

# CSIRO Astronomy and Space Science

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ASTRONOMY AND SPACE SCIENCE

[www.csiro.au](http://www.csiro.au)



# A New ATNF Vision

## Where will be in 10 years?

**We will operate world-class radio astronomy facilities for users from across Australia and around the world. We will be global leaders in technology and research, exploiting the world's premier radio quiet site. We will attract and retain the best staff.**

***DRAFT – feedback requested***

# A (refreshed) ATNF Mission

**To develop and operate world-class facilities in radio astronomy.**

- Run the Australia Telescope National Facility (ASKAP, Parkes, ATCA) as a financially viable and user-focussed research facility, for the benefit of Australian and international communities
- Play a key role in SKA, covering operations, science leadership and technology development
- Deliver world-class science through exploitation of our southern location and technological advantages
- Develop, apply and commercialise our innovative technologies and big data processing techniques
- Foster a diverse and creative workforce of scientist and engineers

***DRAFT – feedback requested***

# ATUC Membership

Dr James Miller-Jones, Curtin University – Chair

Dr Cormac Reynolds, CSIRO – Secretariat\*

Dr Stuart Ryder, AAO

Dr Shari Breen, USyd\*

Dr Stefan Osowski, Swinburne\*

Dr Stas Shabala, UTas

Dr Vanessa Moss, USyd

Dr Martin Bell , CSIRO

Mr Daniel Reardon, Monash – Student

Ms Sarah Hegarty, Swinburne – Student\*

# ATNF Steering Committee

Prof Elaine Sadler, Usyd – Chair

Prof Matthew Bailes, Swinburne

Dr Cathryn Trott, Curtin

Prof Na Wang, Xinjiang Astronomical Observatory, China

Prof Gazia Umana, Catania Astrophysical Observatory, Italy

Prof John Carlstrom, University of Chicago, USA

Prof Robyn Owens, UWA

Dr David Skellern, CMCRC Ltd

Prof Warrick Couch, AAO

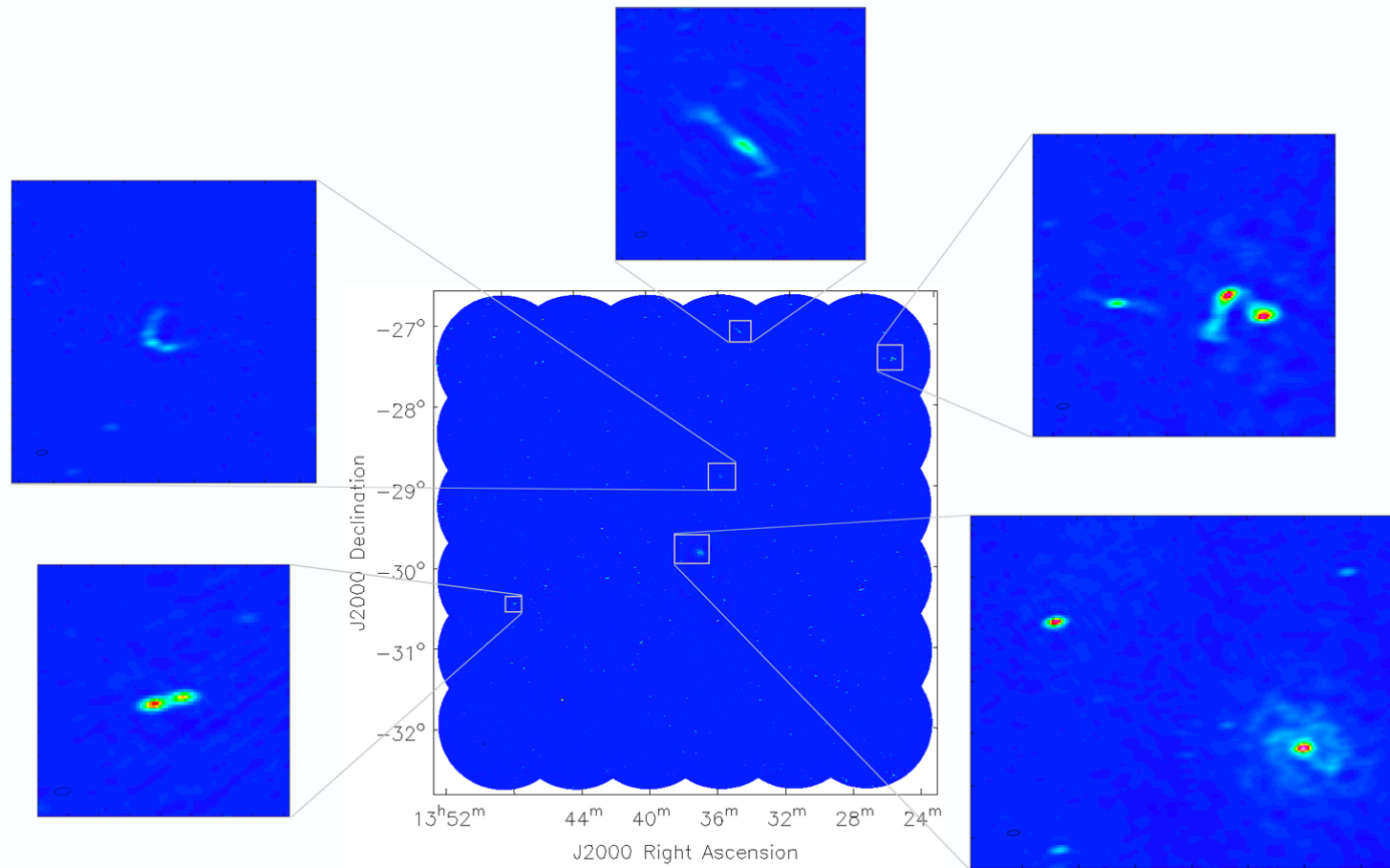
Dr David Williams, CSIRO

Mr Brendan Dalton, CSIRO

# ATUC recommendations addressed today

- CASS culture
- KPIs, publication stats, time allocation plots
- Observatory visit policy
- Budget, sale of telescope time
- Staff contact list and outreach contact
- ATNF Science structure
- Science highlights
- Radio school
- TAC: timing of schedule delivery
- Legacy project status
- DA options
- NAPA overrides - policy change
- Unattended observing
- Observer feedback

