



Decadal plan for Australian astronomy 2016–2025

Mid-term review



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Lister Staveley-Smith



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BACKGROUND

- 2016-25 Astronomy Decadal Plan informs investment by Government via AAL, DIIS, NCRIS etc.
- 2021-25 Mid-term review is an opportunity to update Plan and examine new opportunities



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FOR ASTRONOMY

AUSTRALIAN
ACADEMY OF SCIENCE | JULY 2015

Australia in the era of global astronomy

The decadal plan for
Australian astronomy
2016–2025

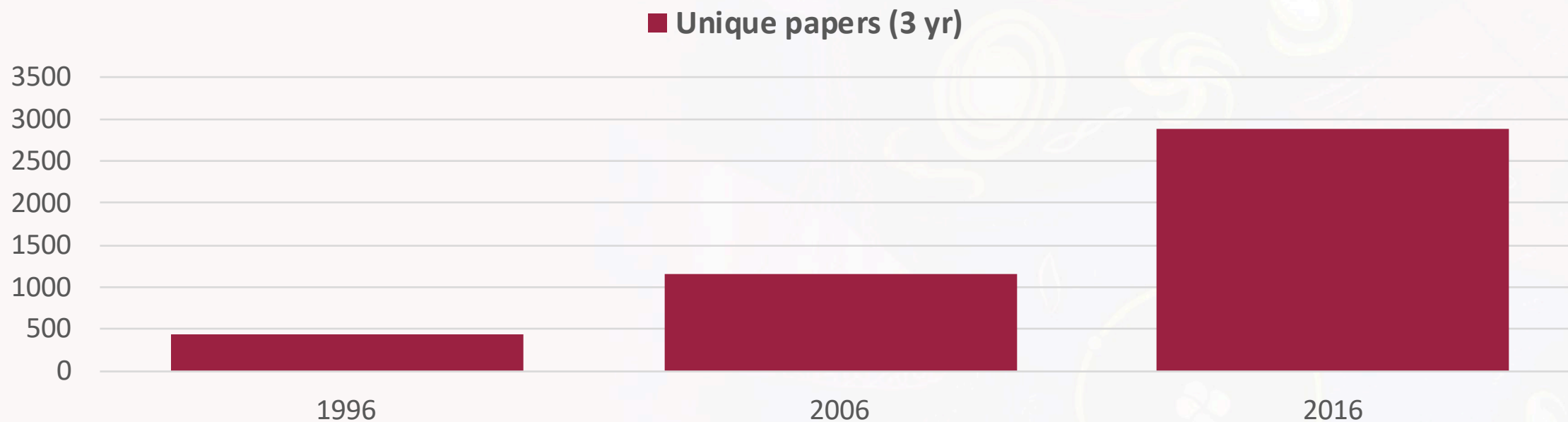




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Growth in astronomy over three Decadal Plans

