

## **Annex E1**

### **Australian Academy of Science National Committee for Astronomy**

#### **Decadal Plan 2006 – 2015**

#### **Outline of the process used to develop the Plan**

### **1. Background information presented in Brisbane.**

The Decadal Planning process was launched at the Annual Scientific Meeting of the Astronomical Society of Australia, in July 2004 in Brisbane. At that meeting the following background was presented to the astronomical community.

#### ***Background***

*As many of you will be aware, the Australian astronomical community carries out a formal strategic planning process on a 10-year time scale; with reviews as/when appropriate. This process is run by the National Committee for Astronomy (NCA) and provides the opportunity for Australian astronomy to carry out a stocktake of its capabilities, assess its impact both nationally and internationally, provide a vision for the future and to set priorities and develop strategies on how that vision might be implemented.*

*The resultant Decadal Plan can then be used as a highly influential document to present our vision to key stakeholders outside the research sector. This includes Australian Astronomy's key stakeholder, the Commonwealth Government, as well as industrial/research partners both nationally and internationally.*

*The currency of the last Decadal planning process ran from 1995-2005; with a mid-term review in 2001. It is now time, therefore to consider the next Decadal planning process for the period 2006-15.*

#### ***Timescale***

*The following time scale was also proposed:*

- *Receive feedback on process: August 13 2004*
- *Deadline for expressions of interest in serving on WGs: August 13 2004*
- *Distribute final outline of process/Working Group membership to community: September 10 2004*
- *National Workshop End-Sep: (Date/Location TBA)*
- *Working Group activity: September/October 2004 - April 2005*
- *Working Group progress report to NCA: December 2004*
- *Editorial Integration May/June 2005*

- *Community Review July 2005 (ASA meeting)*
- *Decadal Plan Published September 2005*

*Consistent with that time scale the community are now asked to:*

- *provide feedback on the draft WG structure and time scale*
- *submit any expressions of interest in becoming a member of an appropriate WG*

Several presentations were also made at the 2004 ASA meeting:

- Decadal Plan Process, Brian Boyle
- Decadal Plan AAO, Matthew Colless
- Decadal Review, Rachel Webster

## **2. Working Groups**

After sufficient time to allow for community feedback, Working Groups with associated Terms of Reference and Context and Guidelines were developed by the NCA in August 2004. The names of the Working Groups, their membership, terms of reference and context were placed on the NCA WWW site and an announcement distributed to the community via the ASA email distribution list. This method of information dissemination was used for all subsequent community announcements relating to the Decadal Plan.

Full WG membership is included at Annex A below.

Decadal Plan Working Groups

- 1.1 Demographics
- 1.2 Education and Training
- 1.3 Industry
- 2.1 Cosmology and Large-scale structure
- 2.2 The Local Universe
- 2.3 Stars and Planets
- 3.1 International Facilities
- 3.2 National Facilities
- 3.3 University Facilities

Membership of the Working Groups was open to all members of the astronomical community.

### ***Decadal Plan Working Group Terms of Reference***

*By considering how best to position Australia in the international astronomical landscape of the coming decade the Working Group is requested to compile a report that:*

- 1. provides a stocktake of current or future proposed capabilities/resources in the area*

2. identifies any new national or international opportunities/requirements in the area over the period 2006-15

3. suggests strategies and the resourcing levels required to maximise these new opportunities.

*The WG should submit their report to the NCA, through the Chair, no later than April 30 2005.*

*The WG is encouraged to consult widely, through whatever means appropriate, with all key stakeholders (both national and international) in developing their report.*

*The WG is asked to submit to the Chair of the National Committee for Astronomy, by 1 Dec 2004, a progress report on activities and an outline plan (with milestones) for the delivery of the final report (which is due April 30 2005).*

### ***Decadal Plan Working Group Context***

*The final reports provided by the Working Groups will provide the basis for the Australian Astronomy Decadal Plan for 2006-15, to be drafted by an Editorial Board. It is currently envisaged that the Editorial Board will draft the Plan in the context of the Big Questions in astronomy over the next ten years e.g.*