# ASKAP Early Science underway



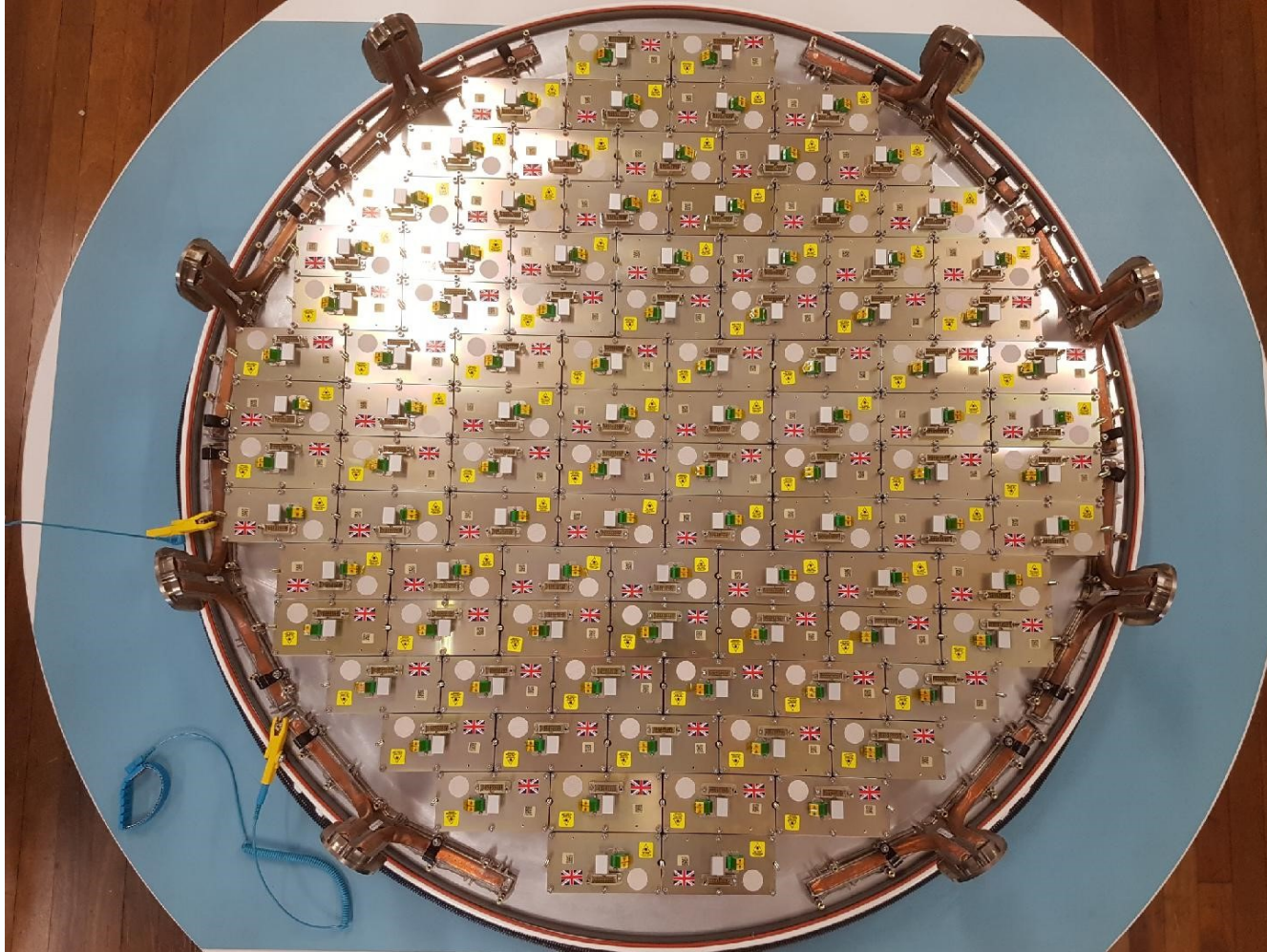
# ASKAP-30 complete



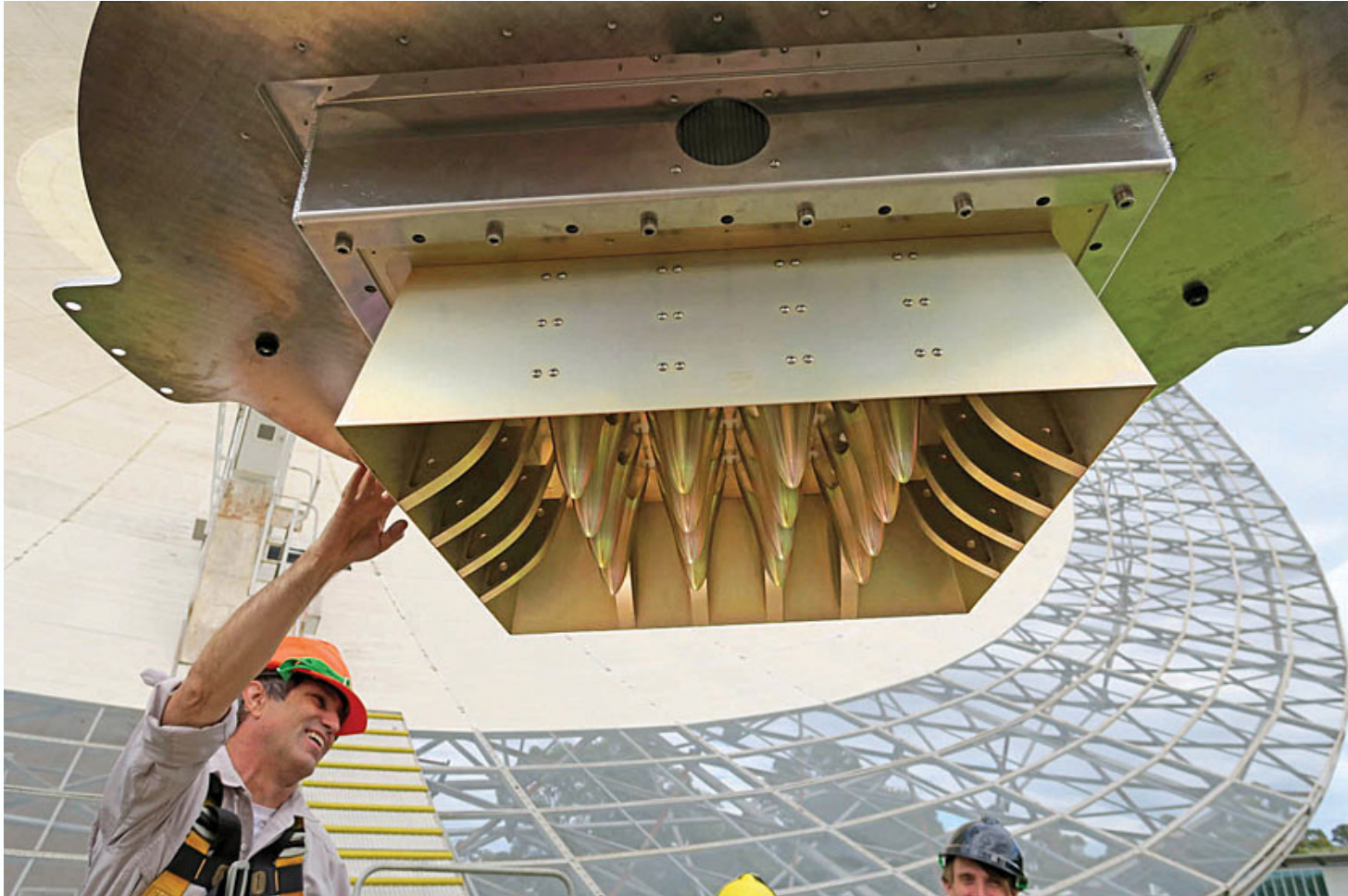
# Sale of PAFs



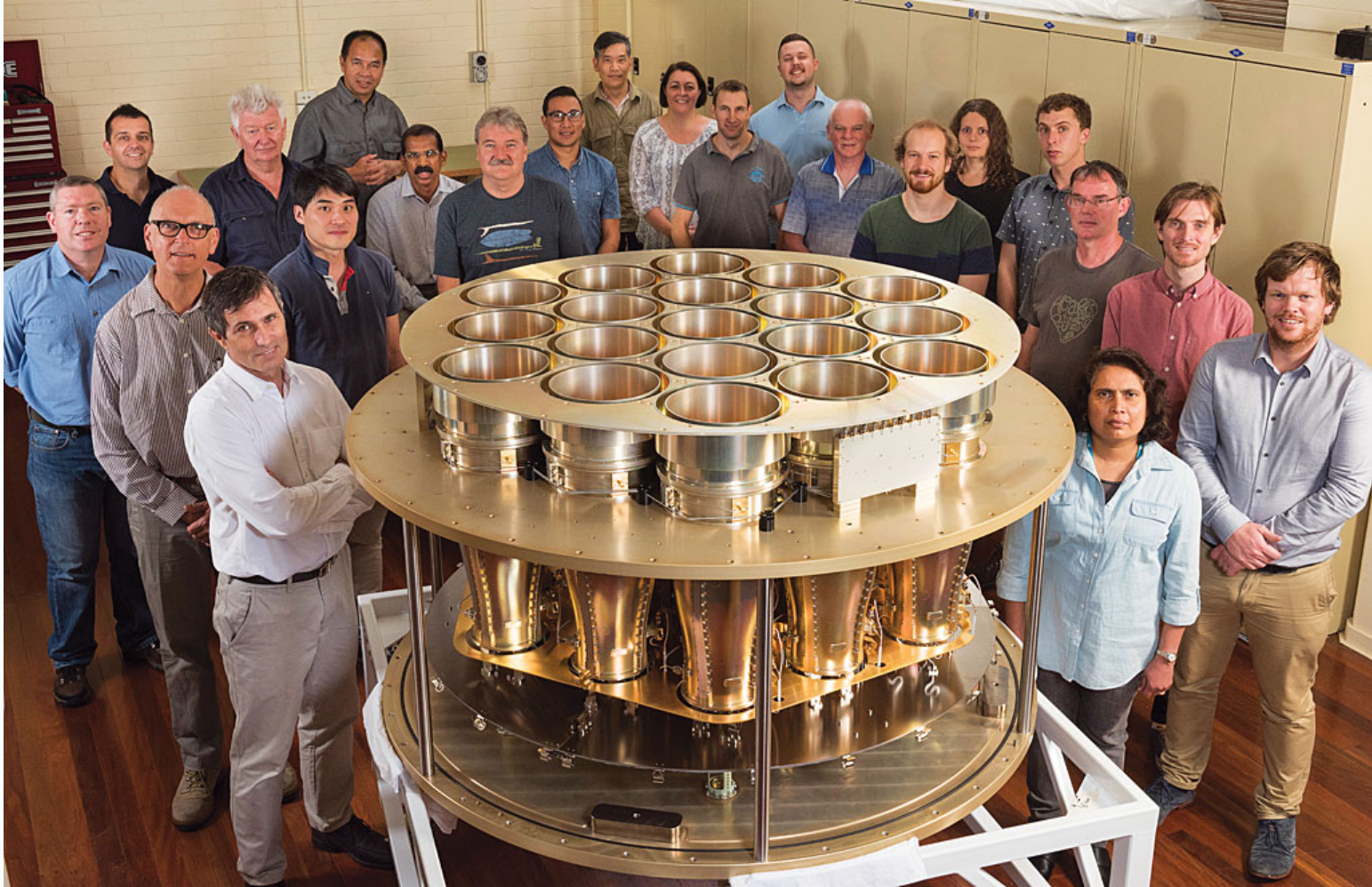