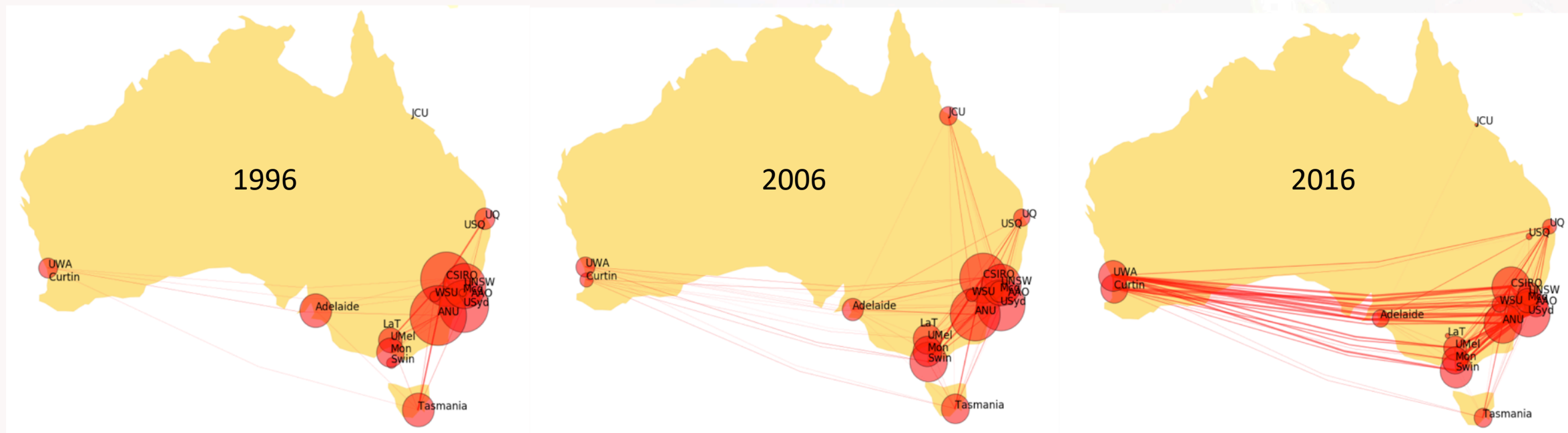




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Normalised distribution of astronomers and their publication network over three Decadal Plans

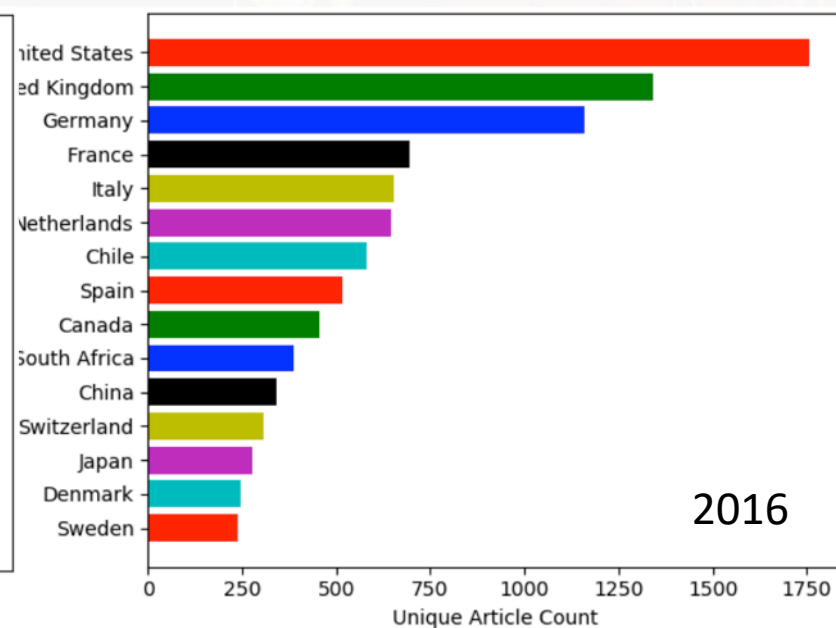
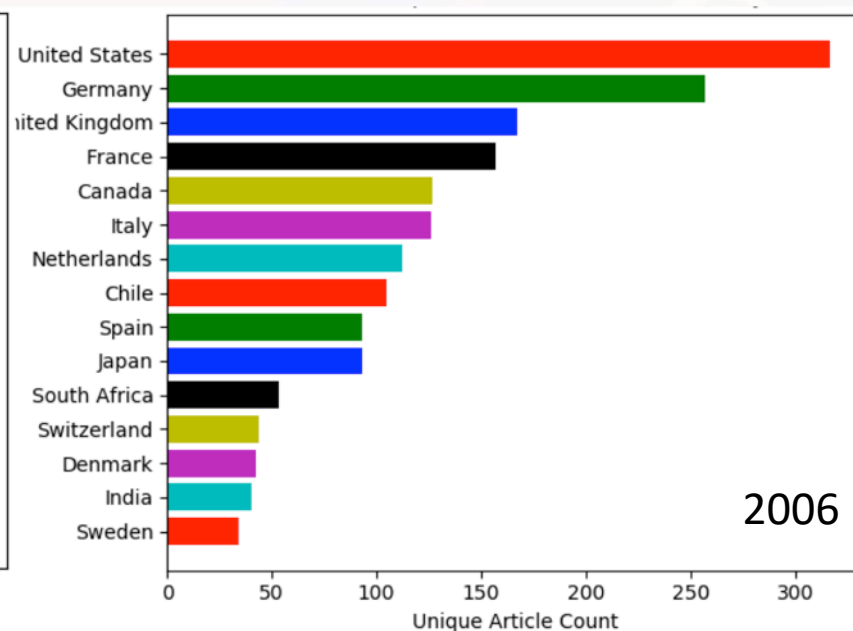
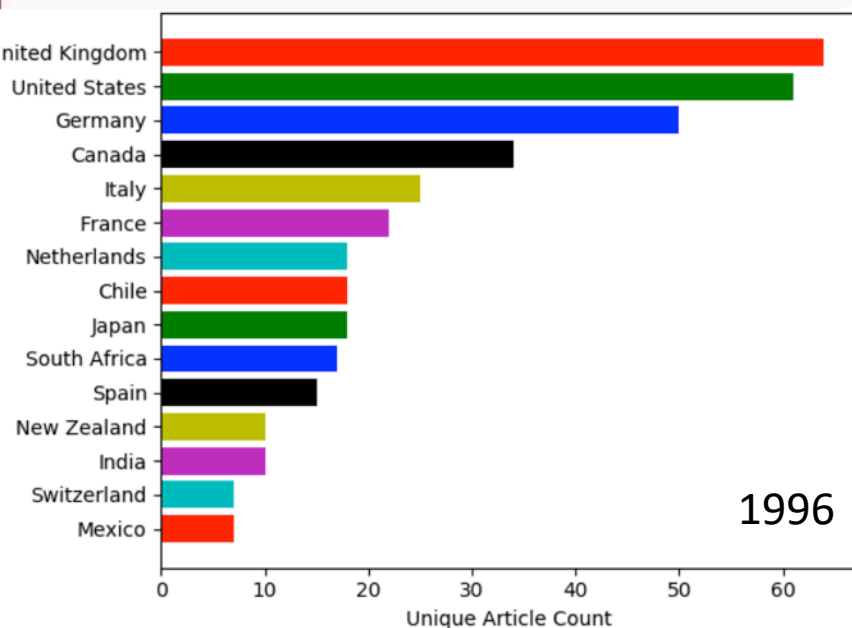




