

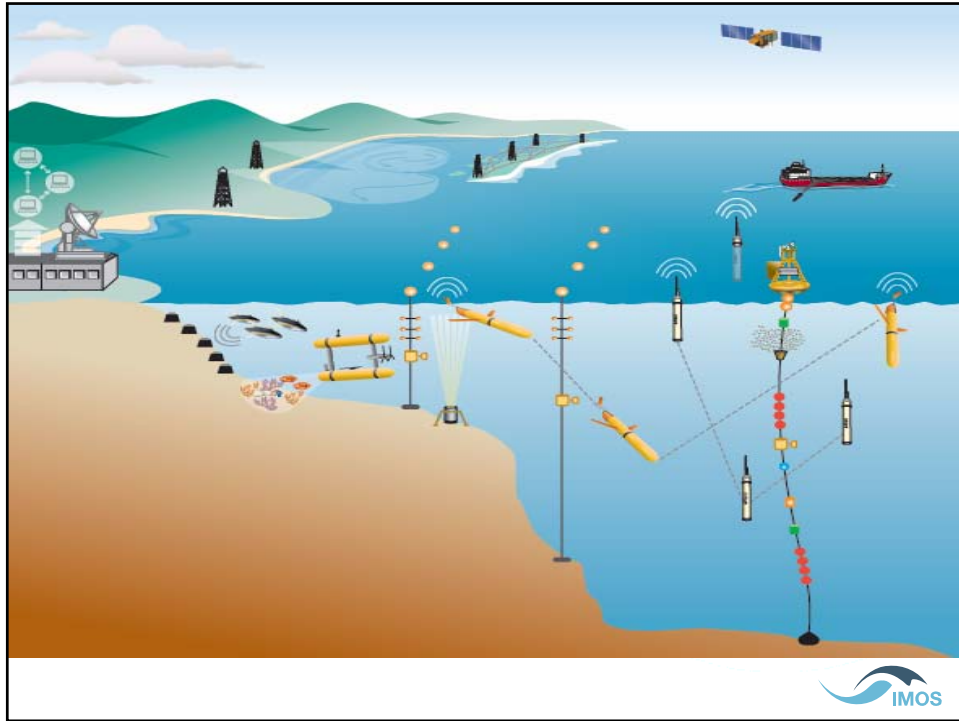


Introducing an Integrated Marine Observing System for Australia (IMOS)

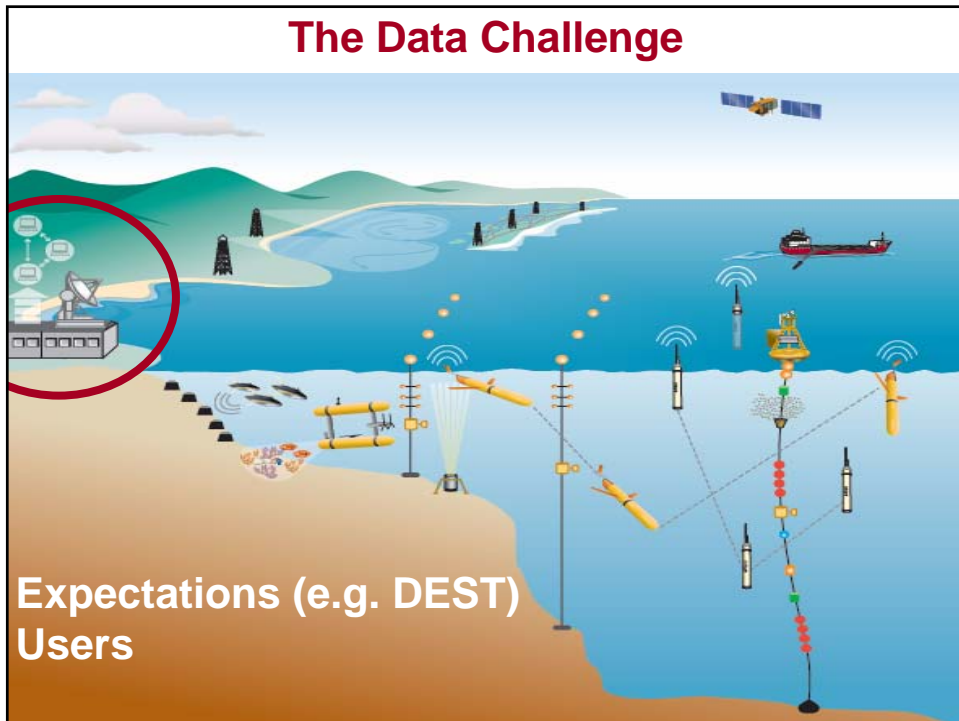
Dr Gary Meyers
Director, IMOS Office
eMII Workshop 26-27 July 2007
University of Tasmania

