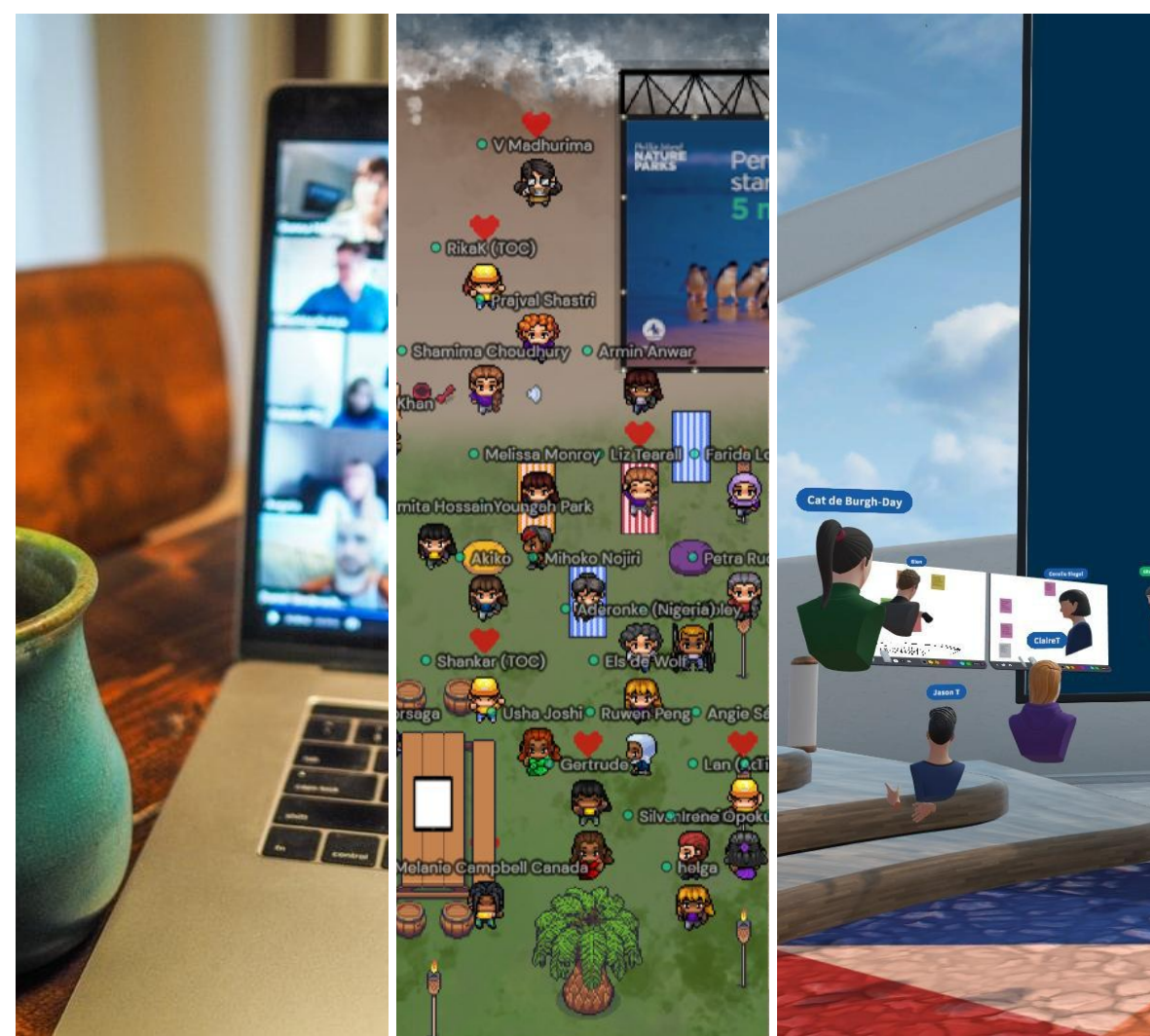




Beyond normal: the future of meetings and collaborations in science

Vanessa Moss • [@cosmicpudding](https://twitter.com/cosmicpudding)





Dharug

Wallumedegal

Noongar

Acknowledgement of country

Ngambri

Ngunnawal

Introduction

Based at **CSIRO Space & Astronomy** (Sydney) since June 2019 - prior **ASTRON** (2017-2019) and **University of Sydney** (2010-2017)

Current key roles include:



Head of ASKAP Science Operations focusing on survey science specification to ingest



ATCA DA Coordinator responsible for training duty astronomers to support the telescope



The Future of Meetings (TFOM) Chair
(ongoing as part of post-symposium phase)



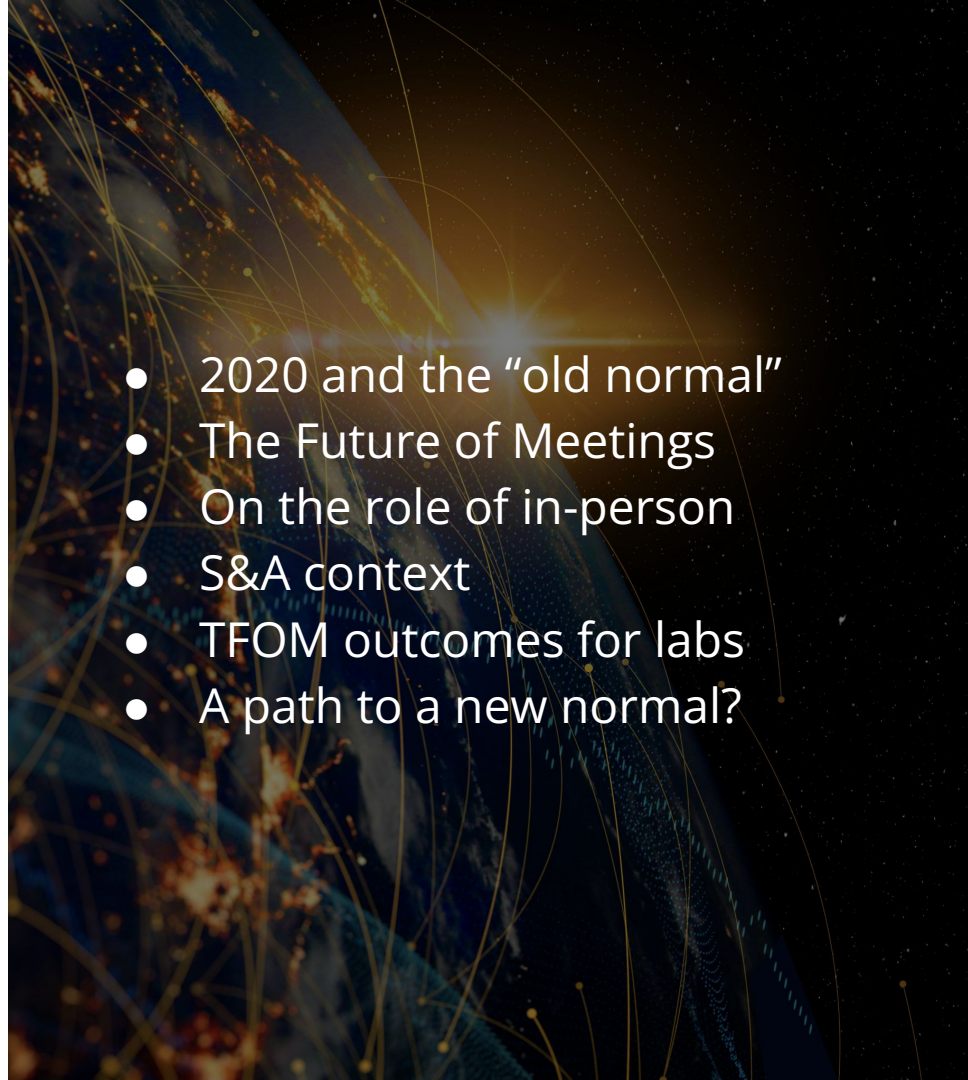
EMCR Forum exec member as part of the Australian Academy of Science



