



# TECH RECRUITMENT & RETENTION PILOT PROGRAM PROGRESS REPORT

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RVTEC Annual Meeting  
15-18 Nov 10





# Recommendations from Austin Workshop

Feb 2009

- Internship Programs for Technicians and licensed crew positions
- Training Scholarship to provide opportunities for advanced technical skills and license upgrades.
- Crew and Technician Relief Pool Process that will better utilize existing personnel and to better identify qualified and available temporary personnel.
- Available Berths Policy and Procedures to more effectively provide opportunities for training, experience and research or educational opportunities, including outreach to potential employees.
- Addition of a UNOLS Personnel Coordinator that will oversee, coordinate and facilitate these related issues on a fleet wide basis making them more effective and providing relief to smaller ship operations staff.



## Tech Recruitment & Retention Pilot Program Progress Report

- Collecting Information
- Finding Technicians
- UNOLS/MATE 6 month Internship
- Training & Education
- Technician Pool
- Technician Augmentation
- Recruitment/Outreach



# Collecting Information



- Further contact with Tech Managers to learn about their programs.
- Conversations with full-time and contract technicians within UNOLS & other at-sea programs
- Visits to WHOI, LDEO, URI, UDEL, OSU, SCRIPPS
- Conversations with scientists
- Conversations with private companies who supply technicians





# Collecting Information

- Investigated other Shipboard Technical Support Models
  - National Oceanographic Center – Southampton, UK
  - WHOI Jason Program
  - NOAA
  - NOAA OER – OKEANOS EXPLORER
  - IODP
  - USAP
  - SEA



# Finding Technicians



- UNOLS Technician Transfers
  - SCRIPPS technicians to the *Sharp*
  - SCRIPPS technician to the *Atlantic Explorer*
  - Miami Technician worked on the *Thompson* and *Atlantic Explorer*
- Contract Technicians
  - Connected UW with contract technicians (independent and commercial)
  - Contract technician to the *Oceanus* and *Kilo Moana* (Dec 2010)
- UNOLS/ USAP exchange
  - Set up an easy means of exchanging technicians between the fleets
  - USAP/RPSC technician to the *Atlantic Explorer*



# Finding Technicians



- Results:
  - Great experiences for full time technicians
    - “I enjoyed seeing how another institution’s operations run.”
    - “I enjoyed seeing something new.”
    - “The experience increased my confidence in my skill-set.”
  - Great experience for the host institutions:
    - “I was expecting at least a few headaches and did not have any”
    - “The process of getting a qualified technician to fill-in was painless.”
    - “It was great training for my technician.”
    - “The technician’s IT experience was very helpful. He made several good recommendations to improve our network, one of which he implemented before he left.”
  - New appreciation for fill-in and contract technicians



**MATE**

MARINE ADVANCED TECHNOLOGY EDUCATION CENTER

# UNOLS/MATE internship

- Worked with the MATE program to set up the 6 month internship to run from January – June 2011
  - WHOI ~ Jan – Mar 2010
  - DUKE ~ Apr – Jun 2010
- Advertised through all the UNOLS email lists, MATE infrastructure, COL, web. Emphasis was placed on
  - Already completed or almost completed studies
  - Previous sea-time
  - Candidates interested in a career as an MT





**MATE**

MARINE ADVANCED TECHNOLOGY EDUCATION CENTER

# UNOLS/MATE internship

- Subcommittee of RVTEC members
  - Help develop the Internship Guidelines
  - Assist in narrowing down the applicant pool
- Internship Schedule
  - 80-90 Days at Sea
  - 80-90 Days ashore
- On-Shore Housing





**MATE**

MARINE ADVANCED TECHNOLOGY EDUCATION CENTER

# UNOLS/MATE internship

- Applications Received:
  - 30 complete applications
    - 13% ethnic minority
    - 37% female
    - 43% from MATE Partner colleges
    - 27% from community colleges
    - 10% previous MATE interns
- The Future
  - 1 intern proposed for the next 3 years
  - We will need further host institutions!



# Training/Education



## Investigating MT Training/Education

- Developed a survey on training within the fleet to:
  - Review the current training models within the fleet
  - Begin to develop a database of beneficial and not-beneficial courses for the fleet so current and future technicians can benefit from past technicians' training and education experiences
  - Find out if there is any opportunity for future group training/education



