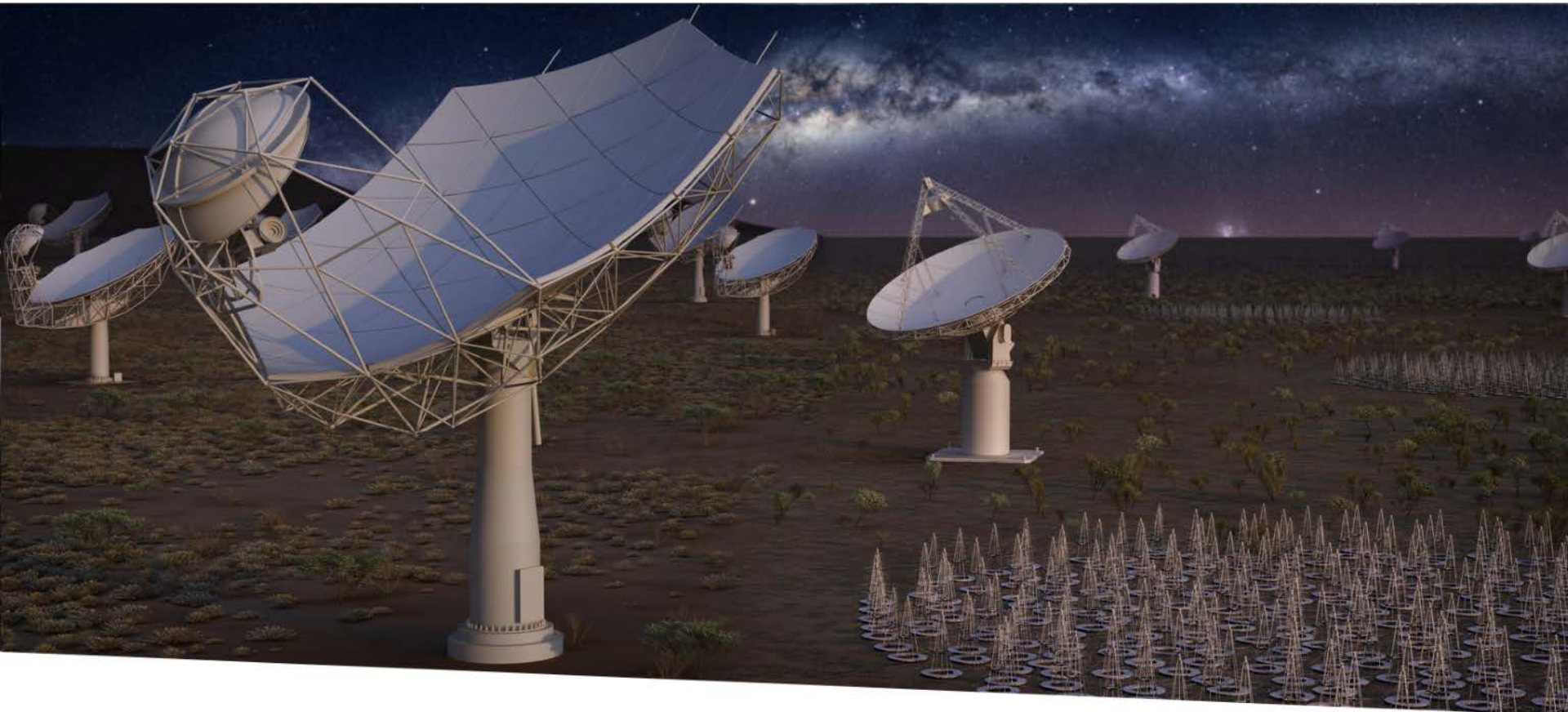


# Construction Credits



**SQUARE KILOMETRE ARRAY**

Exploring the Universe with the world's largest radio telescope

**Tim S**

# EPAs in the context of construction

- The rationale for EPAs is one of risk reduction
  - Early qualification of designs
  - Early development of processes in AIV, operations
  - Platform for software development
  - ...
- Thus costs should be constrained to that strictly necessary to reduce risk and to contribute hardware, software and infrastructure to the final build
- ‘Allowable expenditure’ will be somewhere between the value of the products that are finally used in the Telescopes and the limit of investment which would make the EPAs worthwhile

# Construction Credits

- Contributions to the EPAs are expected to be exclusively in-kind, but cash is possible
- Contributions will be counted as Construction contributions, hence earning Telescope access rights
- Construction Credits are proposed to account for this, and these need to be calculated in a fair and transparent way
- The final implementation of CCs is a matter for Funding Schedule negotiations
- Using Construction Credits to calculate Fair Work Return is TBD

# Construction Credit calculation

- For in-kind contributions, either (whichever is latest available):
  - Consortium costing
  - Office 'adjusted' costing
  - Independent 'non-advocate' costing
    - Basis (location of manufacture/coding, etc) TBD
- Adjusted by:
  - Timeliness of delivery
  - Conformity to requirements/ EPA needs
    - 'Representativeness', necessity, etc. TBD
  - Exclusivity
  - Other Key Performance Indicators...
- Plus any cash contribution
- To not include:
  - Taxation
  - Import duties

# Issues

- Status and basis of the cost evaluation
- Adjustments
  - Adjustment 'coefficients'
- Credit for 'unrepresentative' H/W & S/W
  - i.e. products not being qualified
- Disadvantages of early implementation (pre-IGO)
  - Tax
  - Inefficiencies in procurement, lack of scale, etc
- How to maximise benefits (and hence credit) of cash if available
- Ownership of, and CC for, tooling
- Accounting of CC as FWR