# Sale of PAFs



# Next gen PAF

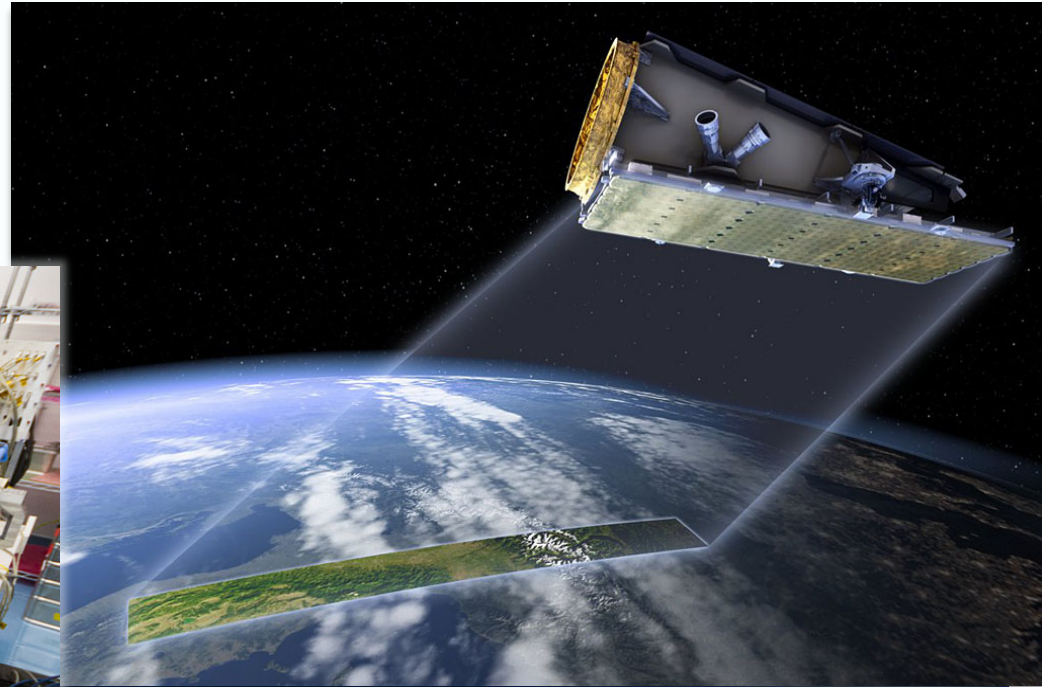


# FAST receiver





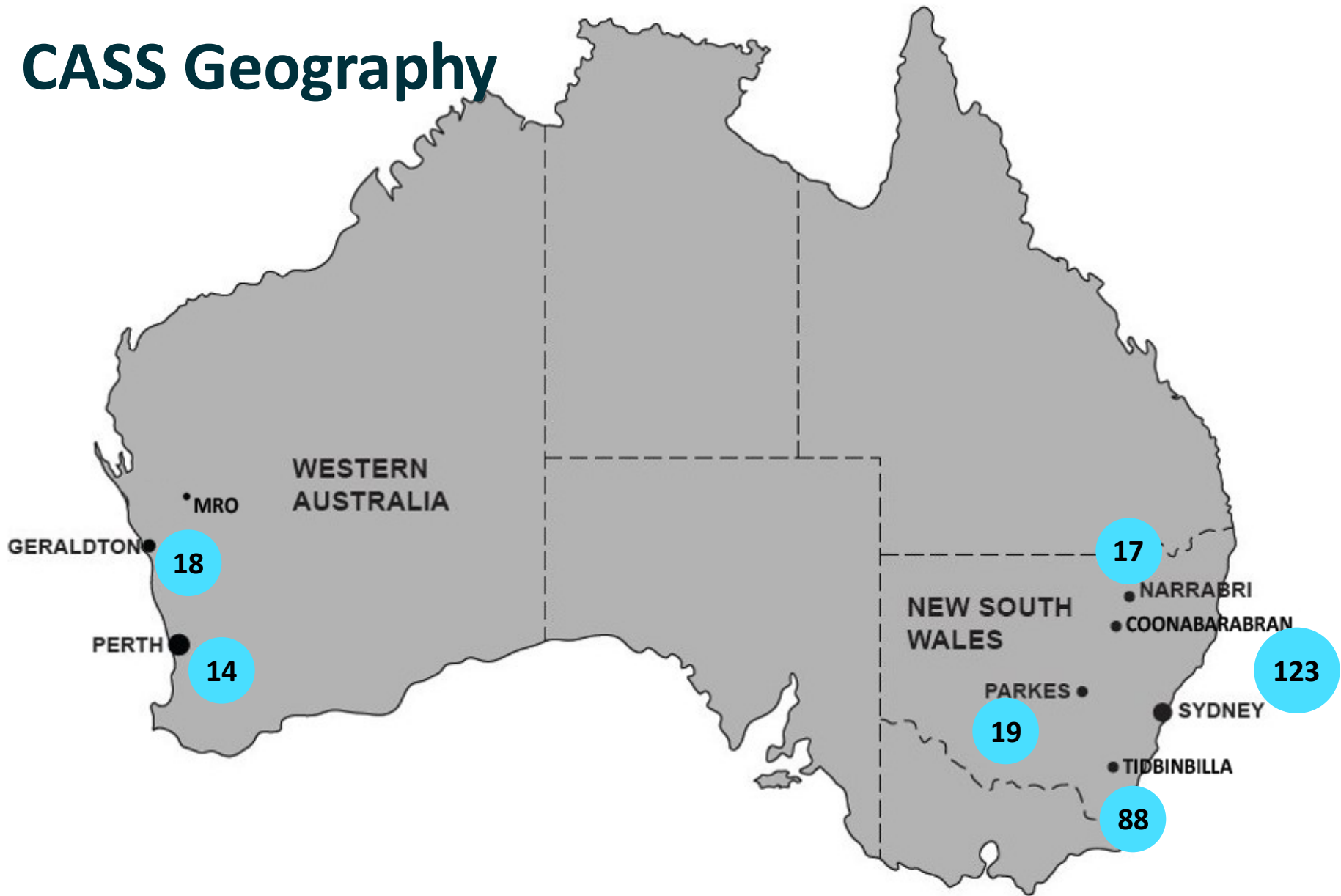