# Training/Education Survey

## Results

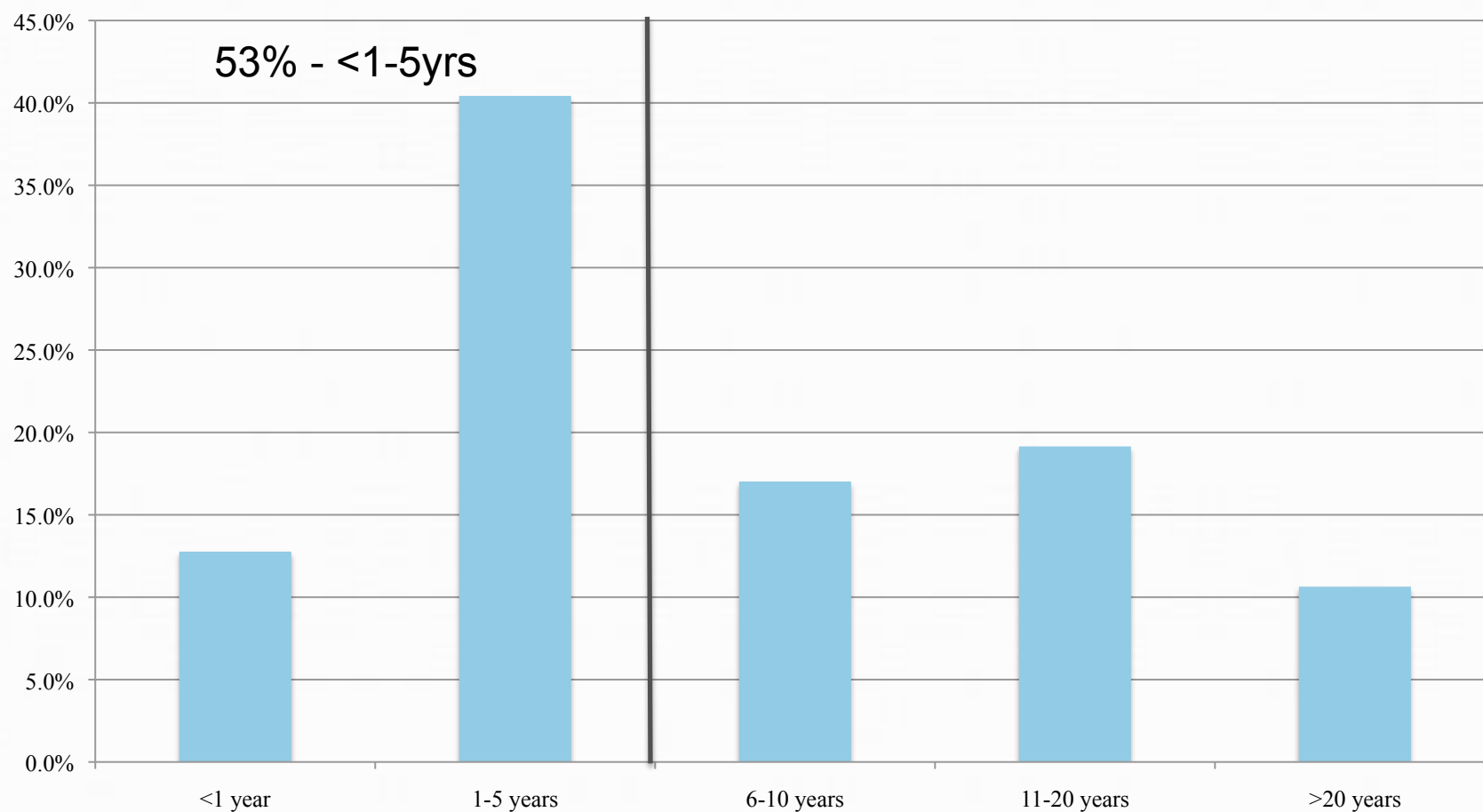
- 54 Total responses
- 47 Responses from current UNOLS MTs/Tech Mgrs
  - Approximately 55-60% return
- 5 Responses from MTs outside UNOLS
- 2 Responses from folks in the Marine Industry (nonMTs)



