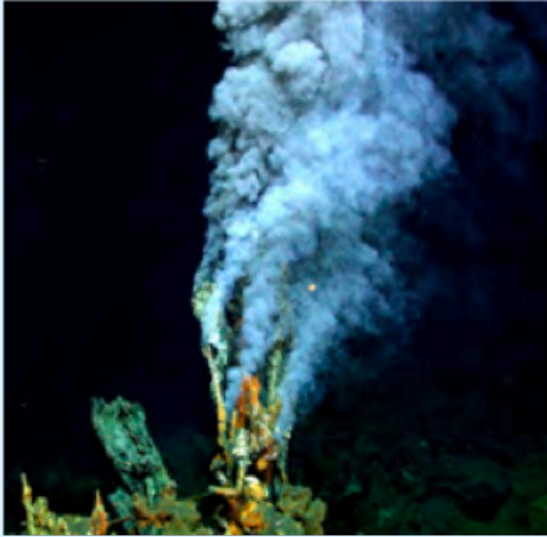


DeSSC New User Program



09 Dec 2017 – New Orleans, LA



What is UNOLS?

University-National Oceanographic Laboratory System (UNOLS)

An organization of academic institutions (universities, National Labs, etc.) involved in oceanographic research joined for the purpose of coordinating oceanographic ships' schedules and research facilities.






UNOLS Today

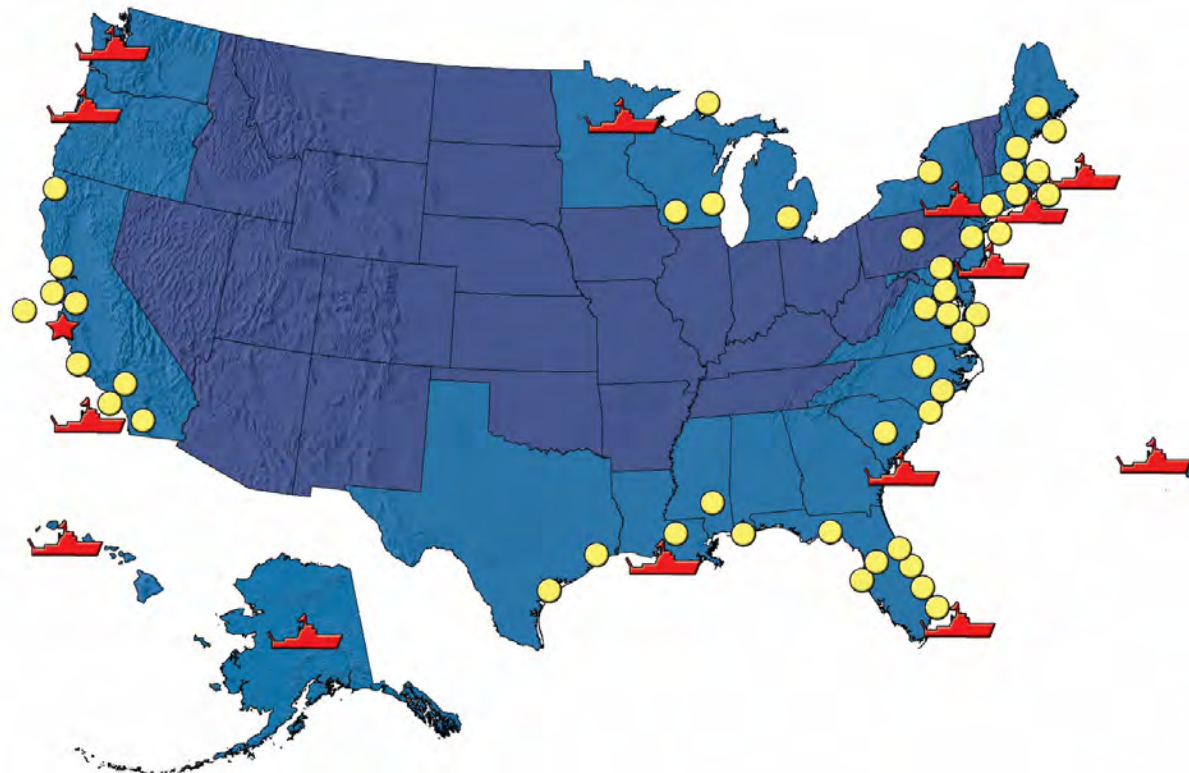
UNOLS today is an consortium of 58 U.S. institutions with ocean science programs