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International collaboration over three Astronomy Decadal Plans





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Decadal Plan 2016-25 Strategic Priorities

- ✓ • Partnership equating to 30% of an 8-metre class optical/infrared telescope
- ✓ • Continued development and operations of Square Kilometre Array (SKA) precursors, the Australian SKA Pathfinder (ASKAP) and Murchison Widefield Array (MWA) at the Murchison Radio-astronomy Observatory (MRO), and membership of the SKA telescope
- (✓) • Partnership equating to 10% of a 30-metre class optical/infrared extremely large telescope (ELT), such as the Giant Magellan Telescope (GMT)



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Decadal Plan 2016-25 Strategic Priorities

- (✓) • Capability within the national observatories (the Australian Astronomical Observatory, AAO; and Australia Telescope National Facility, ATNF) to maximise Australia's engagement in global projects through instrumentation development for these and other facilities
- (✓) • World-class high performance computing (HPC) and software capability for large theoretical simulations, and resources to enable processing and delivery of large data sets from these facilities



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Decadal Plan 2016-25 Community Priorities

- (✓) • Utilisation of astronomy to improve participation and the standard of science education in schools through teacher-training programs;
- (✓) • Provision of graduate training that includes transferable skills to provide highly skilled graduates for roles in wider society;
- ✗ • Establishment of a central body to promote and facilitate industry engagement with the next generation of global facilities;
- (✓) • Adoption of principles and practices that aim for at least 33% female representation at all levels of Australian astronomy by 2025.