NCRIS: a new way to fund research Infrastructure announcement Nov 2006

- Minister for Education, Science and Training
Hon Julie Bishop
- IMOS \$50M NCRIS investment
- Approximately equal co-investments
- IMOS Office at University of Tasmania
- Director—Gary Meyers
- Exec. Officer—Jo Neilson
- Funding Agreement—signed by UTAS and DEST
- Initial milestone accepted
- Annual payments
 - \$16M Jun 2007
 - \$ 8M Dec 2007
 - \$10M Dec 2008
 - \$ 8M Dec 2009
 - \$ 8M Dec 2010



The Data Challenge



eMII Issues

- Links with AODC-JF and AODN—a national approach, within limits
- Delivery of IMOS data streams from the Facilities
- Where is the boundary between responsibilities of eMII and facilities?
 - Resources?
- Interoperability of IMOS data streams
- Interoperability of marine data in a national and global sense



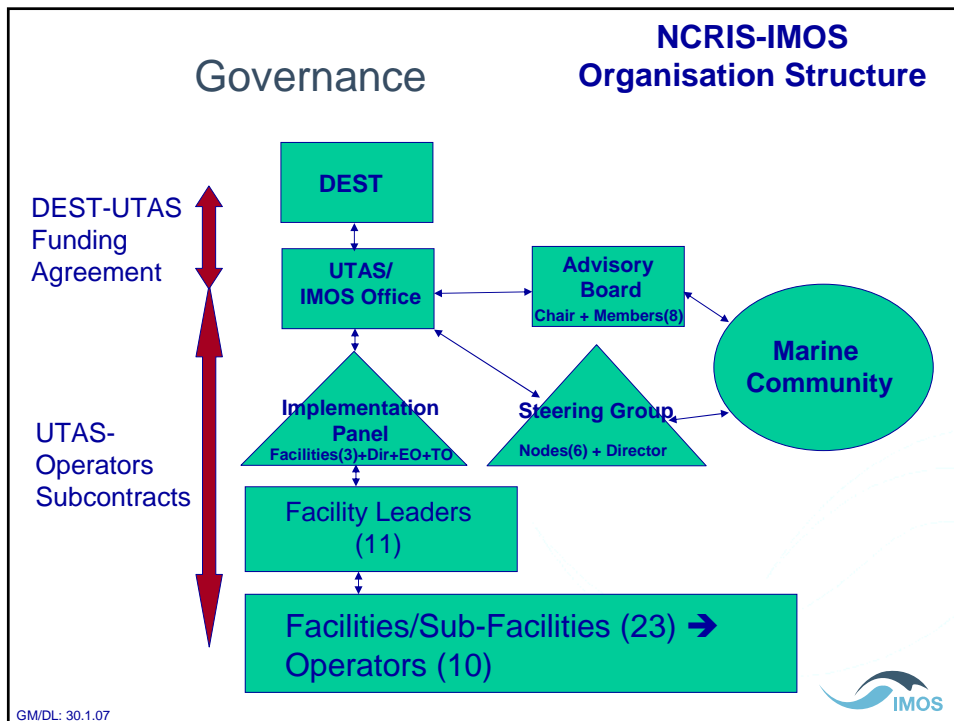
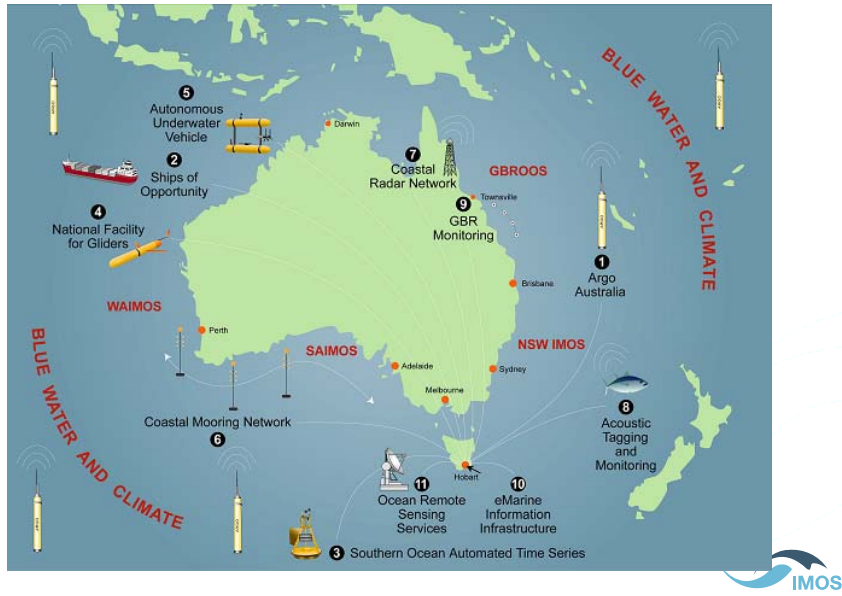
Goal—understand impacts of oceans and boundary currents on ecosystems