- 14 operating institutions that operate:
 - 18 Research vessels
 - National Deep Submergence Facility
 - National Oceanographic Aircraft Facility
 - National Oceanographic Seismic Facility
- Facilities are either owned by one of the Federal agencies or by individual institutions.
- Elected Council & 8 standing committees
- UNOLS Office



UNOLS Member Institutions

-  Operator Institution - Note: Multiple ships may operate from a single location.
-  Non-Operator Institution
-  National Oceanographic Aircraft Facility Operator





UNOLS Council

UNOLS
Committees

UNOLS Member
Institutions & the
Oceanographic
Community

UNOLS Ship &
Facility Operators
& Tech Staff -
RVs, Aircraft,
Submersibles

Supporting
Federal Agencies
Navy/ONR, NSF,
NOAA, USGS,
BOEM

The UNOLS
Community

UNOLS Office



Ship Scheduling
Committee (**SSC**)

Fleet Improvement
Committee (**FIC**)

Scientific Committee for
Oceanographic Aircraft
Research (**SCOAR**)

*National
Oceanographic
Aircraft Facility
CIRPAS*

RV Operators'
Committee (**RVOC**)

UNOLS Committees

*Marine Seismic
Research Oversight
Committee (**MSROC**)*

*National
Seismic Facility*

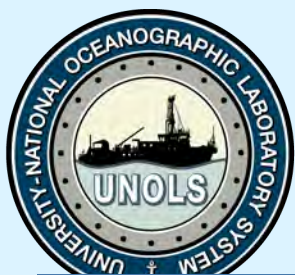
RV Technical
Enhancement
Committee (**RVTEC**)

Arctic Icebreaker
Coordinating Committee
(**AICC**)

*USCG
Icebreakers –
POLAR STAR,
HEALY*

Deep Submergence
Science Committee
(**DESSC**)