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NEW OPPORTUNITIES

Opportunity 1: Gravitational waves and multi-messenger astronomy

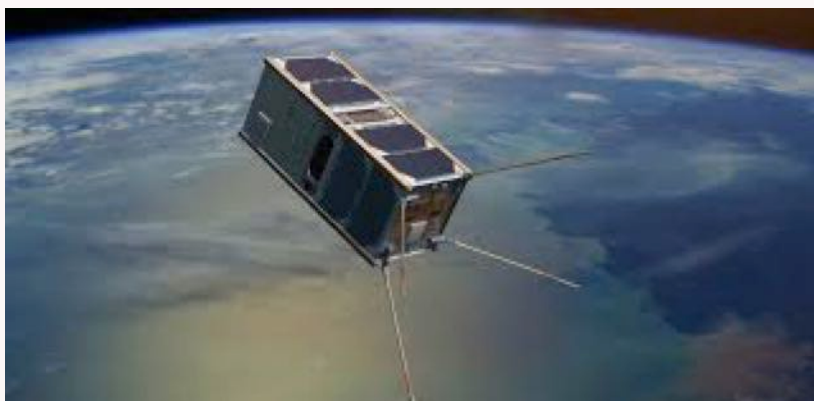




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Opportunity 2: Space



Australian Government

Australian
Space
Agency



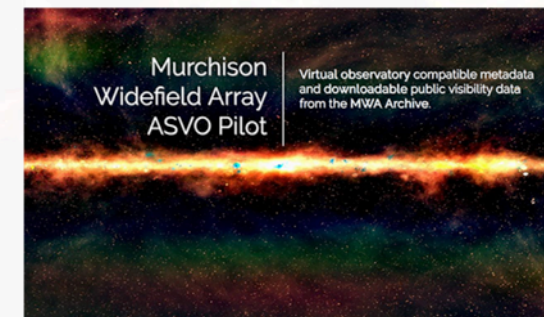
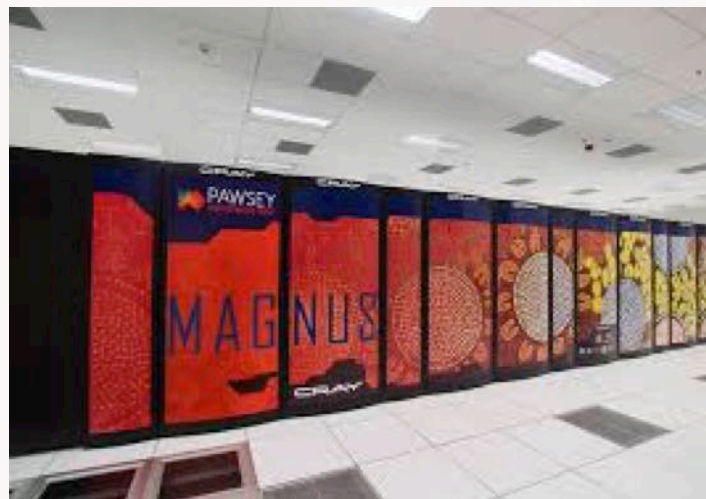
Australian
Space Agency



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Opportunity 3: data centres, HPC



