# Research – Industry SKA Workshop

Peter J. Hall

Sydney, 27 May 2009

*p.hall@curtin.edu.au*

# SKA workshop

- Brief industry on latest SKA developments
- Set out challenges, e.g.
  - Technology; infrastructure & site development; operations
  - Project phasing and scaling (ASKAP → SKA)
- Examine nature, scale and timing of industry involvement
  - Emphasize emerging opportunities
- Exchange information and ideas (solutions?)
- Identify imperatives, e.g.
  - Australian industry visibility; power solutions; international collaboration; technology demonstration; …
- Propose actions, e.g.
  - Ways to address imperatives
  - Additions & modifications to Australian industry strategy
  - Update capabilities register

# SKA snapshot

- €1.5b international mega-science project
- Phased construction; complete by 2022
- Design and demonstration underway (PrepSKA)
  - Global engineering development
  - Governance, procurement, finance, … policy studies
- > €200M in pathfinder or precursor telescopes
  - ASKAP, meerKAT, …
- Two short-listed central sites
  - Murchison (WA) and Karoo (Northern Cape)
- Technology and site choices ~2012
- Government funding agencies engaged
- Industry engagement (mainly) via pathfinders

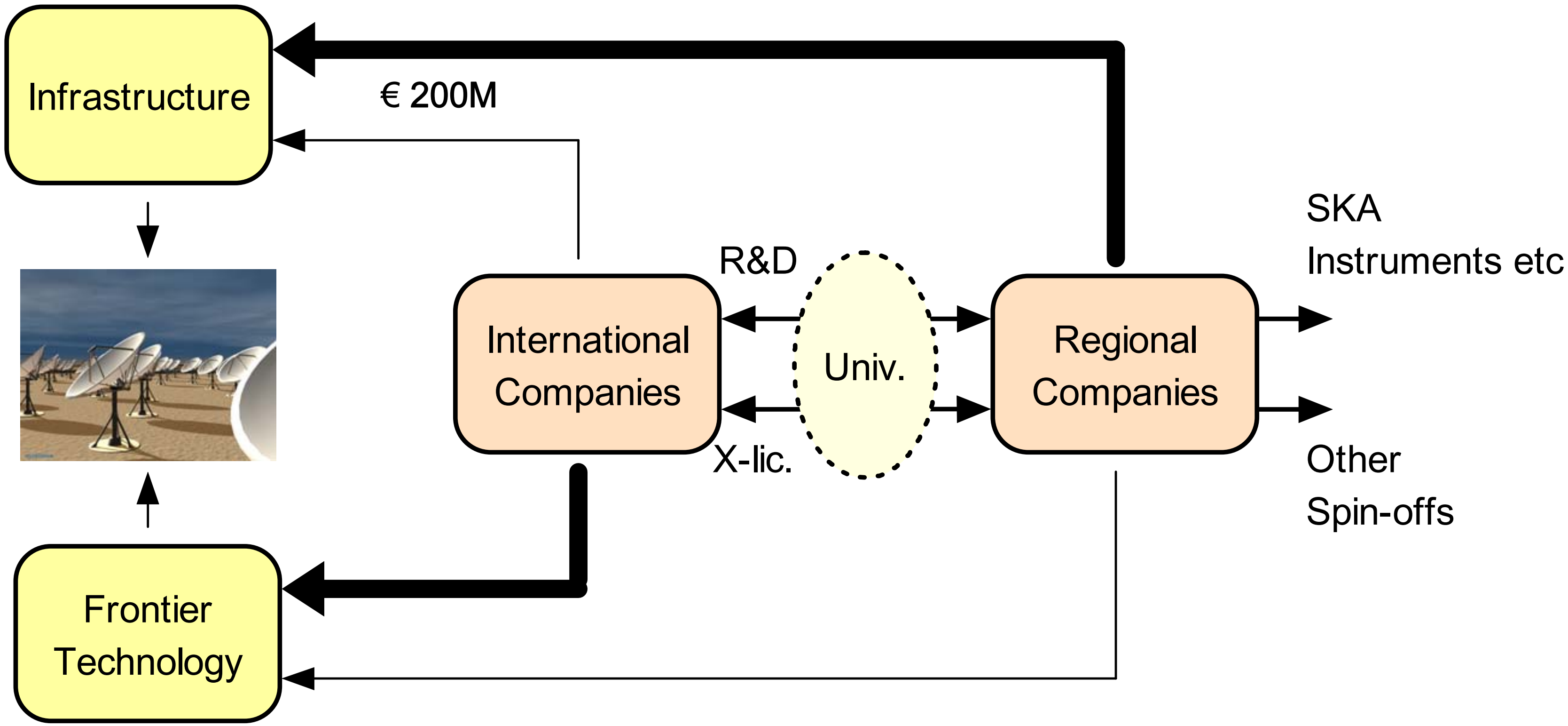
# SKA status

- Regional technology programs complete or well-advanced
- Central system design (UK) ramping up
- Exciting technology demonstrations!
- Race to showcase candidate sites
- Hot issues
  - Data processing & management
  - Energy-efficient design
  - Power delivery and cost
- Download URSI review article via
  - http://astronomy.curtin.edu.au/
- New Australian initiatives, e.g.
  - ICRAR (> $60M)
  - Nat SKA Science Centre ($80M)

# Australian industry and SKA

- Excellent opportunities to engage via first-rank Pathfinder (ASKAP)
  - ASKAIC and related initiatives
- Challenge to match industry visibility in meerKAT
  - RSA forced to early industry engagement
  - Strong industry performance in Karoo site development and meerKAT infrastructure provision
- Need more use of, and visibility for, industry in management and development of MRO
- Turn “shortcomings” of MRO into virtues
  - Renewable energy solution
- Remember that site issues (physical and political) account for most over-runs in mega-projects
  - No place to skimp

# SKA - industry interaction in host country




*Host nation has to be smart in reaping hi-tech returns.*
*Example: universities (or similar) can be incubators of collaborations.*