## Training/Education Survey

### Results

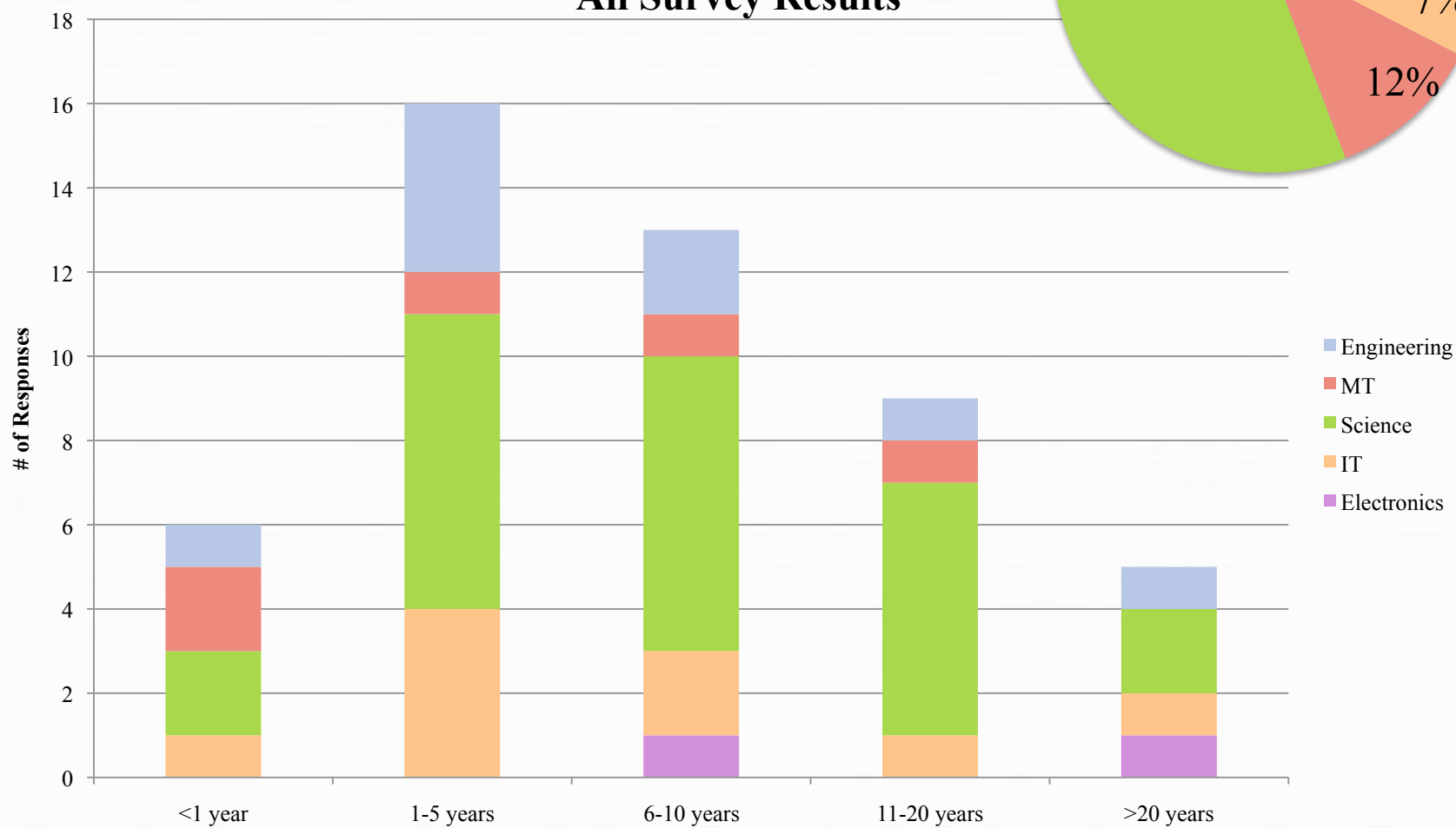
#### Years as an MT/Tech Mgr in UNOLS





# Results

## Post Secondary Education All Survey Results

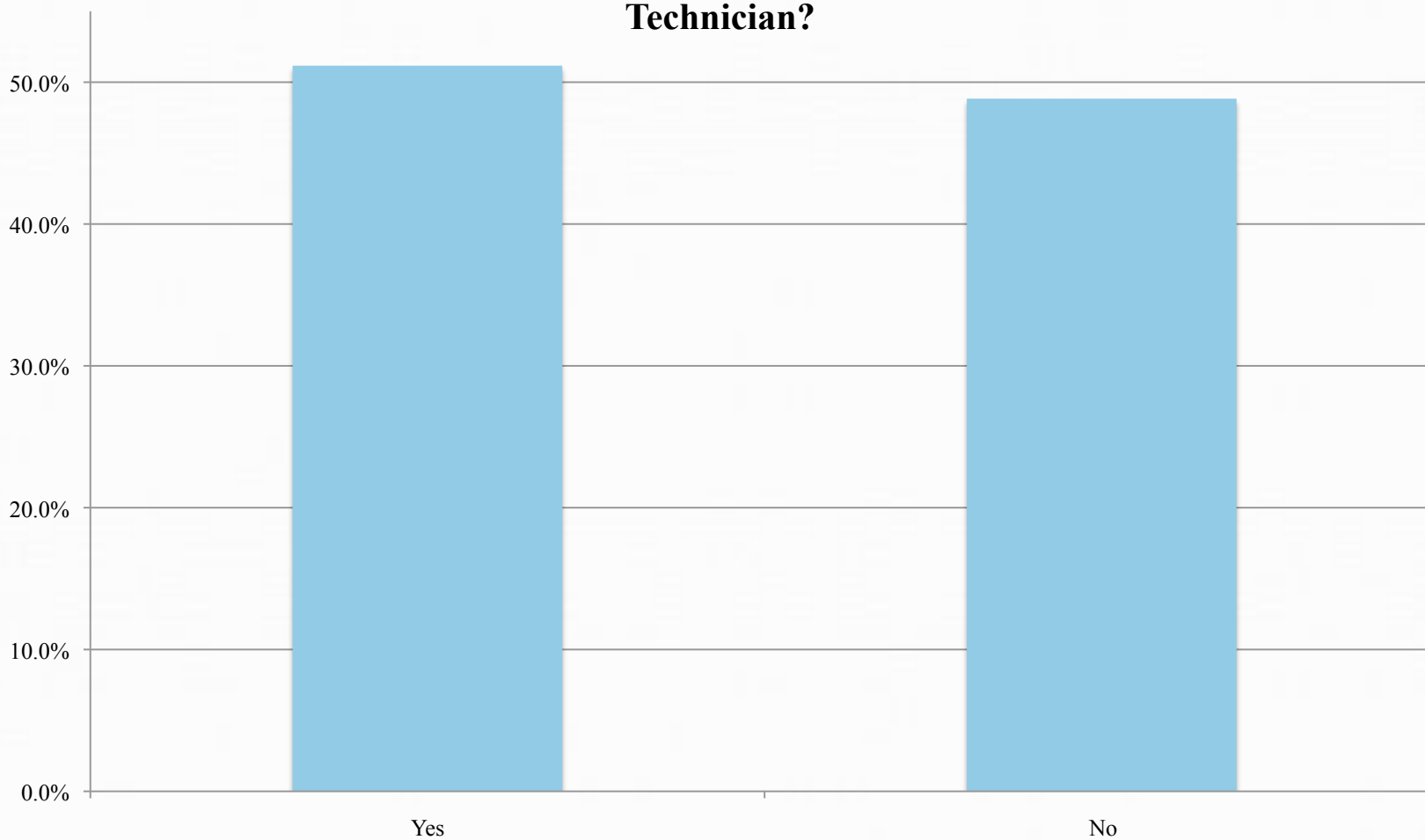