*National Deep
Submergence
Facility (NDSF)
WHOI
Alvin, Jason,
Sentry*



UNOLS Global Class



*R/V Marcus G. Langseth /
LDEO*



R/V Atlantis / WHOI



RV Sikuliaq / UAF



R/V Roger Revelle / SIO



*R/V Thomas G.
Thompson / UW*



UNOLS Ocean/Intermediate Class



*R/V Neil
Armstrong / WHOI*



R/V Sally Ride/ SIO



R/V Kilo Moana / UH



R/V Oceanus / OSU



R/V Endeavor / URI



*R/V Atlantic Explorer /
BIOS*



Federal Agencies, NDSF, & UNOLS



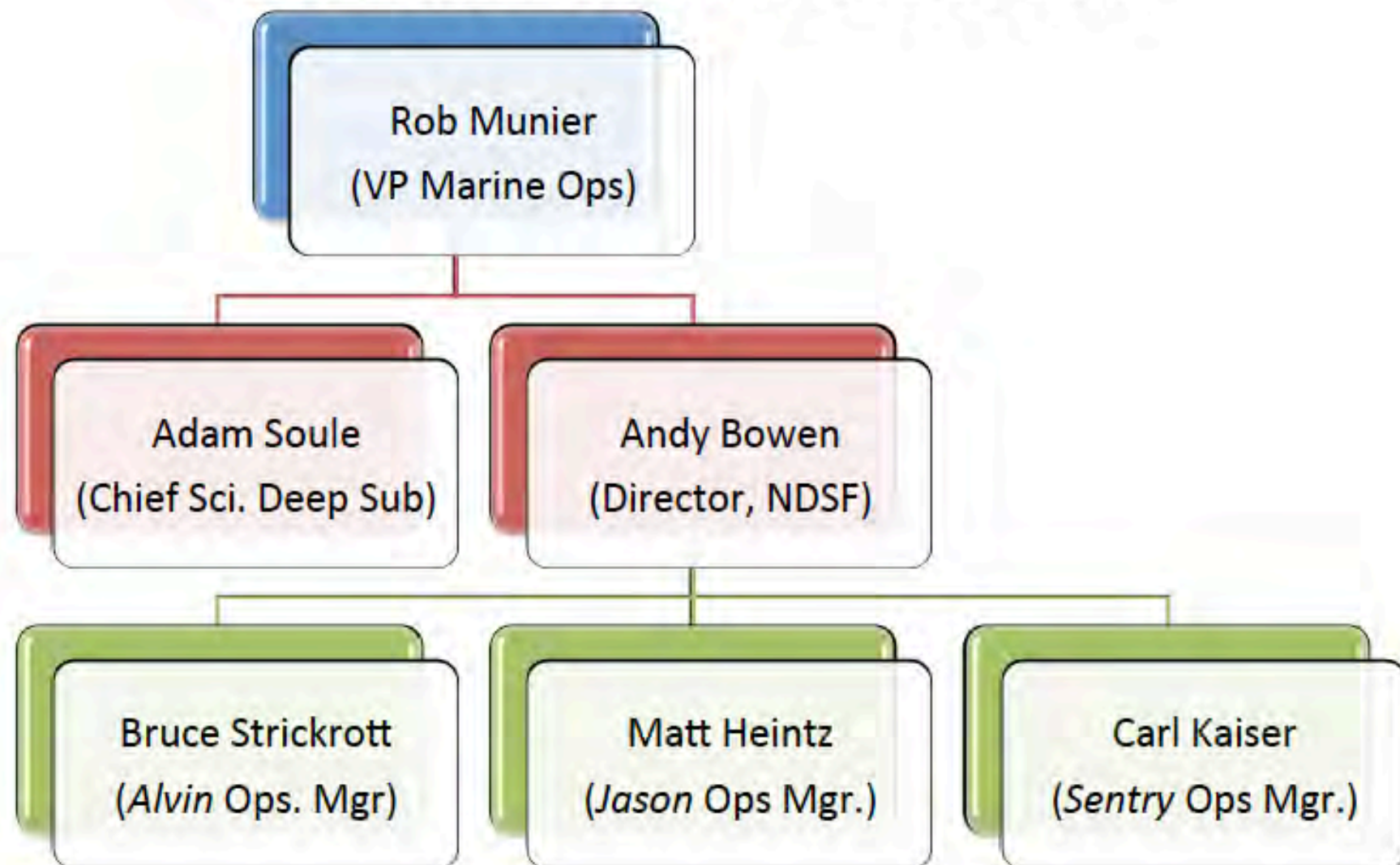
& other
Federal
Agencies

Science
Users



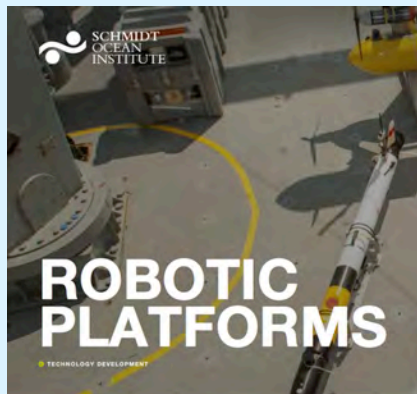
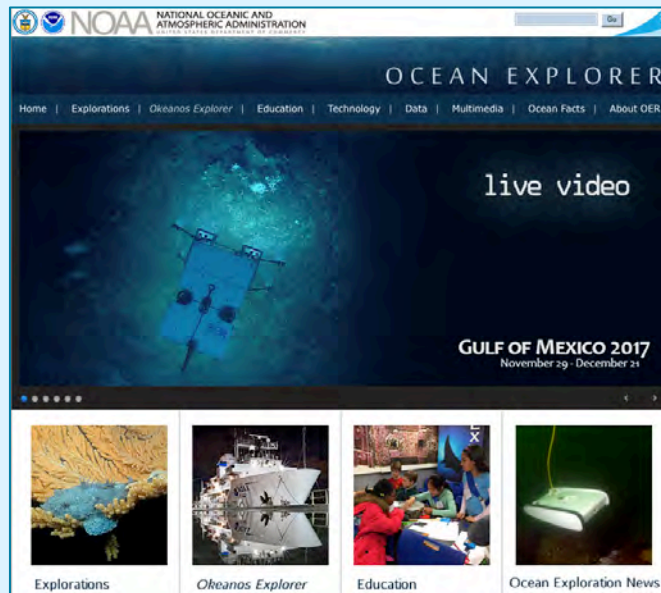
NATIONAL DEEP SUBMERGENCE FACILITY

ORGANIZATION STRUCTURE

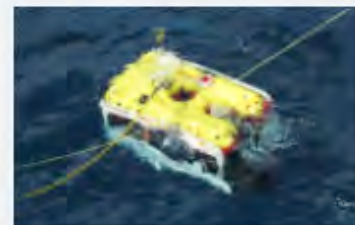




Other Deep Submergence Facilities and Operations



4500 m Remotely Operated Vehicle (ROV SuBastian)



300 m SAAB SeaEye Falcon Remotely Operated Vehicle (ROV)

