



*From Vision to Tools:*

# *ASTRONET Roadmap Status*

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# Infrastructure Roadmap



- Objective:
  - To assemble a plan for the development of the infrastructures that will enable European Astronomy to deliver the Science Vision
    - Taking the Science Vision as the point of departure
    - Covering both ground & space-based facilities
    - Including AVO, (super)computing, theory, HR issues, outreach
    - Incorporating existing ESO, ESA, ASPERA etc. plans as far as possible, and having global perspective
- Develop implementation plan with agencies, EU, OECD, Global Science Forum,...

# Background & Motivation



- What facilities/resources do we need to deliver the Science Vision?
- A comprehensive, but realistic, Plan is required
- Needs input and support of the Agencies and the Community
- Not an easy task (!), but if we do it well, it should lead not only to more effective and efficient planning, (including international links) but potentially more funds into our subject

# Modus Operandi



- Similar structure to Science Vision
- Panels in defined areas, typically 8-10 members
- Report to Working Group comprising Panel Chairs, Co-chairs, Members at Large
- Community and Agency interaction (see below)

# Panels reporting to Working Group



*Panels* will (as appropriate):

- Assemble an overview of facilities in their area which may be of relevance. This would include, where possible, timelines, costs and technological readiness
- Assemble information on priorities identified by relevant external bodies (e.g. ASPERA, ESO, ESA etc.)
- Assess which facilities, or part thereof, would be capable of delivering aspects of the Science Vision
- Provide a prioritised list (possibly in broad categories of prioritisation) of facilities and other infrastructures identified in their area, for transmission to the Working Group
- Assess the Human Resource needs of their area
- Highlight any areas of Industrial Relevance



## *Working Group* will then:

- Assemble information on priorities identified by national Funding Agencies and also on the likely funding envelopes available
- Receive and synthesise the priority lists of the Panels to optimise delivery of the Science Vision. This would include consideration of the overall human resource needs
- Identify areas of synergy and areas where technological development and industrial involvement/relevance needed or appropriate
- Discuss the draft priority list with the Funding Agencies at an intermediate stage Workshop
- Refine the list following the Workshop to provide a publicly available draft document
- Organise a Roadmap Symposium for the community to have their input
- Undertake further refinement, in conjunction with the Agencies, in order to produce the final version for passing to Workpackage 3.2

# Roadmap Working Group:



- **Chair:** M. Bode (Liverpool JMU)
- **Ex-Officio Members:** Panel Chairs and Co-chairs
- **Members at Large Include:** Tim de Zeeuw (Leiden), Guy Wormser (CNRS/IN2P3)

Reporting to the WG are 5 Panels:

# Roadmap Panels:



## A. *high energy; astroparticle; gravitational waves*

- **Chair and Co-Chair:** Guenther Hasinger (MPE), Giovanni Bignami (Università di Pavia)

## B. *UVOIR and radio/mm, including survey instruments*

- **Chair and Co-Chair:** Michael Grewing (IRAM), Laurent Vigroux (IAP)

## C. *solar telescopes; “in situ” (solar system) missions*

- **Chair and Co-Chair:** Michel Blanc (Observatoire Midi-Pyrénées), Mats Carlsson (Oslo)



# Roadmap Panels (cont.)



## D. *theory, computing facilities and networks, Virtual Observatory*

- **Chair and Co-Chair:** Francoise Combes (Observatoire de Paris), [+ tbc]

## E. *education, recruitment and training, public outreach*

- **Chair and Co-Chair:** Rosa Maria Ros (University of Catalunya), Bob Fosbury (ST-ECF)

# Outline Timetable



- Appointment of Panel (Co-)Chairs and constitution of Working Group **Jan 2007**
- Appointment of Panel Members and schedule first Panel meetings **Mar 2007**
- First Draft Panel Reports **Sep 2007**
- First Draft Working Group Report **Nov 2007**
- Workshop with Agencies **Jan 2008**
- Public Draft Roadmap released **Mar 2008**
- Roadmap Symposium **Jun 2008**
- Final Roadmap Document produced **Sep 2008**

# Some Questions and Concerns



- Should we involve “outsiders” in Panels?
- Verification of cost estimates/timescales of major projects?
- How do we ensure “emerging” projects are not left out?
- How do we best ensure effective international (extra-European) co-ordination?
- What is the optimum revision cycle period?



# And Finally...

## Why should anyone take note?

- If we do this correctly, overall funding for new European infrastructures might increase & dreams come true (earlier).
- European participation in the largest, global, astronomy projects in the future will be facilitated by long-term planning and coordination, backed by the agencies.

# Contacts etc.



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- Individual Panel Chairs (contacts to be posted on ASTRONET web pages)
- See also (as ever) the ASTRONET website for updates