# Space



# Budget summary

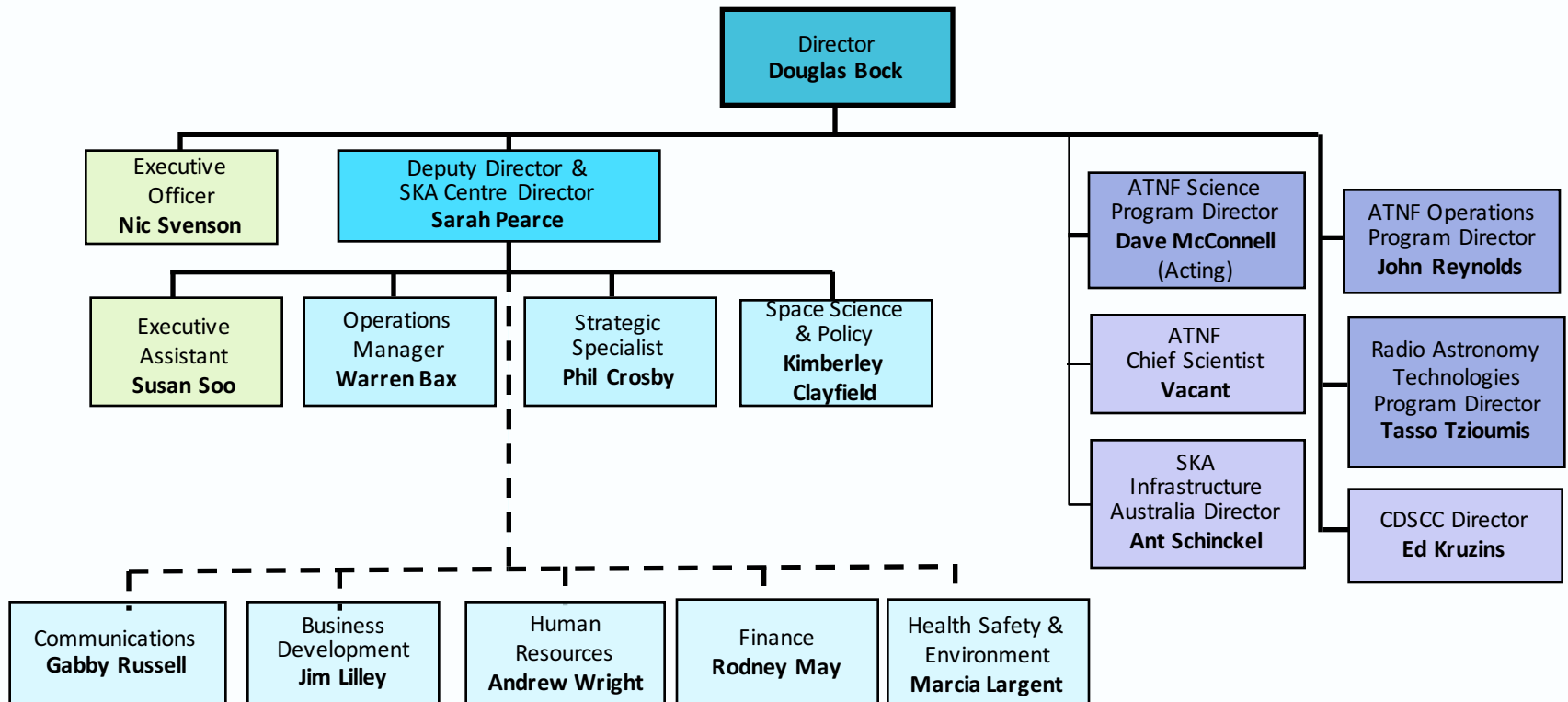
- Maintain Operating funding levels and keep operating Parkes, ATCA, ASKAP (contingency: suspend LBA if needed)
- ASKAP resources at ~ level of recent years (constrained)
- Largest pressure in R&D (with current distribution of internal funds) – ASKAP, FAST ending. Still significant uncertainties.
- Maintain R&D FTE at > 80% of current levels (~50 FTE)
- SKA funding will more than cover our direct costs in FY18.
- Astro research staff levels unchanged (but key roles vacant)