- 1. What is the nature of Dark Matter and Dark Energy and how do they shape the structure of the Universe and individual galaxies?*
- 2. When and how did the first luminous objects form in the Universe and how did they effect their environments?*
- 3. What is the frequency and nature of planetary systems in the Galaxy, and what drives their diversity and habitability?*
- 4. How are elements processed through stars and galaxies to produce the cosmic chemical environment in which we live?*
- 5. Do the same physical constants and physical laws apply throughout the Universe, regardless of age, temperature, density and gravity?*

*Where appropriate, WGs may wish to frame their reports addressing these and any other "Big Questions" they may wish to identify.*

### ***Decadal Plan Working Group Guidelines***

*The ToR are intended to enable the WGs to approach their task from a number of different directions. The WGs may wish to look at the issues in their area from a variety perspectives e.g. current resources vs future needs, existing capability mapping, SWOT (Strengths, Weaknesses, Opportunities & Threats) analysis.*

*Inevitably, there will be overlaps between different WGs. WGs should (i) check with other groups regarding potential overlaps, and (ii) tend to be inclusive and cover anything they think is relevant to their topic even if it is being covered by another working group.*

*WGs should focus on producing strong arguments, meaningful statistics, telling examples and comprehensive lists. The report should include as many useful tables and figures as possible. WGs should generate the valuable content for the Decadal Plan, emphasising substance over style, quantitative arguments over qualitative, and let the Editorial Board structure and polish the material.*

Over the next few months, the Working Groups met separately to assemble their reports. Two large “Town Hall” meetings were held, consisting of the combined WG3.1, WG3.2 and WG3.3 groups; the first at UNSW on 16 December 2004 and the second at RSAA on 4 February 2005.

The Working Group reports were generally completed by May 2005, and made available to the community on the NCA WWW site.

#### **4. Site Visits**

Following the receipt of working group reports, and during the early phases of the editorial integration, the NCA Chair made a number of ‘site’ visits to ensure comprehensive community consultation. These included Curtin University, James Cook University and the Universities of New South Wales, Sydney, Tasmania, Adelaide, Western Australia, Curtin, Brisbane and Southern Queensland. As part of these visits, the NCA chair also visited the Mt Pleasant radio observatory, the Mt Canopus Optical observatory and the Gingin gravity wave observatory. The chair also held informal briefings with astronomers from the Anglo-Australian Observatory and the Australia Telescope National Facility. Previously, the NCA chair attended the “Town Hall” meeting at the ANU.

#### **5. The Editorial Board**

To conduct the editorial integration of the working group reports, the NCA approved the establishment of an Editorial Board with the membership below at its meeting in December 2004.

*Editorial Board Members:*

*Brian Boyle (Chair)*

*Charles Jenkins*

*Elaine Sadler*

*John Storey*

*Chris Tinney*

Following receipt of the Working Group reports, a joint meeting of the Editorial Board and the National committee for Astronomy was held on 3 May 2005. The Editorial Board Timeline and Terms of Reference were approved as follows.

### ***Timeline for Decadal Plan Development***

*May 3: NCA/Editorial Board meeting*  
*May 6: Editorial Board meeting*  
*May 10: Draft structure of Decadal Plan submitted to NCA*  
*May 17: Draft structure approved by NCA*  
*May 17: Draft 'executive summary' submitted to the NCA + community*  
*May 25: NCA/Editorial Board meeting to discuss feedback on executive summary*  
*May 30: Executive summary • NCRIS as 'first-pass' short list*  
*June 17: First draft of Decadal Plan to NCA, community & external stakeholders*  
*June 24: Deadline for comments on first draft*  
*June 30: Second draft available for presentation at ASA (July 4-8)*  
*July 15: Deadline for feedback*  
*July 31: Final version*  
*Sep 30: Public release date (with full layout)*

