Data and Computing Investment Strategy

Robert Shen
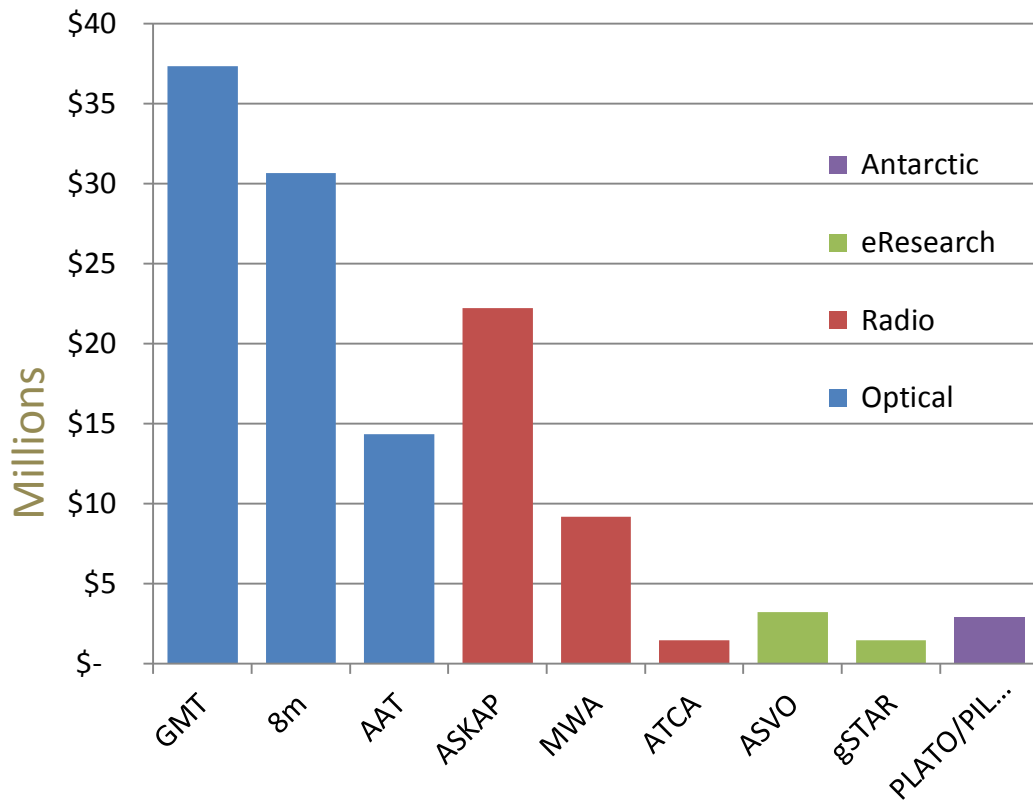
Astronomy Australia Ltd.

23rd October 2018

AAL Investment 2007-15 (total $125M)

New Horizons
A Decadal Plan for
Australian Astronomy
2006 – 2015

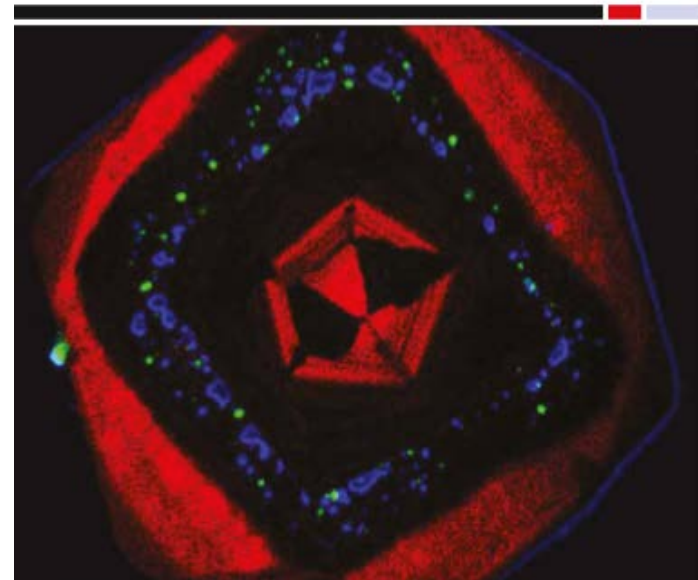| Priority	Amount ($M)
1. GMT	$37.3
2. SKA	$32.9
3. 8m	$30.6
4. AAT	$14.5
5. eResearch	$4.3

Five equally-weighted top priorities (abridged):

1. Partnership equating to 30% of an **8-metre class optical/infrared(IR)** telescope

2. Development & ops of the **Aust. Square Kilometre Array precursors at MRO** and membership of SKA

3. Partnership equating to 10% of a **30-metre class optical/IR telescope**

4. Capability within **AAO and ATNF** to maximise Australia's engagement in global projects through instrumentation

5. World-class **high performance computing and software** capability for large theoretical simulations, and resources to enable processing, delivery of large data sets from these facilities.

Australian Government

2016 NATIONAL RESEARCH
INFRASTRUCTURE
ROADMAP
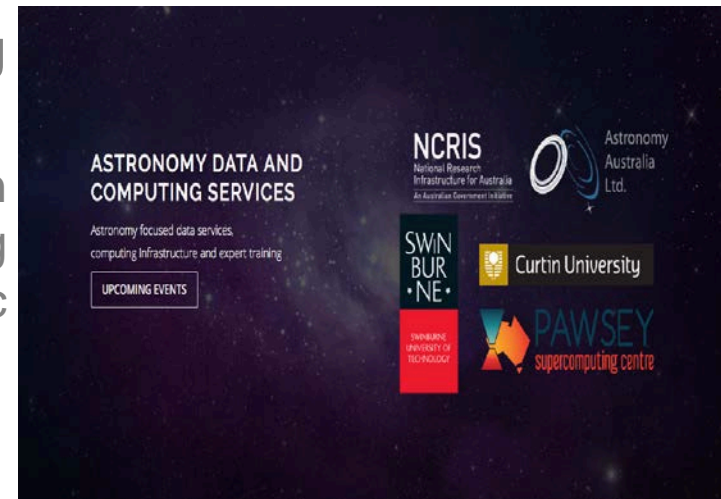
Computing Infrastructure Planning Working Group (January 2016 – October 2016)

- **Key recommendation 1:** AAL should invest in the provision of Astronomy Data and Computing Services (ADACS) to provide discipline-specific training, support and expertise.

- **Key recommendation 2:** AAL should invest approximately $7-15M every five years for astronomy-dedicated data storage and computing resources.

Investment Principles

1. Many existing resources are already available to Australian-based astronomers and therefore **AAL investments should leverage and augment, rather than duplicate**, existing resources.

2. Storage and computer resources are limited, therefore **should be used as efficiently as possible**.

Investment Category

- **Investing in People:** ~~s~~ ~~sk~~ r ~~ces~~ are available for efficient and effective use of astronom ~~ta~~ ~~u~~ frastructure.

- **Investing in Software:** ~~s su~~ ufficient tools are available to enable astronomers to discover, access, ana ~~ an~~ ualize data.

- **Investing in Hardware** ensure sufficient storage and computing resources are available to astronomy c ~~unity~~.

Optical — **AusSRC** — **GW** — **Theory**

National Support

$2M/year

$3M/year