Overview of this talk

TFOM and Labs of the Future

- 2020 and the “old normal”
- The Future of Meetings
- On the role of in-person
- S&A context
- TFOM outcomes for labs
- A path to a new normal?



2020

the year that was...





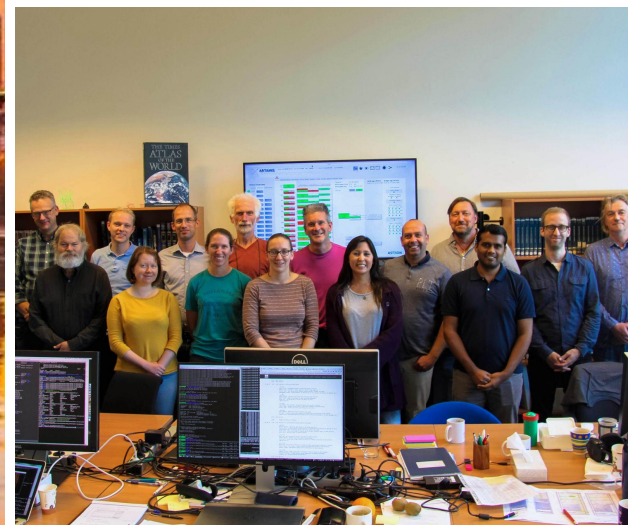
The last thing I did before COVID-19 closed Australian borders was a Perth trip for training, meetings and collaboration



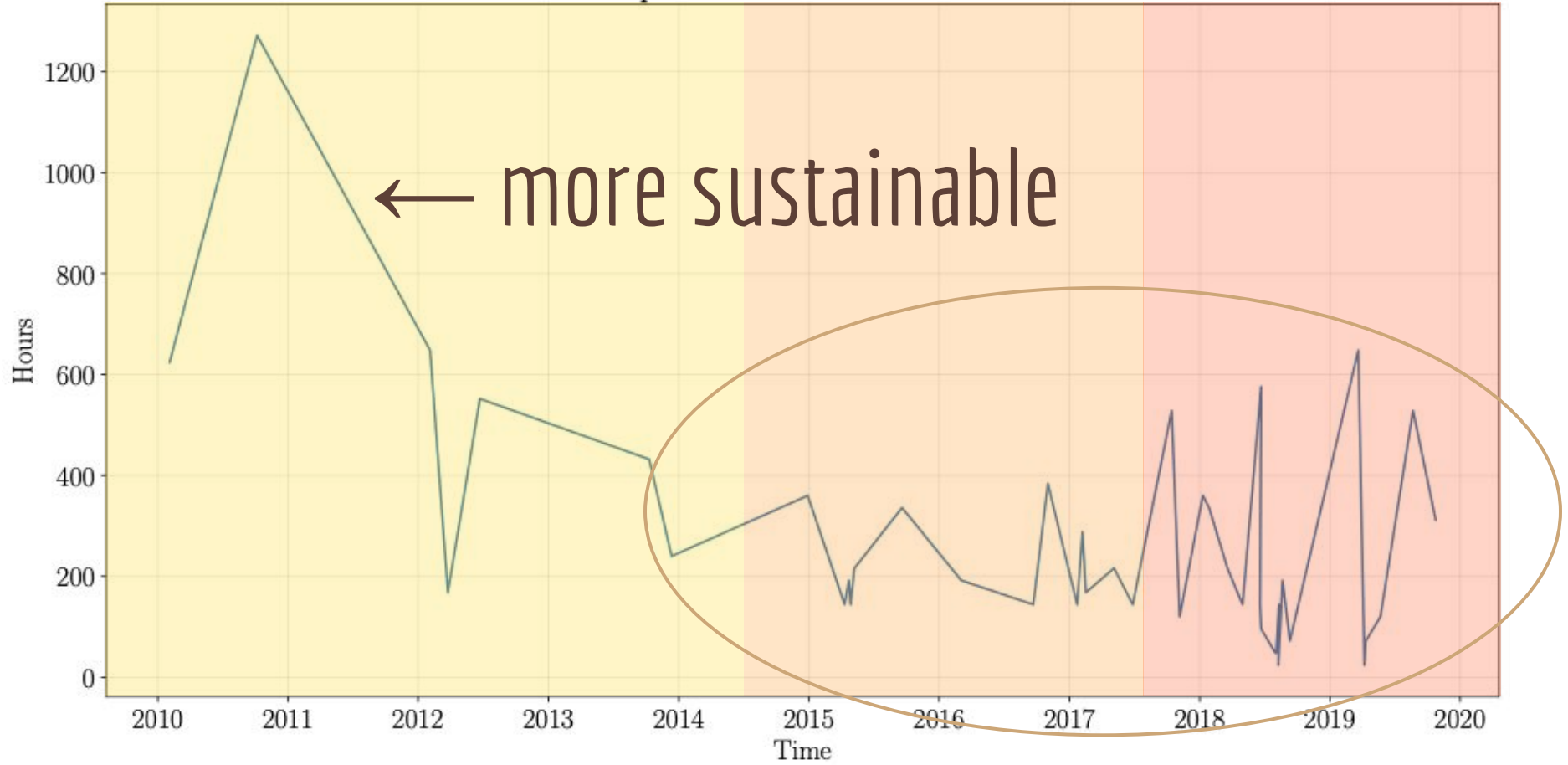


URSI GASS 2021
28 AUGUST – 4 SEPTEMBER

In 2020, I was meant to travel to Italy for PHISCC, to Georgia for HVCs, to ASTRON for collaboration and to Italy for URSI