# CASS Geography



# CSIRO Astronomy and Space Science

## Organisational chart



# ATNF Science Program

## Questions CASS is considering – input on any welcome from ATUC

- Is the group adequately resourced for its support of users, instrumentation development, and ASKAP commissioning, and SKA engagement?
- Do we have adequate levels of research effort?
- Are there critical gaps in our research capability?
- What should our recruitment strategy be?
- Should we provide a standard path from postdocs to indefinite science staff positions?
- What is the balance between more senior staff and postdocs?
- What is the balance between targeted recruitment in a specific field vs attracting the best candidates by casting a wider net.
- To what degree do appointments jointly funded by Universities and CSIRO add value?

# CASS culture

## Summary of actions

- CASS Culture Project (Michelle Storey)
- Communications to staff, Astronomical Society of Australia
- DB met with affected people and astronomy community leaders to seek information and advice and to reassure CASS commitment to a safe workplace
- Astro program restructure
- Review of all cases since 2008 by HR

# CASS Culture

- 16 misconduct allegations over 8 years
  - 13 non-sexual, handled in line with established procedure
- 3 allegations of inappropriate workplace behaviour 2007-2012
  - Included sexual harassment
  - Independent external investigation
  - CSIRO accepted all the investigator's recommendations
- Not all allegations upheld

# CASS Culture

Gender profile of case 2007 – 2016

Respondent Gender		Complainant Gender	
		Female	Male
	Male	7	4
	Female	5	0

# ATSC recommendations

- Endorsed CASS Culture Project Report recommendations
- Continue operating ASKAP, Parkes and ATCA for 10 years, as long as funding is available and excellent science continues to be done.
- Pursue close strategic relationships with universities
  - Develop a strategic plan for jointly funded uni appointments
  - Increase capacity for PhD supervision
- Increase involvement in SKA Regional Centre planning
  - Ensure broad community engagement and broker a win-win outcome
  - Consider expanding purpose to broader astronomy applications
  - Use ASKAP/Pawsey/CASDA as the basis for a regional centre pathfinder
- Be pro-active about IP – protect or publish in a timely fashion
  - Consider forming a JV to commercialise CASS technologies

# SKA Regional Centres

- SKA construction budget does not include funding to deliver science data to telescope users.
- SKA Board recommends that:
  - A collaborative network of SKA Regional Centres (SRCs) be established
  - Resources outside of the SKA1 construction budget be provided regionally
  - SKA Organisation set up an SRC Coordination Group (SRCCG)
- The Australian and New Zealand SKA Coordination Committee (ANZSCC) established an SRC Working Group to consult with the community and plan the SRC.
  - Chaired by Peter Quinn (ICRAR/UWA)
  - Several members from CASS including the Director and Deputy Director.

# SKA Regional Centres – essential functions

- Data curation and heritage and access to SKA data products
  - subject to SKA data access policies
- Computational resources for processing, including science analysis and data visualisation
- Common platform for continued development and certification of software and data analysis tools
- Long-term science archive for SKA data products
- Local user support to communities.

# ATSC draft recommendation #1

“The scope of a future SKA Regional Centre (SRC) in Australia should be set after discussion with all key stakeholders in the Australian astronomy community. Serious consideration should be given to providing access to other multi-wavelength data archives, including current and future large optical surveys in which Australian astronomers are involved. The scope of SKA-related activities within the SRC should take into account the science priorities of the Australian community and the activities planned for other SRCs around the world.”

# ATSC draft recommendation #2

“CASS should consider promoting a model using ASKAP, Pawsey & CASDA in the near future as the basis for a pathfinder ‘ASKAP Science Centre’ that could serve as a focus for optimizing ASKAP science output while also demonstrating and testing many of the functions relevant to a future SRC, with a view to informing the future model for SKA.”

## CSIRO Astronomy and Space Science

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