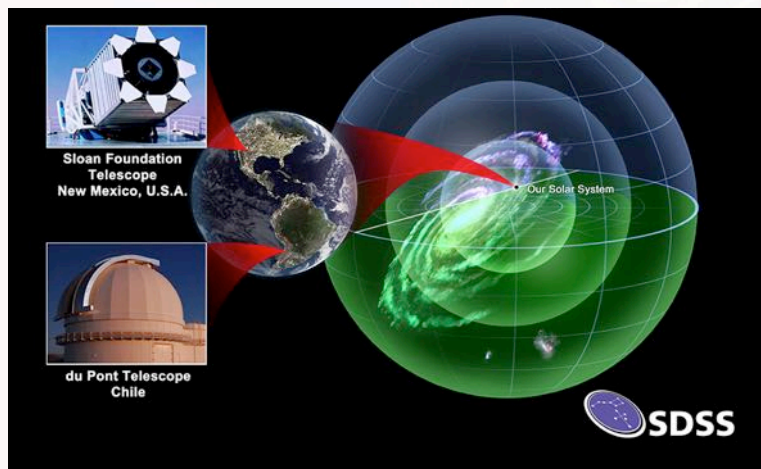
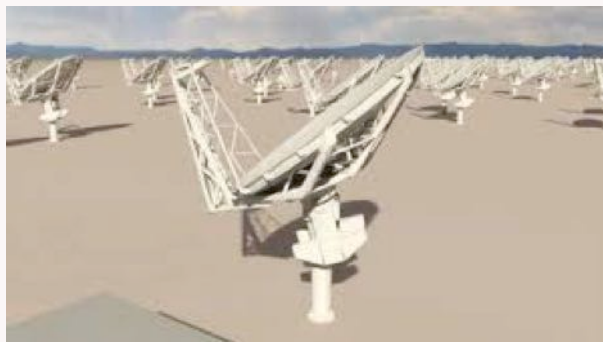
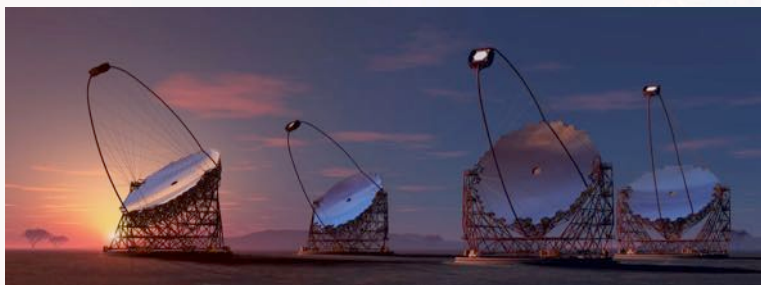
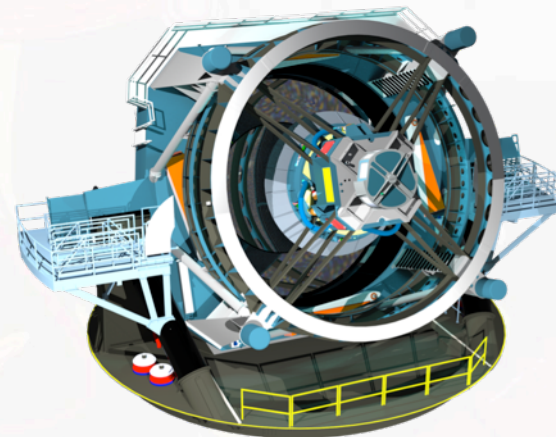


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Other opportunities

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MTR TIMELINE

July 2019	MTR kick-off at ASA ASM
July 2019	Capabilities and Opportunities paper
Aug - Oct 2019	Workshops
Aug - Oct 2019	White papers
Sept - Oct 2019	Town Hall meetings
Nov 2019 - Feb 2020	MTR committee drafts MTR
Mar – Jun 2020	Community consultation
July 2020	MTR finalised



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Amanda Karakas

Tamara Davis



MTR committee

AAS



NCA

Christoph
Federrath

Eric Thrane



CapOp committee



Chris Tinney

Cathryn Trott



Sarah Brough

Amanda Karakas

White papers, community
submissions, workshop outcomes,
Town Halls



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Opportunities to contribute to MTR

- ASA lunchtime discussion tomorrow
- Focus workshops (Space, Data centres, AAT)
- White papers by invitation
- Optional 1-page submissions to MTR chair
- Town Hall meetings
- Feedback on MTR draft (2020)