- Climate sensitivity of Australian agriculture and economy
 - Requires improved climate prediction on seasonal/inter-annual time-scales.
- Major role of ocean in shaping climate change.
 - Ocean observations critical for improving climate scenarios, characterizing major boundary currents and marine climate impacts on the shelf.
- Understanding how marine ecosystems work and respond to change
 - Fundamental to integrated ecosystem based management required by required by commonwealth and state marine policies
- Environmental Protection legislation
 - Responsibility to protect biodiversity and document what there is and ecological role.
- Risk Management and harm abatement
 - for at sea/offshore industries, recreational pursuits, maritime safety, hazard prediction and national security.



IMOS—5 Nodes and 11 Facilities

Goals: onshore-offshore interaction, climate impacts



Principles (1)

(First AGM, IMOS-1, Hobart, 31 Jan-2 Feb 2007)

- **Service**—IMOS is a **national** system and will provide a **service** that broadly supports marine research to maximise the contributions of R&D to economic development, national security, social wellbeing and environmental sustainability.
- **Data-streams**—IMOS data will be delivered **freely**, **openly**, in a **timely** manner, preferably in near real time. Success will be measured in terms of the quality and quantity of data that IMOS delivers, the number of users and the quality of research-results produced with IMOS data.



Principles (2)

- **Integration**—IMOS will deploy a nationally **coordinated, multi-platform** system to take advantage of the synergies between instruments, and to provide a comprehensive description of the ocean, as a contribution to national and international programs.
- **Sustainability**—The real value of IMOS will only emerge if **systematic, repeated** data collection continues for a **long time** to see the full range of climate variation and change. Sustained streams of data are integrally related to conservation and sustainable development of the marine environment.



Risks

- Loss of focus on a national marine observing approach
- Marine community's needs not seen to be met
- Marine observing ceases at end of NCRIS funding
- An Operator does not meet obligations
- Operational issues create demand for more funds
- Facility or Sub-facility becomes financially unviable



Strategic review early 2009—revisit design of IMOS Infrastructure

- Free, open and timely access to data-streams
- Fixed and moveable infrastructure—by proposal, through the Nodes
- Assessment by the IMOS Steering Committee
- Criteria:
 - Consistency with IMOS Principles and Goals
 - No risk to IMOS implementation
 - Level of Co-investment
 - Commitment to sustained observation
 - Expected number of research users
 - Scientific merit (merit based e.g. ARC vs other project)



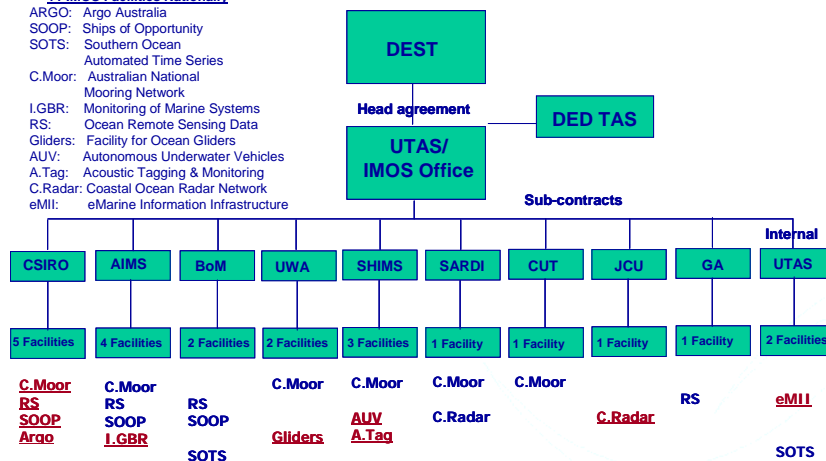
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Legal structure

11 IMOS Facilities Nationally

- ARGO: Argo Australia
- SOOP: Ships of Opportunity
- SOTS: Southern Ocean Automated Time Series
- C.Moor: Australian National Mooring Network
- I.GBR: Monitoring of Marine Systems
- RS: Ocean Remote Sensing Data
- Gliders: Facility for Ocean Gliders
- AUV: Autonomous Underwater Vehicles
- A.Tag: Acoustic Tagging & Monitoring
- C.Radar: Coastal Ocean Radar Network
- eMII: eMarine Information Infrastructure



Red—Principal Operator Blue—Associate Operator