### ***Terms of Reference***

- The Editorial Board is tasked with preparing a draft strategic plan for the Australian astronomical community covering the period 2006-15. The plan will seek to identify opportunities and prioritise requirements with the goal of maximising the benefit to the nation from astronomical research over the coming decade.*
- The Editorial Board should compile the draft strategic plan primarily based on the Decadal Plan WG reports, seeking further input from the Decadal Plan WG chairs as appropriate.*
- The Editorial Board is required to adhere to the time line outlined above.*

### ***Feedback***

*The community is invited to provide feedback at any stage of this process via the NCA chair (brian.boyle@csiro.au) or through any member of the NCA.*

The Editorial Board met on numerous occasions and conducted lively discussions via email. The first draft of the Decadal Plan was presented to the Astronomical community at the Annual Scientific Meeting of the Astronomical Society of Australia, in July 2005 at Sydney University. An informal discussion evening, an evening meeting of the Heads and Directors of Astronomical Departments, and an open two-hour formal discussion meeting was held.

Support for the process, and for the general thrust of the Plan, was noted at the open meeting by acclamation.

Written feedback was then sought from the community.

Following the ASA meeting, and with over 100 pages of written feedback from members of the community, the Editorial Board produced a revised 'final draft' version of the Decadal Plan. This was submitted to the NCA and unanimously approved by them via email in August 2005.

This revised plan was then sent to five overseas reviewers selected by the NCA and made available to the community on the NCA WWW site.

Following feedback received from the international reviewers in early September, a further all-day meeting of the Editorial Board was convened in September 2005 to produce the final version, subsequently unanimously endorsed by the National Committee for Astronomy.

## **6. Funding**

Funding for the Decadal Plan process was generously provided by the Australian Research Council and the Astronomical Society of Australia. Secretarial support was provided by the CSIRO Australia Telescope National Facility.