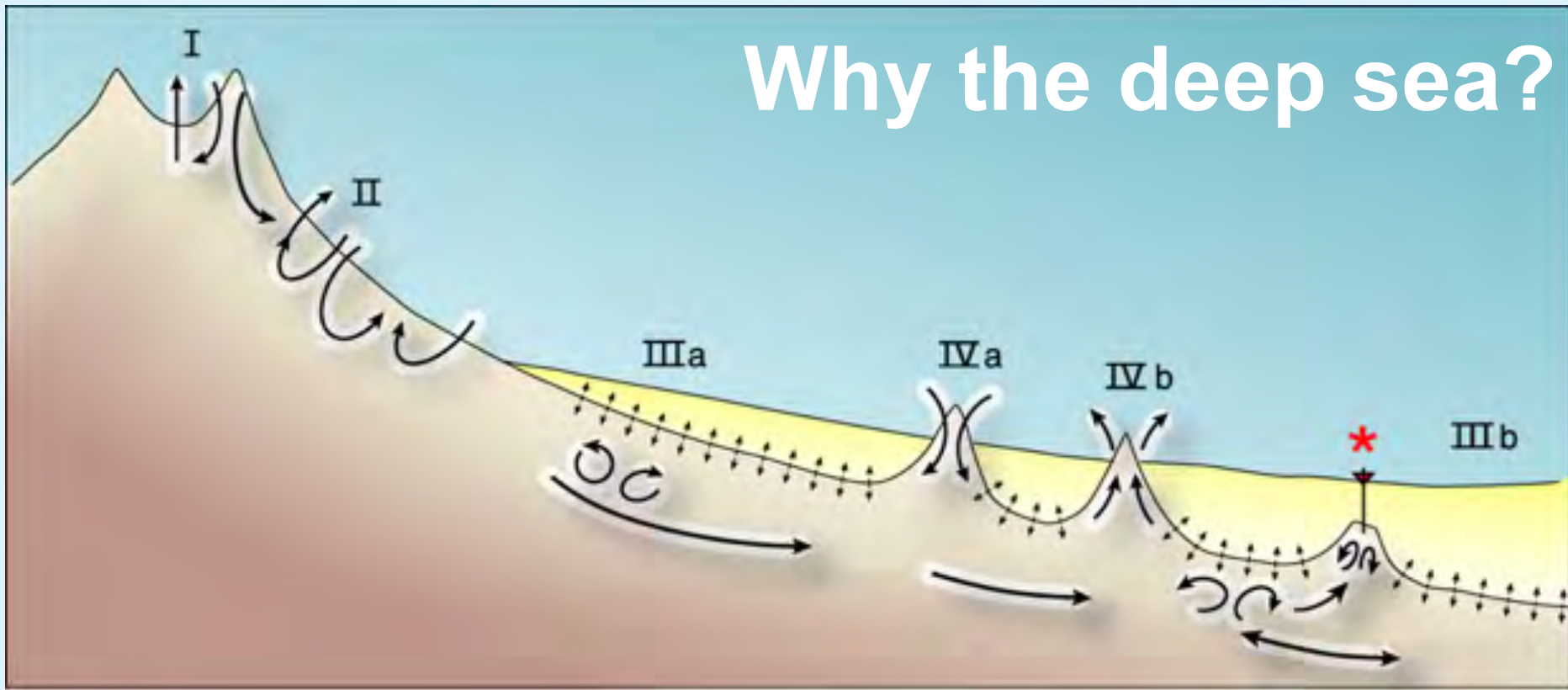


Autonomous Underwater Vehicle (AUV)



Rick Murray, NSF

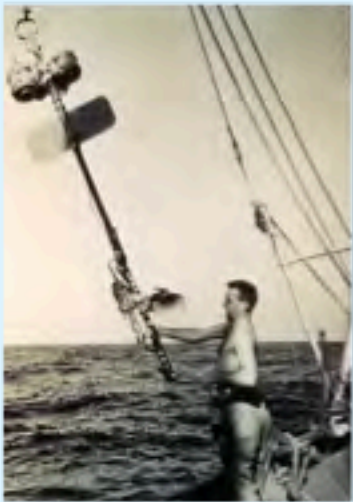
Why the deep sea?



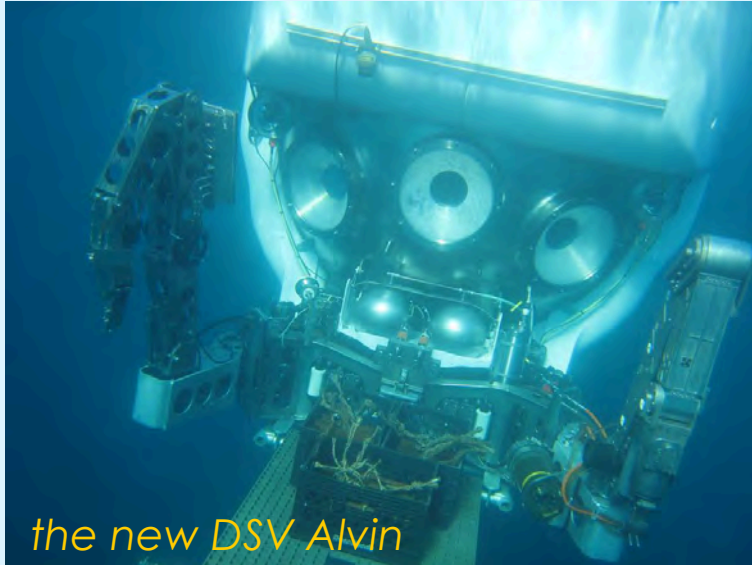
- **NEW DISCOVERIES**

- Biodiversity
 - Sites of mineral resources
 - Sites of where there is the mass transfer from Earth's interior to exterior
- The hadal zone represents the deepest marine habitat on Earth (6000-11,000m), accounting for the deepest 45% of the global ocean.