Hours spent overseas between 2010-2020



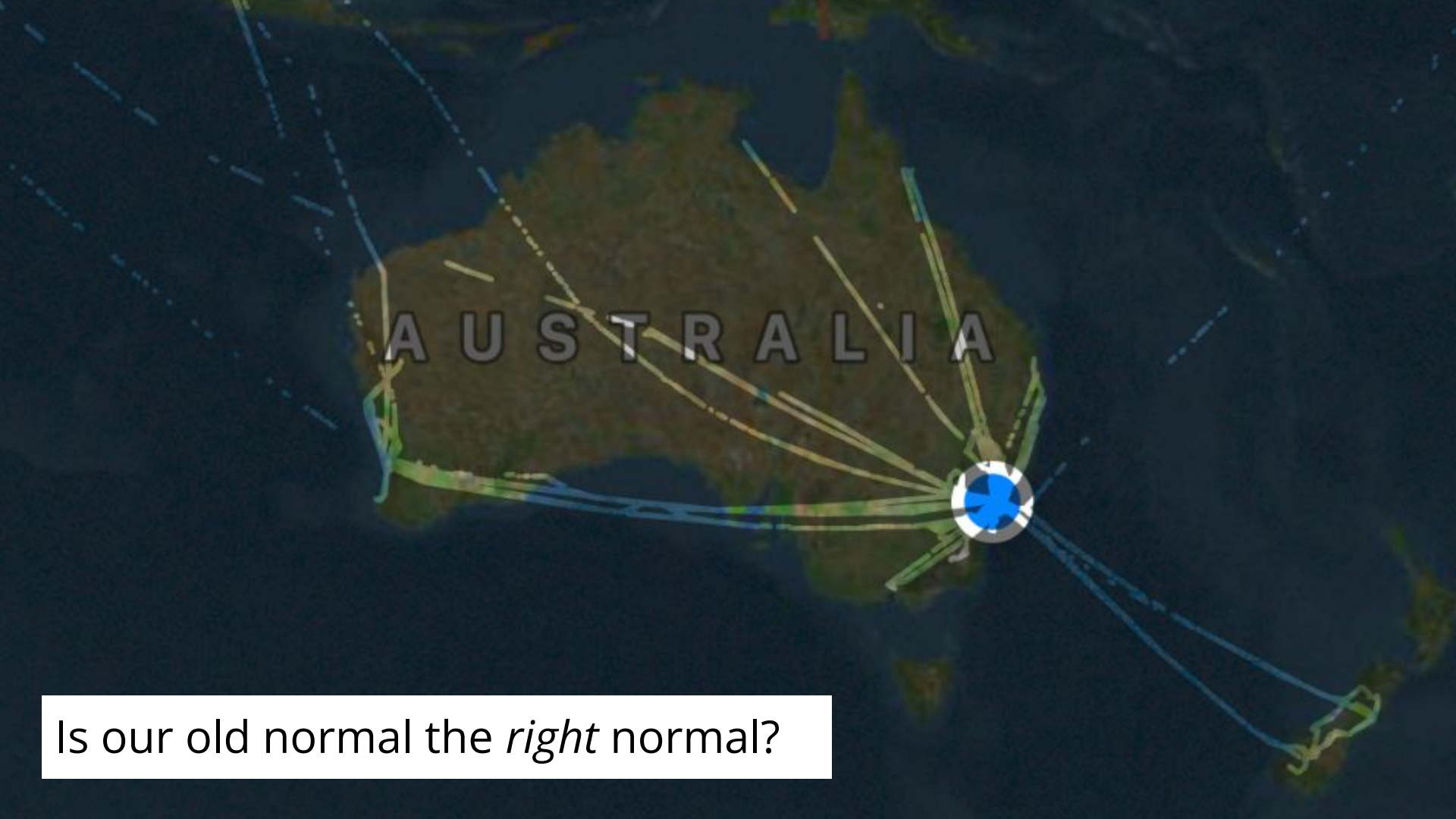


Sydney, February 2020

Current Trends

- Financial Hardship
- Work-related Stress
- Family burnout
- Loneliness and Isolation
- Uncertainty
- Languishing





A U S T R A L I A

Is our old normal the *right* normal?