# Results

## Training/Education Survey

**Sufficient Training/Education to Optimally carry-out duties as a Marine Technician?**

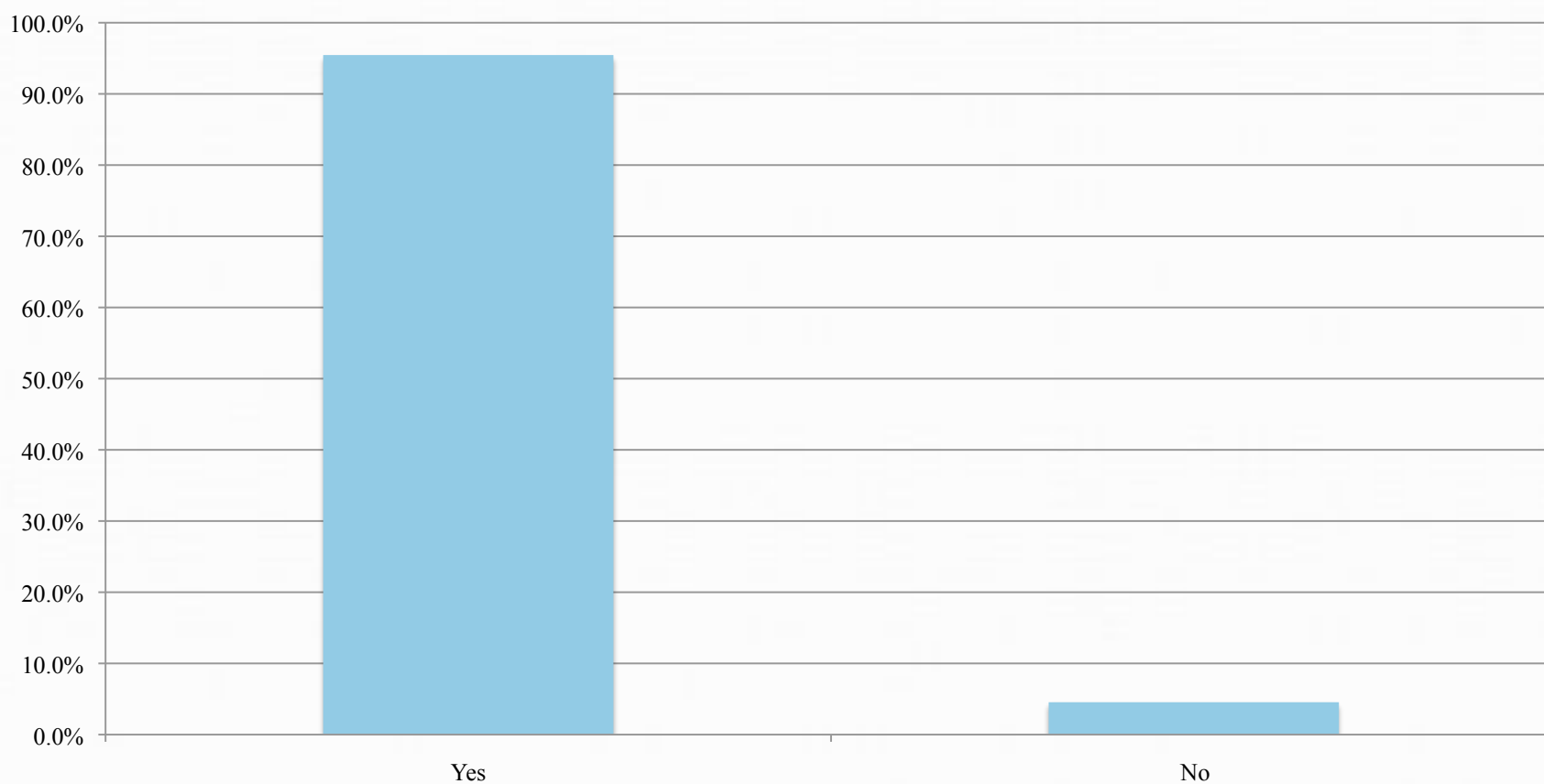




# Training/Education Survey

## Results

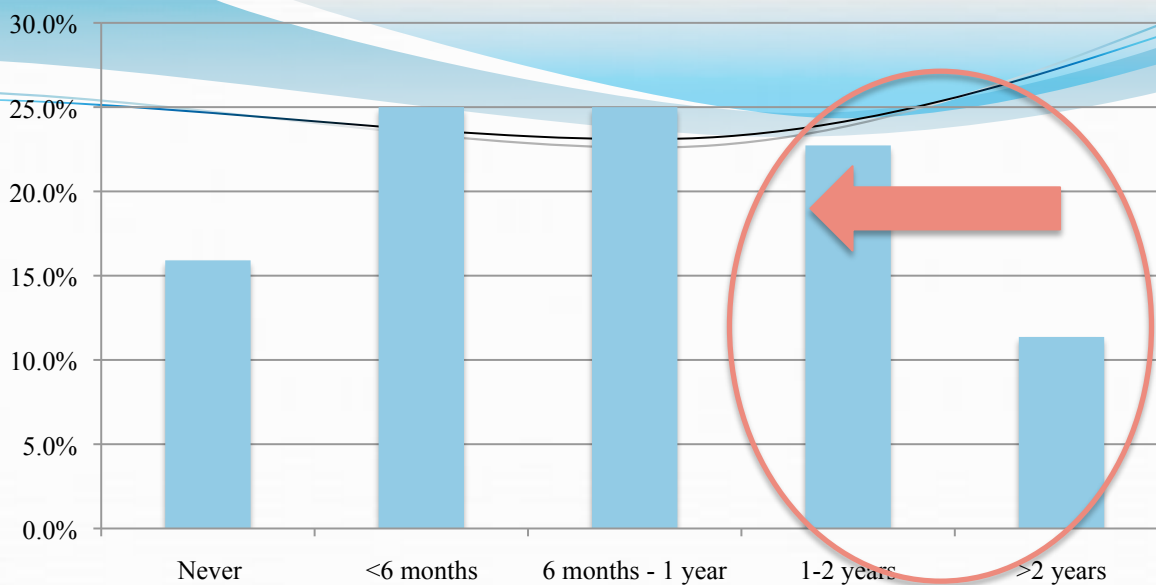
### Attend More Training? UNOLS Tech/Tech Mgrs