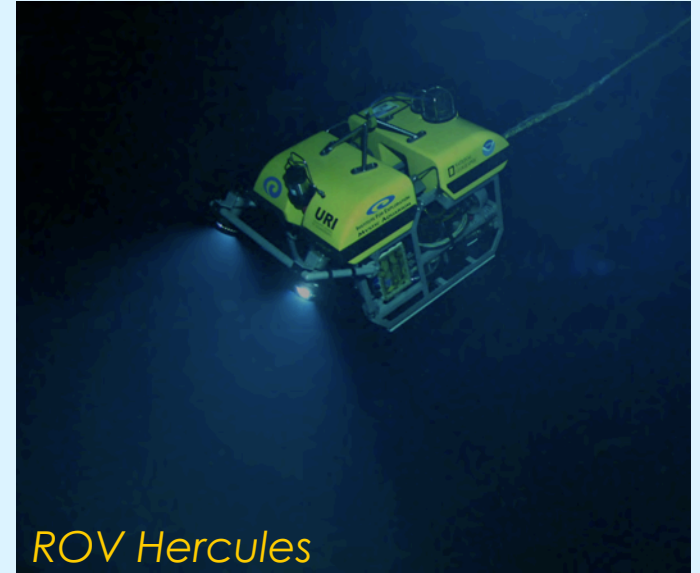
Technology & innovation enable innovative science



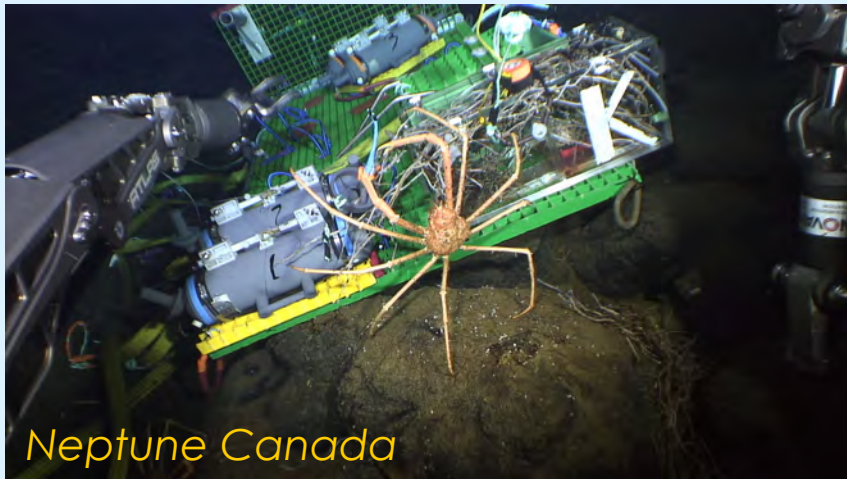
Today, advanced submersibles and robots are ever-present in the deep sea



the new DSV Alvin



ROV Hercules



Neptune Canada



AUV Sea Explorer

How is deep sea research conducted today?

THEN:

- Deep sea research support was “haphazard”
- Not open to all
- Women were not allowed on board
- Samples were not deposited in open repositories
- Training was on the job

NOW:

- Deep sea research support is far more consistent
- Largely open to all
- Samples and data are supposed to be broadly available
- Training programs exist
- Efforts are both governmental and private

How can you get involved?

- You're here...that's a great start!
- Reach out to the agencies and operators
 - NSF, NOAA, SOI, OET and all the insitutions
- Volunteer or, better yet, apply for jobs
 - CONSIDER WORKING WITH THE OPERATORS!
- Apply for funding !!!



You have an idea... so what's the flow for your deep sea research?