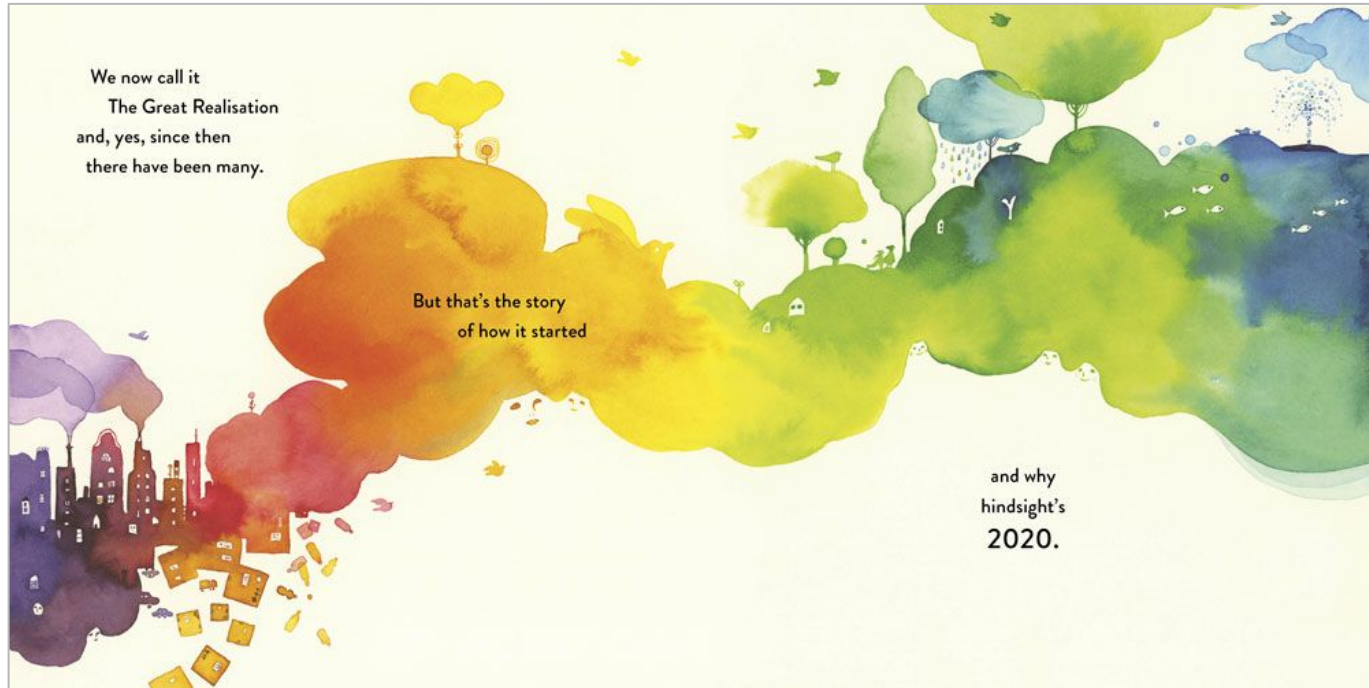
What happens when you're not "in the room"?



Can we be together with people when we're apart?



Was everything about COVID-19 bad?



RESEARCH+ SYMPOSIUM

The Future of Meetings

COMING IN Q3 2020

VIRTUAL | REMOTE | COLLABORATION
SUSTAINABILITY | INCLUSIVITY | SOCIAL



REGISTER INTEREST NOW

[Click here](#)

Human collaboration is fundamental to sustaining and progressing essential economic, scientific and cultural activity. The precipitous governmental and social response to COVID19 enforces physical distancing, and effective climate action relies on making significant shifts towards sustainable commuting. Large parts of the "knowledge" workforce have adapted by scaling and expanding use of existing remote collaborative technologies so that these are ubiquitous, fundamental, and sometimes sole channels of communication. For science, this amplifies and emphasises existing problems in running remote participant inclusive, semi-distributed meetings and conferences.

Specific and urgent reflection and research is required to optimise distributed meetings and conferences to maximise generated value and minimise harms. Dual concerns of future meetings include "how do we make best use of existing and emerging collaborative technologies" and "what culture and practices are there and could there be that would help"? How do we maximise contributions and creativity, while minimising negative interactions or outcomes?

The Future of Meetings Symposium, 15-17 Sep 2020

TFOM: BEST PRACTICE FOR INTERACTION

@FUTUREMEETINGS



ACCESSIBILITY, INCLUSIVITY, SUSTAINABILITY

Maximise accessibility, inclusivity and sustainability in all activities

Your choice of technology, approach and structure for any activity or interaction determines how accessible, inclusive and sustainable it will be as a result, which translates to positive or negative impact on both people and the environment



DIGITAL FIRST

Embrace a digital-first approach to interaction where possible

Going digital-first offers a level playing field for those involved and brings many opportunities for innovative ways to connect and collaborate



RIGHT TOOL/APPROACH

Find the right tool/approach for the given situation

Tools such as Whova, Altspacex or Gather work best for very different contexts, so it is worth clearly defining your goals and choosing the tool/s to suit these desired outcomes



EXPERIMENTATION

Experiment regularly to build awareness of new solutions

Experimentation with new tools and approaches gives you diversity of experience, which then feeds into the suite of available solutions you have at your disposal



VALUE

Recognise the value that your team brings

By utilising the expertise of your team and taking ownership, it is possible to minimise outsourcing to where it is best applicable which maximises value for investment



EVALUATION

Evaluate at every step of the process for maximum impact

Evaluation of how well you are meeting your goals consistently provides useful reality checks and encourages you to adjust or adapt where needed



<https://zenodo.org/record/4345562>

- ✓ **D**igital-first
- ✓ **A**ccessibility
- ✓ **I**nclusivity
- ✓ **S**ustainability
- ✓ **E**xperimentation
- ✓ **R**ight tool/approach
- ✓ **V**alue
- ✓ **E**valuation



<https://tfom.org>



<https://www.nature.com/articles/s41550-021-01325-z>

What's wrong with our current normal?

- ✗ In-person format directly ported online
- ✗ People in the room ignore online people
- ✗ Time zones make scheduling impossible
- ✗ Several hours straight without a break
- ✗ The “void” of online webinars
- ✗ No hallway/serendipitous conversations
- ✗ Too many (long) meetings
- ✗ Technical failure is super common
- ✗ Tech stack has too many apps
- ✗ Video calls aren't serving the need
- ✗ Don't get feedback as a speaker
- ✗ Hours and hours of conference talks
- ✗ Can't attend virtual without distraction
- ✓ Design the format to suit the interaction
- ✓ Use digital-first to give all a voice
- ✓ Maximise asynchronous communication
- ✓ Mandate breaks every hour
- ✓ Have ways of signalling presence
- ✓ Use tools that allow organic interaction
- ✓ Only use a meeting when needed
- ✓ Prepare, practice, test, have back ups!
- ✓ Build purposefully but keep it simple
- ✓ Use the right tool for the job
- ✓ Develop skills, allow audience feedback
- ✓ Prioritise many-to-many interaction
- ✓ Develop cultural norms and boundaries



When to “in-person”

Maximising the value of F2F interaction

- **Social events/activities**
 - Lunches, farewells, BBQs
- **Difficult conversations**
 - c.f. “Up In the Air” movie
- **Catch-ups / sharing ideas**
 - The “hallway conversation”
- **If the work requires it***
 - c.f. Labs of the Future
- **Building personal networks**
 - Especially for new people
- **Immersive collaboration**
 - e.g. sabbaticals, long-term stays



