Choices of F&B e.g. include fruit options

Include access to small rooms for meetings

Evaluation (in advance) of venue accessibility options e.g. prayer space, gender neutral bathrooms, breastfeeding, and family facilities

Networking and social events

Awards ceremony

Include a “formal” dinner?

Have a closing networking event?

Facilities

Childcare (on site and grants to enable support for child-care at home for partners / carers)

Sponsorship for student attendance

Prizes for best student poster presentation

Proceedings of presentations