Pre-submission discussions (NDSF)

- (choice of vehicle; technical feasibility; cruise duration)

Grant submission (UNOLS)

- (UNOLS Ship Time Request)

Once you are funded (NDSF)

- (Pre-cruise planning; ~6 months; Expedition Leader)

Once you are at sea

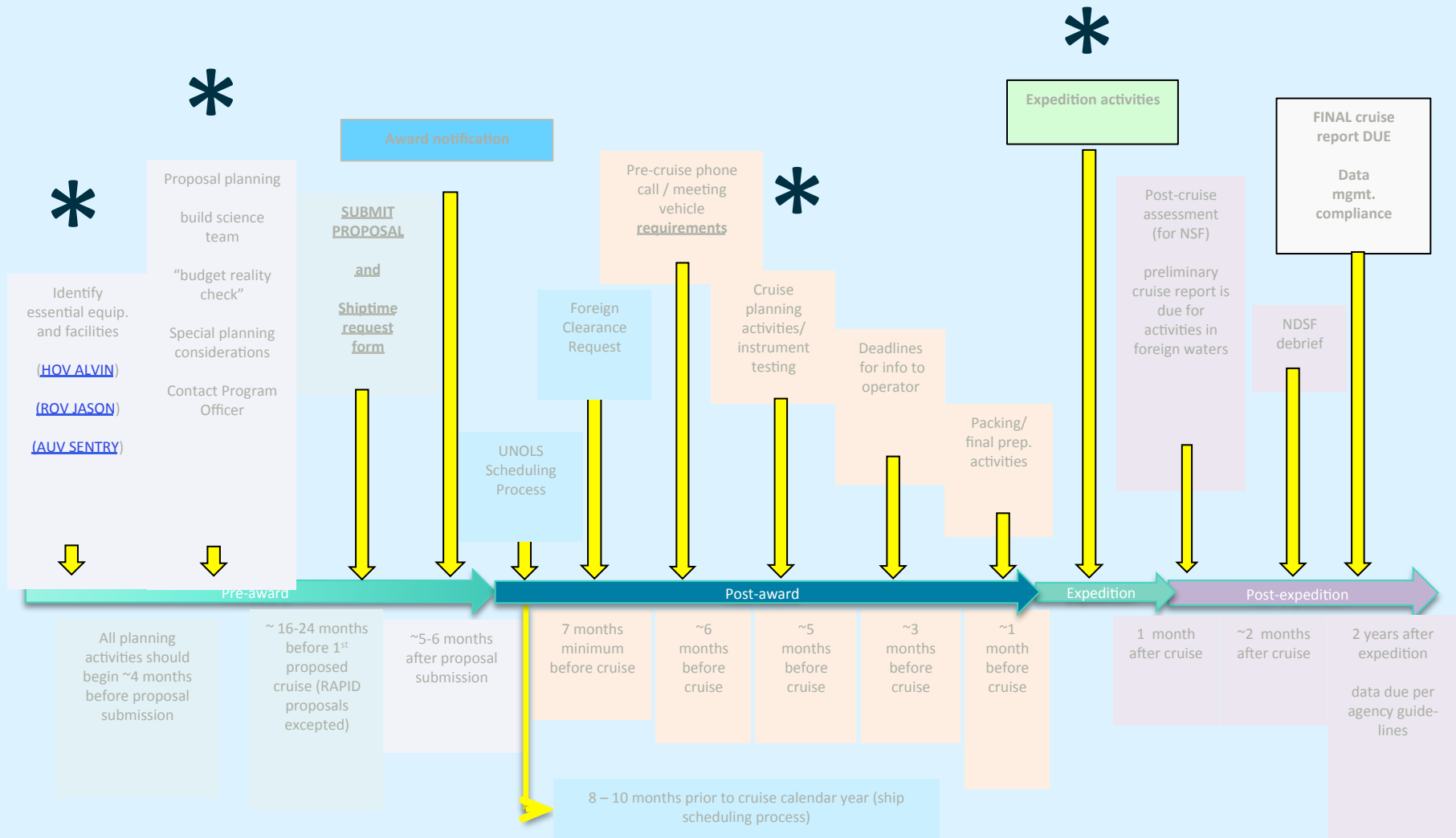
- (Dive planning; responding to “events”)

Post cruise

- (NDSF debrief, cruise report, data management)

You have an idea...

so what's the approx. time frame?



Remember this...

“The real voyage of discovery consists not [just] in seeking new landscapes, but in having new eyes.”

— Marcel Proust