SIGGRAPH BOF

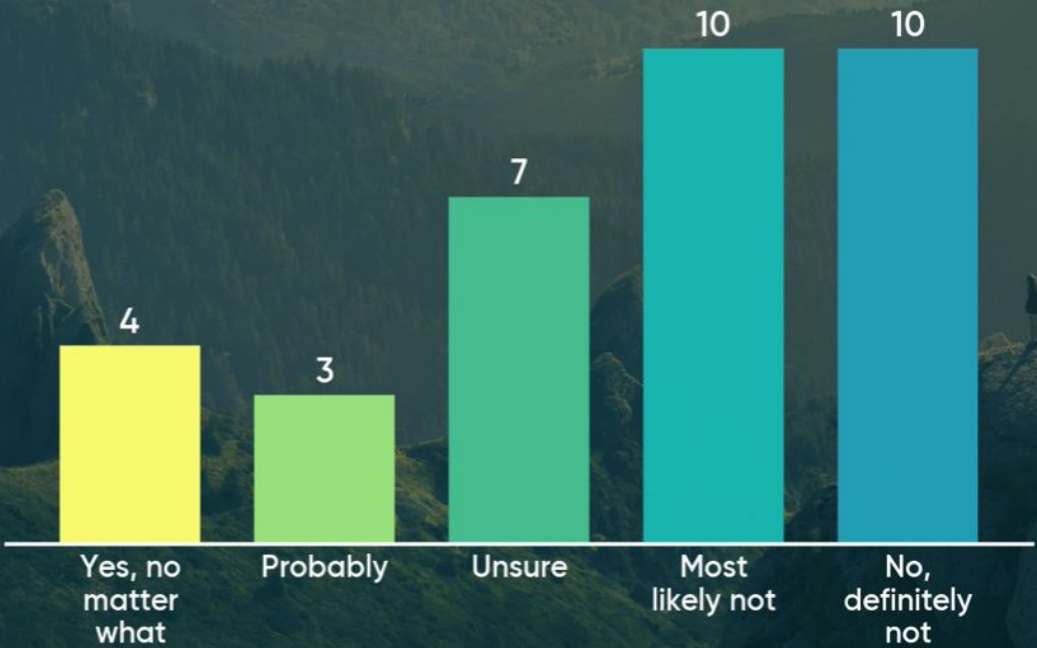
“The Future of Meetings: Working in XR?”

XR: The term “XR” is typically used to collect and describe the various kinds of “extended reality”, including virtual, augmented and mixed reality



The
Future of
Meetings:
Working
in XR?

Would you have been at SIGGRAPH 2021 if it was in person?



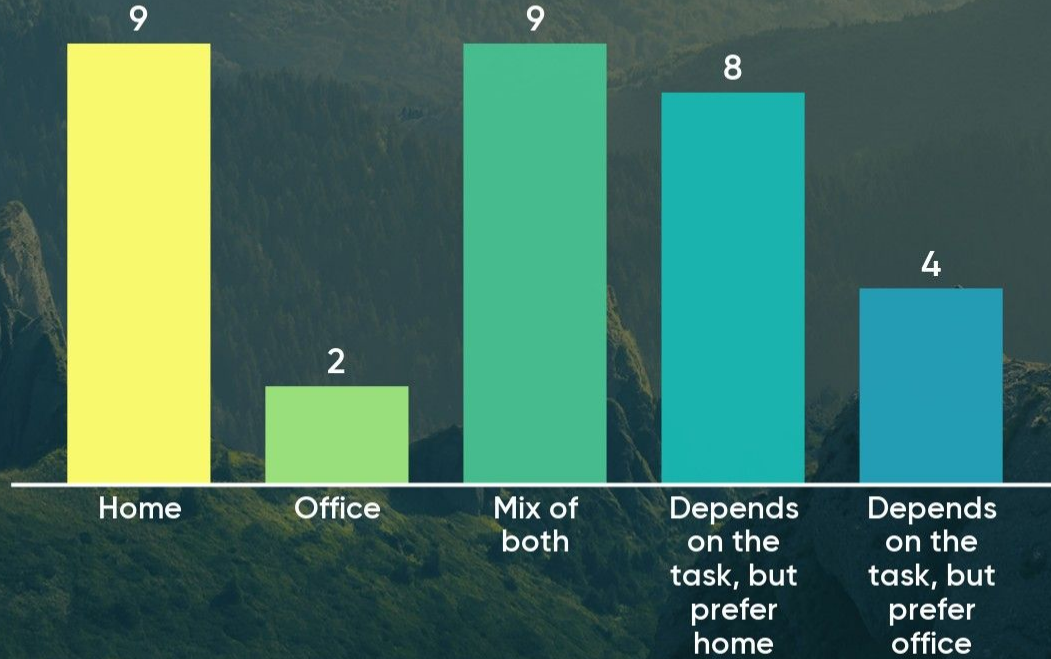
→ The "new normal" can be more inclusive and accessible

When will XR stop becoming a gimmick and be truly useful?



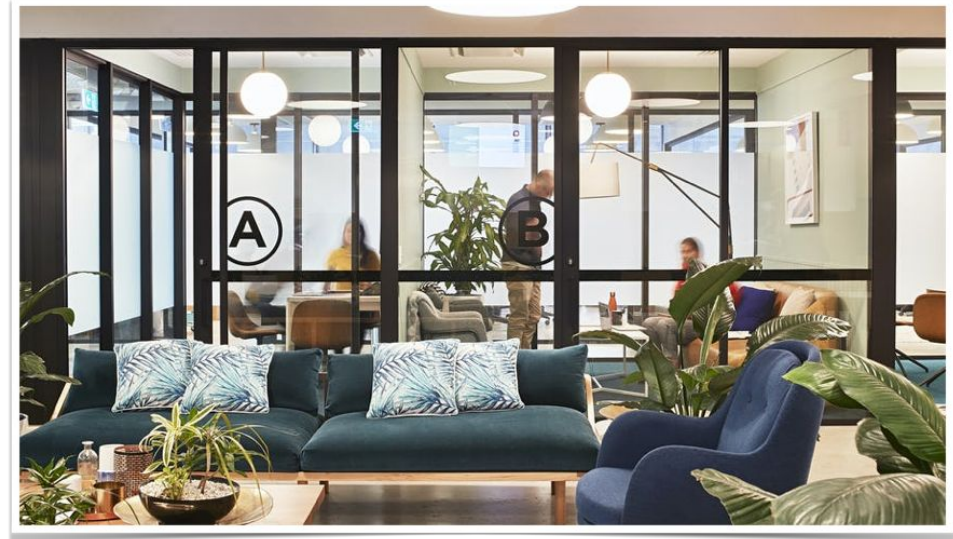
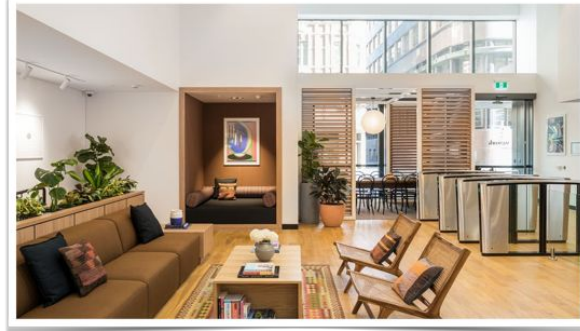
→ *Mixed and extended reality is going to change everything*

Are you more productive working from home or from the office?