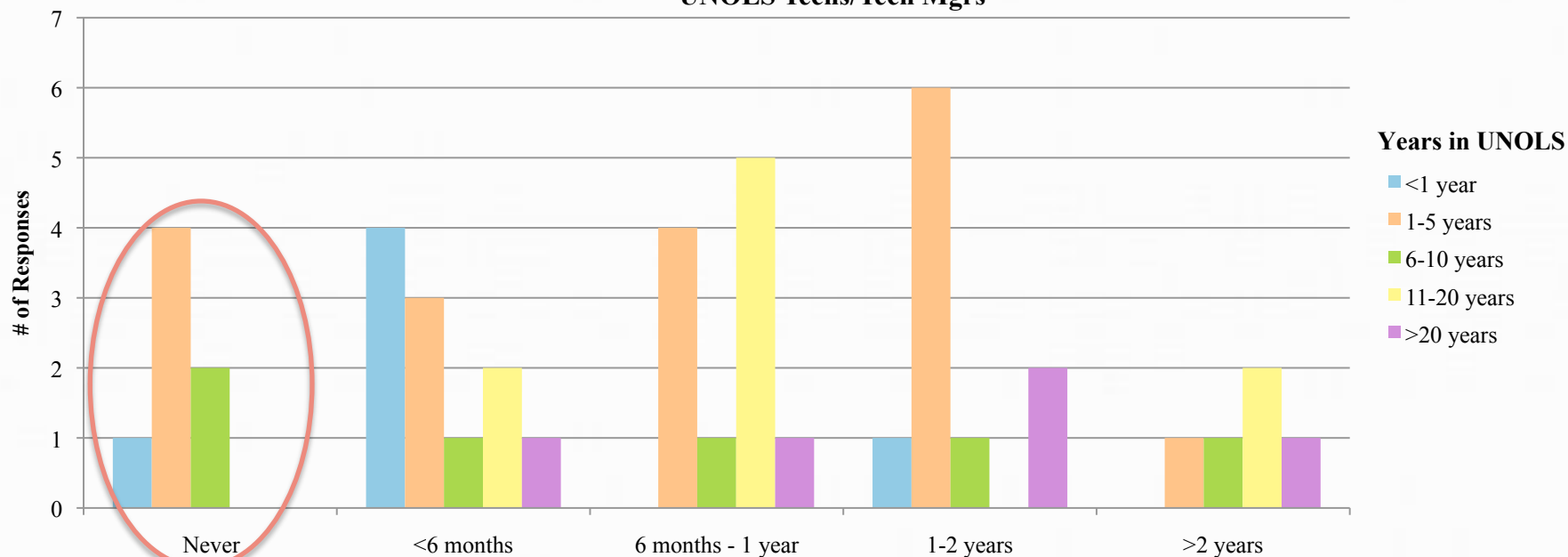




# Results



**Time Since Attending Training**  
UNOLS Techs/Tech Mgrs



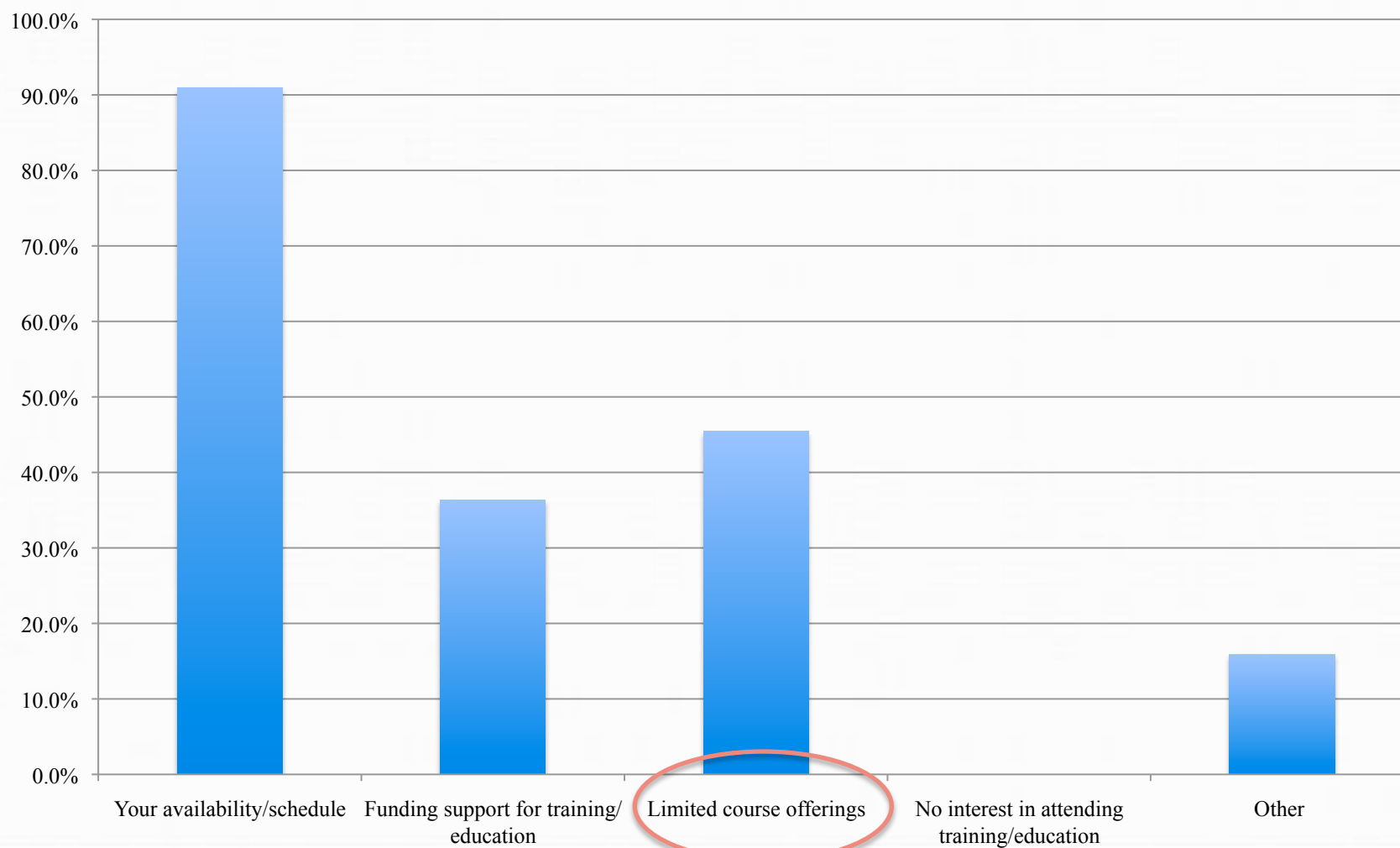


# Training/Education Survey

## Results

### Hurdles to Attending Training

UNOLS MTs/Tech Mgrs





## Training/Education Survey

### Worthwhile Courses

- A few courses specifically stood out:
  - Seabird
  - HiSeasNet
  - Multibeam – both Kongsberg and UNH
  - Rigging
  - Winches & Wires
  - Fish Philosophy! course
- Others Listed:

Marine Safety, Hazmat, Electronics, Computer Networking, RVTEC, INMARTEC, Small Boat Operations



## Training/Education Survey

### Courses Interested in Taking

- Many of the same courses as listed above
  - Network Administration
  - ADCP
  - HiSeasNet
  - Software programming
  - Multibeam
  - Electronics
  - Rigging



## Training/Education Survey

### Comments

- “Troubleshooting and fault location is becoming a lost art and upcoming techs could benefit from exposure to these topics.”
- “(It) would be worthwhile to provide a Rigging/Back Deck Training session to keep consistency and safety high within UNOLS fleet.”
- “I think that conflict management and stress management are also important topics for education and retention of technicians.”
- “If an institution purchases a new piece of gear the technicians should get formal training on proper maintenance and operation of the equipment.”



## Training/Education Survey

### Comments

- “Cross-training of techs on other vessels to expose all to the various systems would be beneficial.”
- “... Training should augment their workload, not add to it.”
- “The more training the better!”



## Training/Education Survey

### What next?

- Create a list of good courses and providers as a resource for the fleet.
- Investigate further community training sessions
- Training matrix?
- Investigate different models for funding training
- Find good online training?
- Develop UNOLS specific courses (e.g. electronics, rigging?)
- Investigating finding ship days (transit or other) to conduct full-scale MT training onboard a UNOLS RV



# Technician Pool

- Investigating means of hosting the Technician Pool
  - Provide flexibility to the Tech Managers within the fleet
  - Augment the current support on particular cruises
  - The tech pool will consist of sea-going only technicians either contract employees or independent contractors
- Investigating how the various systems within the fleet and the skill sets required per boat.
- Investigating the various pay structures within the fleet.





## Technician Pool

### How Paid?

Institution	At-Sea pay
1	5 x (8hrs straight time for weekdays at sea + 1.25hours of 1.5x/hr) 2 x (3 days of comp time for each weekend at sea)
2	1.5x/hr over 40hr/wk + 15% sea bonus per day at sea
3	7x8hr straight time + Either 4hrs extra straight time per day at sea OR 4 hours of comp time per day at sea
4	7x8hrs straight time + 4 hours of comp time per day at sea
5	7x8hr straight time + 1.5x/hr over 8 hr/day at sea
6	7x8hr/day straight time + 1.5x/hr over 40hrs/wk +seapay/day (seapay=fixed rate dependent on exp)
7	7x8hr/day straight time + 1.5x/hr over 40hrs/wk
8	7x8hr/day straight time + 1.5x/hr over 40hrs/wk



## Technician Pool

### How Paid?

Institution	At-Sea pay
9	7x8hr/day straight time + 1.5x/hr over 40hr/wk + 8hr comp time per 14 days at sea
10	7x8hr/day straight time + 1.5x/hr over 40hrs/wk
11	7x8hr/day straight time + 35% seapay bonus/day after 3 days at sea
12	7x8hr/day straight time + 1.5x/hr over 40hrs/wk
13	60% -140% of regular pay/day
14	7x8hr/day straight time + Either 1.5x/hr over 40hrs/wk OR ~16hr comp time per week
15	7x8hr/day straight time + Either 1.5x/hr over 40hrs/wk OR 6 hr comp time per day at sea
16	5x8hr/day straight time + \$70/day sea-pay bonus per day at sea