B.J.Boyle  
J.W.V.Storey

20 September 2005

## Annex A: WG membership

Working Group Membership								
People			Science			Facilities/infrastructure		
WG 1.1	WG 1.2	WG 1.3	WG 2.1	WG 2.2	WG 2.3	WG 3.1	WG 3.2	WG 3.3
<b><u>Gibson,B. (Swi)</u></b>	<b><u>Johnston-Hollitt,M. (Tas)</u></b>	<b><u>Jackson,C. (ATNF)</u></b>	<b><u>Croom,S. (AAO)</u></b>	<b><u>Burton, M (UNSW)</u></b>	<b><u>Asplund,M. (RSAA)</u></b>	<b><u>Schmidt,B. (RSAA)</u></b>	<b><u>Drinkwater, M (UQ)</u></b>	<b><u>Kedziora-Chudczer, L. (Syd)</u></b>
Webster,R. (Mel)	Green,A. (Syd)	McGregor,P (RSAA)	Drinkwater,M. (UQ)	Sadler,E. (Syd)	Bedding,T. (Syd)	Colless,M. (AAO)	Burton,M. (UNSW)	Filipovic,M (UWS)
White,G. (JCU)	Gibson,B. (Swi)	Hawthorn,J. (AAO)	Forbes,D. (Swi)	Ryder,S. (AAO)	Maddison,S. (Swi)	Burton,M. (UNSW)	Barden,S. (AAO)	Burton,M. (UNSW)
Zealey,W. (Woo)	Hollow,R. (ATNF)	Zealey,W. (Woo)	Hunstead,R. (Syd)	Gaensler,B. (Har)	Lattanzio,J. (Mon)	McClure-Griffiths, N (ATNF)	McConnell, D (ATNF)	Ellingsen, S. (Tas)
S.Ricketts (AAO)	Lomb,N. (SydO)	Jenkins,C (RSAA)	Johnston-Hollitt,M. (Tas)	Gibson,B. (Swi)	Ellingsen,S. (Tas)	Freeman,K. (RSAA)	Sackett, P (RSAA)	Buchhorn,M (RSAA)
Maddison,S. (Swi)	Filipovic,M. (UWS)	Smith,G. (AAO)	Koribalski,B. (ATNF)	Caswell,J. (ATNF)	Tinney,C. (AAO)	Storey,J. (UNSW)	Green, A (Syd)	Caswell, J. (ATNF)
Tzioumis,T. (ATNF)	Zealy,W. (Woo)		Freeman,K. (RSAA)	Dickey,J. (Tas)	Sackett, P. (RSAA)	Lewis,G. (Syd)	Freeman, K (RSAA)	Murray, J (Swi)
Sim,H. (ATNF)	Vaughan,A. (MQU)		Curran, S (UNSW)	Freeman,K. (RSAA)	Mardling, R (Mon)	Dickey,J. (Tas)	Storey, J (UNSW)	McGregor, P. (RSAA)
Wals,M. (Mel)	Kedziora-Chudczer, L. (Syd)		Sackett, P. (RSAA)	Filipovic,M. (UWS)	Murray,J. (Swi)	Caswell,J. (ATNF)	McGregor,P. (RSAA)	Green,A (Syd)
	Watson,F. (AAO)		Jackson, C. (ATNF)	Green, A. (Syd)	Hurley,J (Mon)	Wong, T. (ATNF/UNSW)	McClure-Griffiths, N (ATNF)	Storey, J. (UNSW)
	Freeman, K. (RSAA)		Staveley-Smith,L. (ATNF)	Staveley-Smith, L. (ATNF)	Bailey,J. (AAO)	Green,A. (Syd)	Caswell, J (ATNF)	Sackett, P. (RSAA)
	Biggs,J. (PO)		Kedziora-Chudczer, L. (Syd)	McClure-Griffiths,N. (ATNF)	Cally,P. (Mon)	Kuncic,Z. (Syd)	Colless,M. (AAO)	Schmidt, B (RSAA)
	Hill,T. (MP)		Schmidt,B. (RSAA)	Lewis,G. (Syd)	Donea,A. (Mon)	McGregor,P. (RSAA)	Schmidt, B (RSAA)	Gibson,B. (Swi)
	George,M. (QVM)		Gibson,B (Swi)	Bailes,. (Swi)	Ferrario (ANU)	McConnell,D. (ATNF)	Couch W. (UNSW)	Dickey, J. (Tas)
	Wong,T. (ATNF/UNSW)		Lewis,G. (Syd)	Galloway,D. (MIT)	Liffman,K.. (Mon)	Tinney,C. (AAO)	Melatos,A. (Mel)	
	Kuncic,Z. (Syd)		Bicknell,G. (RSAA)	Johnston, S. (ATNF)	Marding,R. (Mon)	Barden,S. (AAO)		
	Dickey,J. (Tas)		Sadler,E. (Syd)	Melatos,A. (Mel)	Storey,J. (UNSW)	Sharp,R. (AAO)		
	Sim,H. (ATNF)		McClelland,D. (ANU)	Friere, P. (Mel)	Tango,W. (Syd)	Gillingham,P. (AAO)		
	Maddison,S. (Swi)		Colless,M.(AAO)	Koribaliski ,B. (ATNF)	Wickransighe (ANU)	Boyle,B. (ATNF)		
	Bhathal,R. (UWS)		Briggs,F. (RSAA/ATNF)	Bessel,M. (ANU)		Couch,W (UNSW)		
	Murray,J. (Swi)		Saunders,W. (AAO)	Ellingsen,S. (Tas)				
	Burton,M. (UNSW)		Sharp,R. (AAO)	Gaensler,B. (Har)				
			Ellis,S. (AAO)	Norris,J. (ANU)				
			Hawthorn,J. (AAO)	Ott,J. (ATNF)				
			Couch,W. (UNSW)	Wong,T. (ATNF/UNSW)				
			Colless,M. (AAO)					
			Wyithe,S. (Mel)					
			Briggs,F. (ANU/ATNF)					
			Driver,S. (ANU)					