→ *The role of the office is changing on a large scale*

“What’s the role of the office anyway?” - WeWork



The S&A context

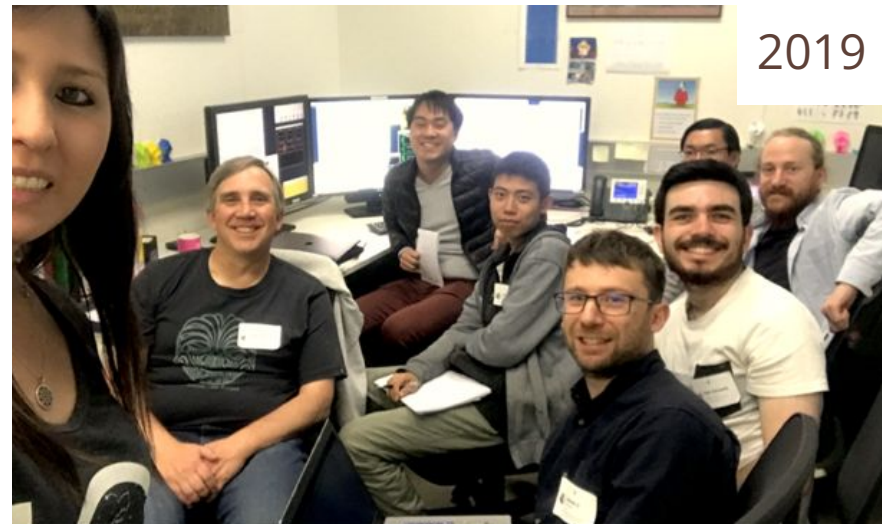
What do our labs of the future look like?

- **Engineering labs**
 - Receivers, antennas, signals
 - Balance between east/west
- **Telescope operations**
 - Remote observing (ATCA/Parkes)
 - Training the next generation
 - Remote management (ASKAP)
 - Autonomous control (SAURON)
- **HPC and supercomputing**
 - Bringing code to data
 - Virtual distributed machines
- **Collaboration**
 - Cross-country and international
 - Widely distributed teams

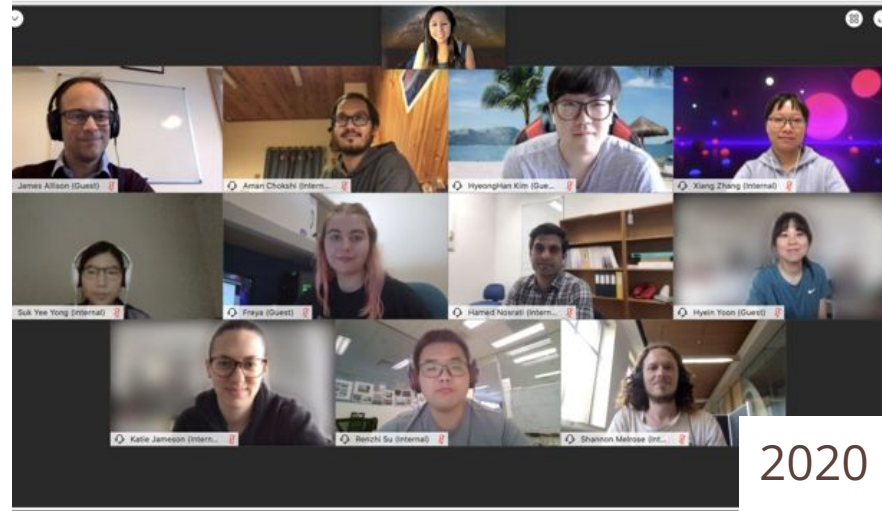


How best can we develop required technical skills of next-generation radio astronomers while being equitable and sustainable?

2019

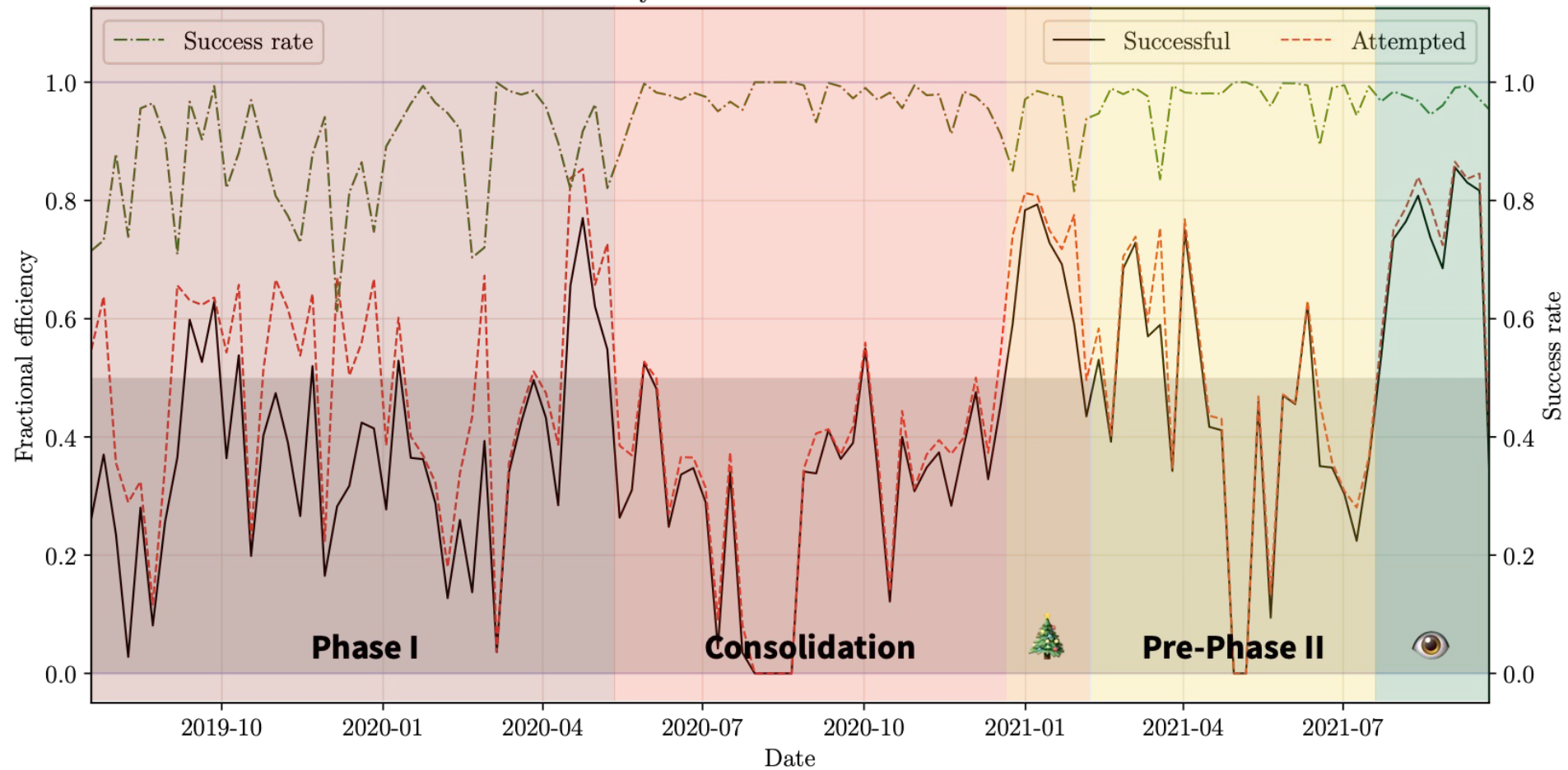


???



2020

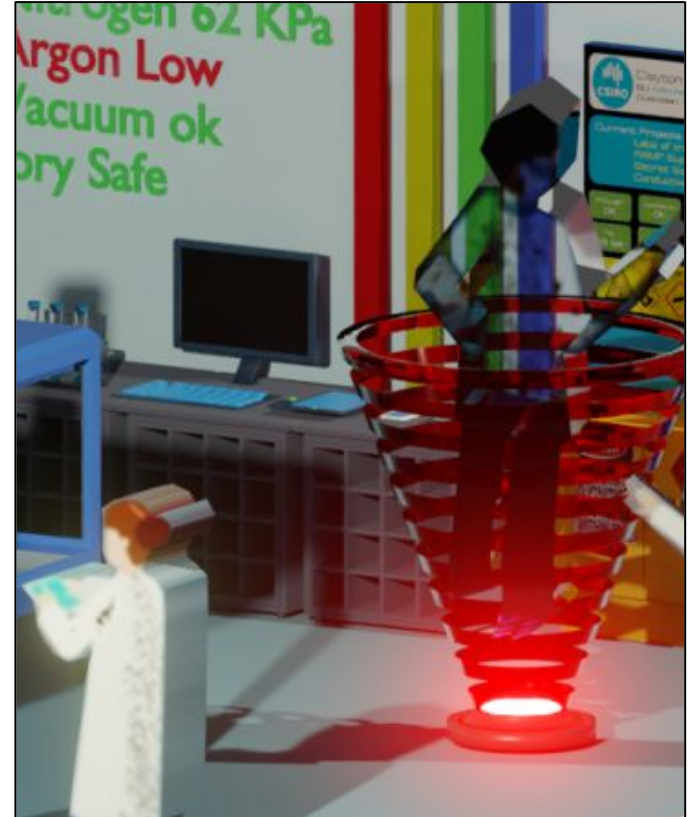
Observational efficiency: 2019-07-15 05:25:56 → 2021-09-22 02:24:47



DAISERVE for LOTF?

DAISERVE came out of exploration for the future of meetings, but it has central relevance for our **future ways of working**, including future-proofing our labs.

- **Digital first:** how do we conduct lab work efficiently, across states, nations, globally?
- **Accessible and inclusive:** are we designing our experimental workflows to include, or exclude?
- **Sustainable:** what is the minimum possible environmental footprint of our future labs?
- **Experiment for right tools:** will the LOTF be flexible in the face of changing tech/approach?
- **Value:** what is the role of the human in LOTF?
- **Evaluation:** can we assess and adjust during?





Karen

Shivani

Sarah Pearce

Aidan

*"In our view of the future, it is not so much distance that will be abolished, but rather our current concept of **being there.**"*

- Hollan & Stornetta 1992
 [Beyond Being There](#)

Recommendations

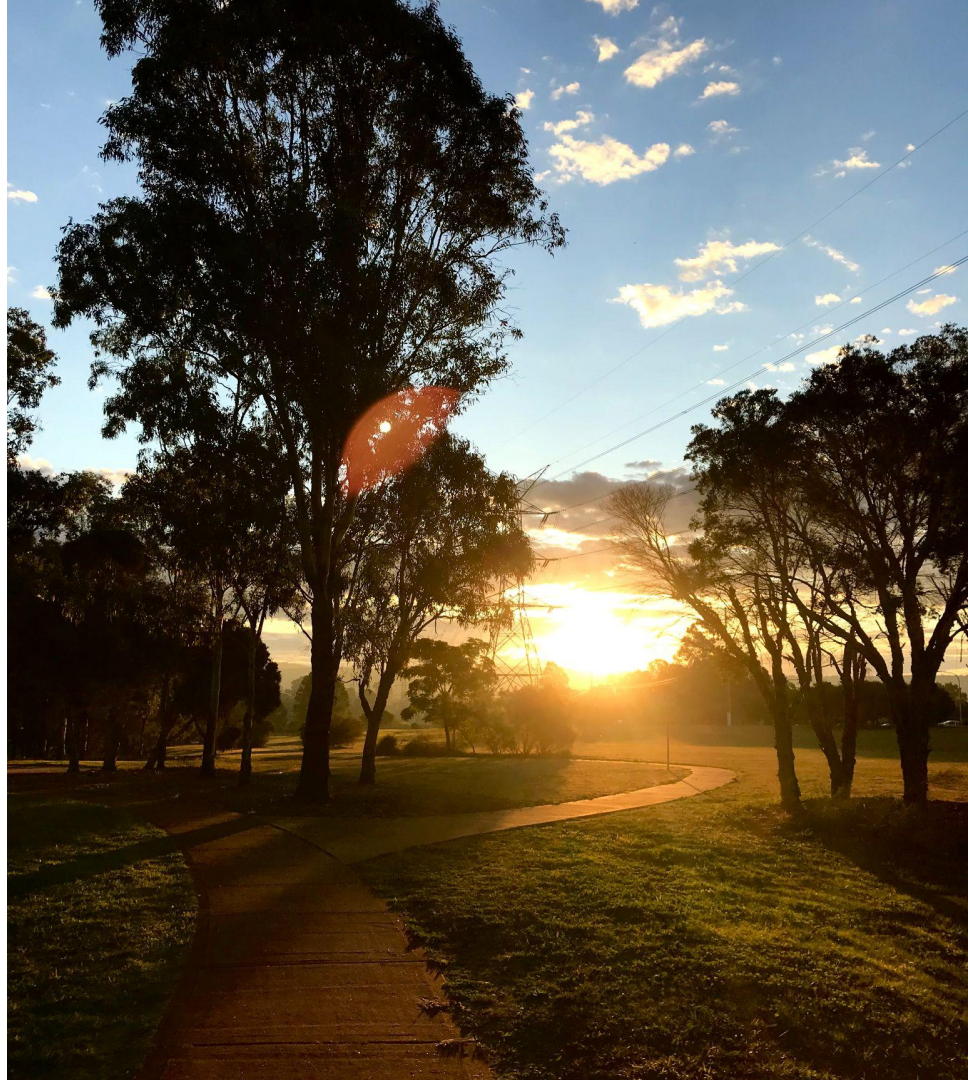
From TFOM to Labs of the Future

- Consider role of **DAISERVE**
- Aim to **include**, not exclude
- Incorporate **in-person** wisely
- **Prepare** for the future of work
- **Maximise** location neutrality
- **Minimise** human dependency
- Account for growth in **XR**



2020

the year that showed us what could be



Appendix

Additional material to accompany main slides

Resources and links

- TFOM Report: <https://zenodo.org/record/4345562>
- TFOM Nature comment: <https://www.nature.com/articles/s41550-021-01325-z>
- TFOM website: <https://thefutureofmeetings.wordpress.com>
- SIGGRAPH BOF: <https://thefutureofmeetings.wordpress.com/siggraph-2021-birds-of-a-feather>
- URSI 2021 talk on ASKAP: <https://youtu.be/l4pcKMhK79w>
- TFOM Twitter: <https://twitter.com/futuremeetings>
- DAISERVE infographic: <https://zenodo.org/record/4588075>
- CSIRO TFOM blog: <https://blog.csiro.au/five-tips-future-meetings>
- Astronomers for Planet Earth: <https://astronomersforplanet.earth>
- Beyond Being There: <http://worrydream.com/refs/Hollan%20-%20Beyond%20Being%20There.pdf>

Digital-first

- Give preference to digital forms of communication over in-person
- Ensure that chosen methods allow everyone involved to have an equal voice
- Design networking to be via virtual means regardless of location
- Avoid scenarios with a majority of people in-person and only a few virtual participants
- Focus on ways of connecting people that remove emphasis on their physical location
- If doing things in-person, consider who is not given access and whether this is okay
- Establish methods to check on whether the ways of communicating are working for everyone
- Ensure there is always an effective digital-first way of connecting (by design) for any interaction

*Embrace a Digital-first approach to
interaction where possible*

Accessibility, Inclusivity, Sustainability

- Be clear about accessibility measures in place for a given interaction
- Give participants a way to make any further accessibility needs known
- Enable accessibility features for all meetings, not just when required (e.g. live captioning)
- Make content available before and after a meeting, to allow others to participate asynchronously
- In group interactions, give ample opportunity for everyone to contribute
- Assess your interactions to see if anyone might have been unable to fully participate (and why)
- Consider, quantify and minimise the carbon impact of your research or work activities
- Calculate the carbon footprint of interactions, and offset them via appropriate schemes or trees
- Use in-person interaction sparingly, as it minimises accessibility, inclusivity and sustainability

*Maximise Accessibility, Inclusivity and
Sustainability in all activities*

Experimentation

- Encourage and be open to the trial of new approaches and tools for a given interaction
- Set aside dedicated time on a regular basis for experimentation to try new tools
- Keep track of possible new tools and approaches in a centralised location, e.g. a Padlet
- Carry out experiments in a group that can provide diverse perspectives on the outcome
- Consider aspects such as accessibility, inclusivity and sustainability when experimenting
- Channel a growth mindset as much as possible when it comes to existing processes/structures
- Ensure that policies do not impede the ability to find the best and most suitable solution

*Experiment regularly to build awareness
of new solutions*

Right tool/approach

- Clearly define the goals and outcomes from an interaction, as well as requirements
- Make a shortlist of potential candidates and trial these where possible to see if they are a good fit
- Ensure you are aware of constraints within your organisation when seeking the tool/approach
- If a tool/approach requires investment, consider short and long terms gains/costs from adopting
- Treat the adoption of a new tool/approach as experimental, and be open to feedback or change
- Discuss your needs with others who may be aware of other solutions to your context
- Evaluate the approach on a regular basis, combining with experimentation for new approaches

*Find the Right tool/approach for the
given situation*

Value

- If designing an event, conference or meeting, list what capabilities are needed for it to succeed
- Actively recruit committee members based on their expertise, capabilities and interest
- Consult with other organisers for advice based on their recent experiences
- Be willing to share advice and lessons learned on the conclusion of your event or conference
- Discuss your needs with external parties and be clear about what your expectations are
- Balance outsourcing against the factors of time, cost, processes involved and expected result
- Rank capabilities needed in terms of in-house, nice to outsource and necessary to outsource

Recognise the Value your team brings

Evaluation

- Make sure the goals and outcomes of any event or interaction are clearly defined from the start
- Alongside goals, identify ways that success will be quantitatively or qualitatively measured
- If relevant, partner with experts in evaluation to define a clear path for evaluation
- Involve organisational representatives of ethics and/or privacy as early as possible in the process
- Provide ways for stakeholders to give insight and feedback through the process of an interaction
- Ensure that as well as evaluating, you commit to taking action on addressing the outcomes
- Keep track of choices and decisions made (and why) to help you evaluate success later
- Hold yourself accountable to evaluation and make the outcomes clear to stakeholders as well

*Evaluate at every step of the process for
maximum impact*