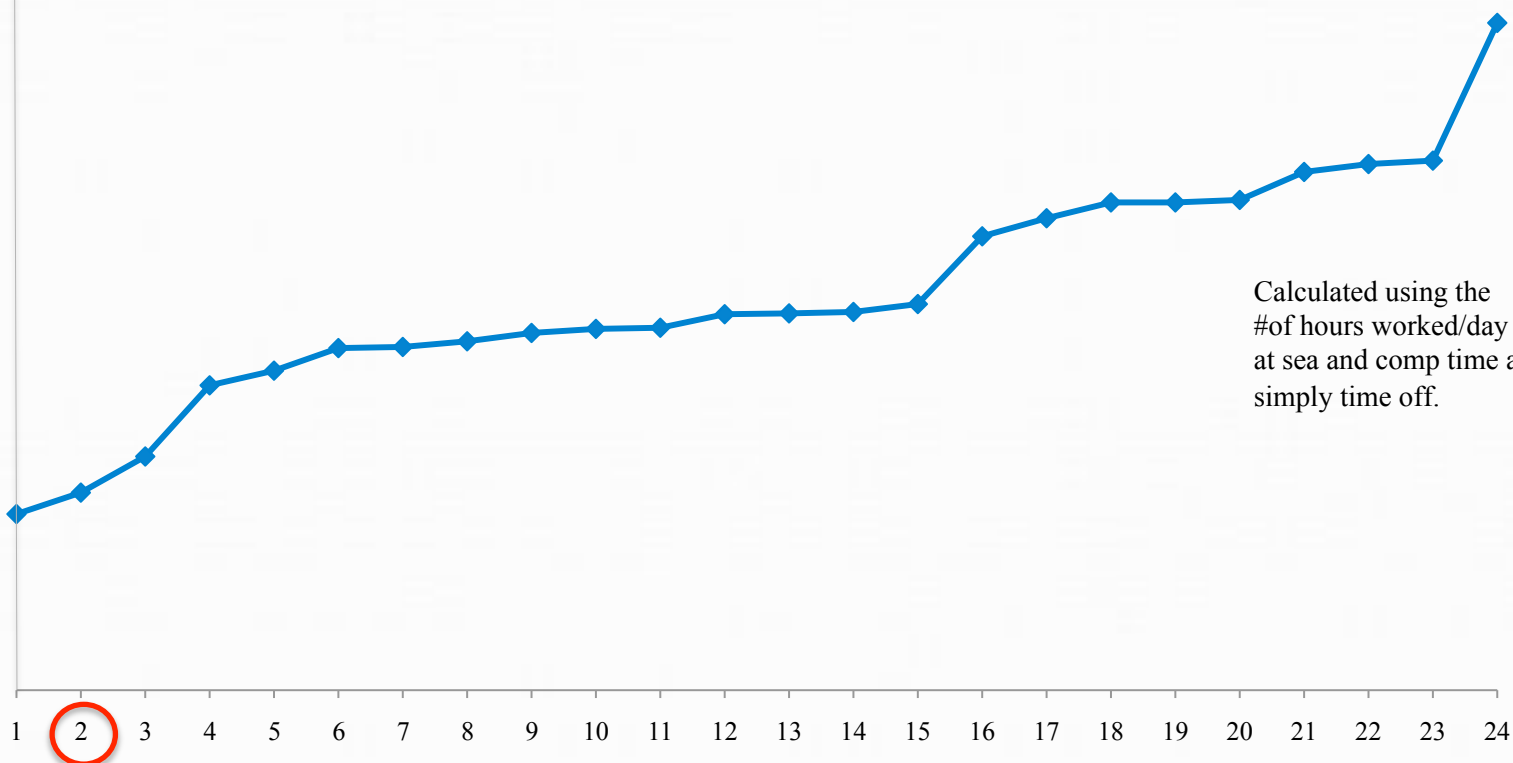


## Technician Pool

# Salary Survey

**Budgeted  
Pre-tax Take-home/day at sea  
(Salary+Seapay/OT)**

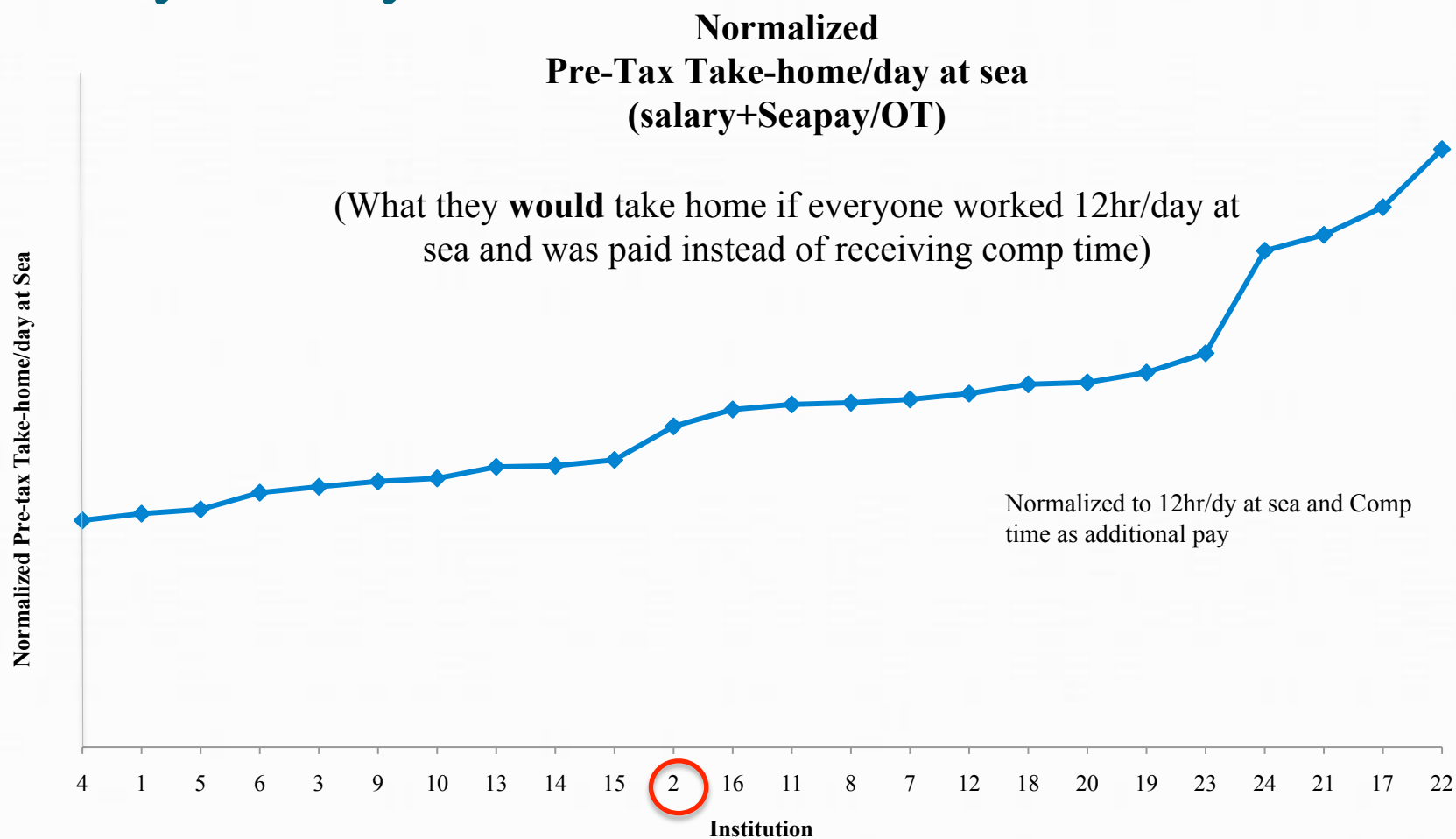
Budgeted Pre-tax Take-home/day at Sea





## Technician Pool

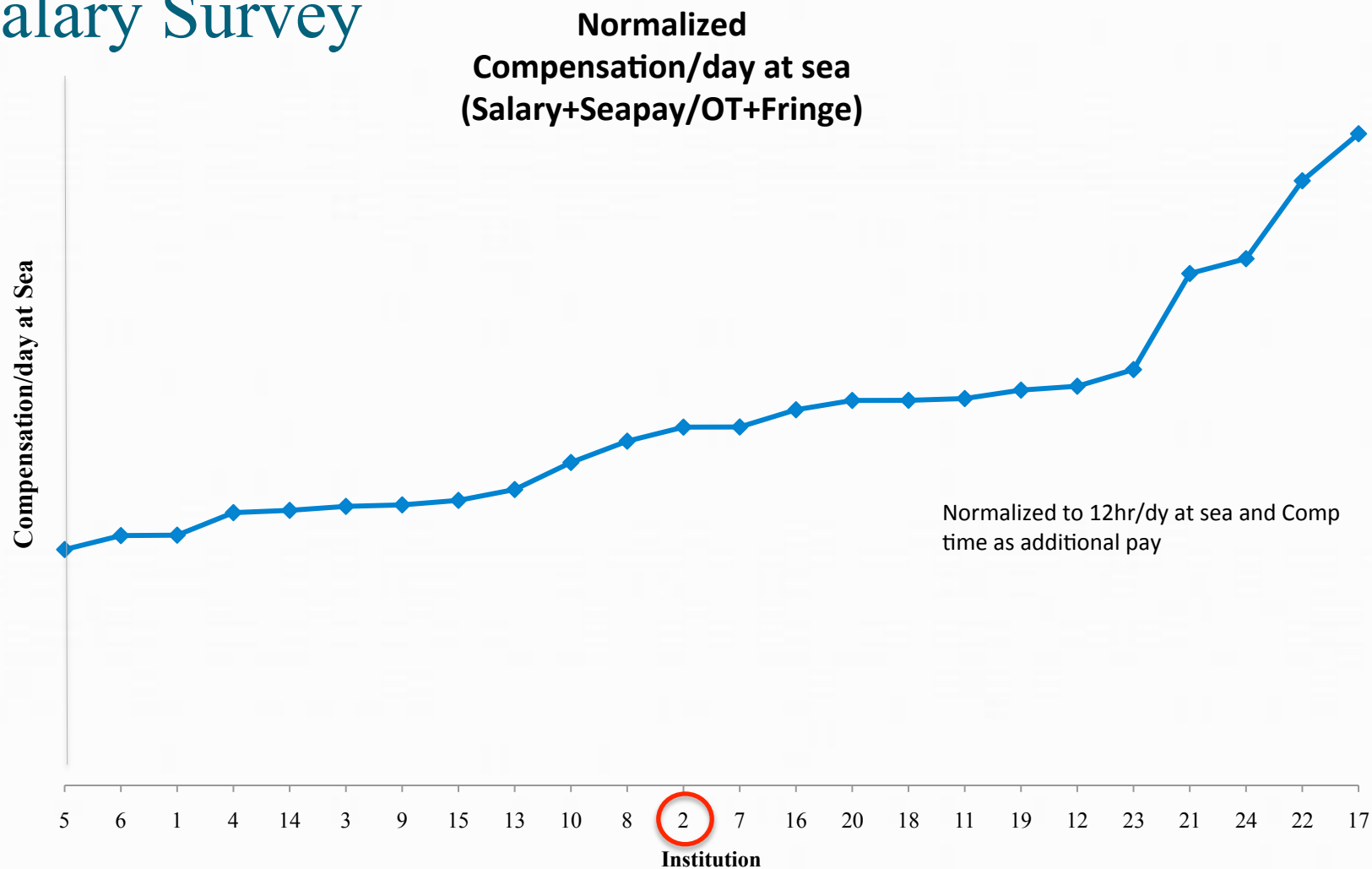
### Salary Survey





## Technician Pool

### Salary Survey





## Technician Pool

### Salary Survey

**Normalized  
Compensation/day at sea  
(salary+Seapay/OT+Fringe) +  
Cost of Living Adjustment**

Compensation/Day at Sea

5 15 9 7 13 1 4 3 8 6 18 10 20 11 23 12 14 2 24 21 19 16 22 17

Institution

Normalized to 12hr/day at sea, comp time as  
added salary plus Cost of Living Adjustment





# Technician Pool

- Hosted by a single institution who would employ all tech pool technicians
- Hope to develop a consistent pool
- UNOLS office sent out a Letter of Interest earlier this year
- Developing a Letter of Guidance to potential bidders
  - 3 tiered Marine Technician structure (MT I, MT II, MT III)
  - Salary Structure
  - Number of technicians, what type & how many days
- NSF plans to fund a pilot program to implement the concept.



## Tech Augmentation- “Increasing the Technical Footprint”

- What does this mean?
- How are we going to do this?
  - Early season planning
  - Non-fully utilized full time technicians
  - Contract/Tech Pool Technicians
- How will the \$\$ work?
  - Carry-forward
  - Direct funding of the Tech Pool





# Recruitment/Outreach

- Developed a UNOLS flier focused on Vessel Support jobs.
- Sent UNOLS fliers to the Oceans 2010 conference & UNOLS Annual meeting.
- Constantly looking for mechanisms to inform people about and promote UNOLS.
- Always looking for better mechanisms for recruiting and outreach.



# Scorecard

The 2009 RVTEC Plan	Action
<b>Evaluate all Institution's Technical Operations</b> in order to better understand shipboard and shore side duties and operation.	Ongoing. Including discussions with most if not all tech managers, technicians and PIs.
Create a <b>better system for exchange/sharing of full-time technicians</b>	Complete including possibility to exchange with the USAP Marine Program.
Establish a <b>data base of contract technicians</b> not currently working within the fleet that could sail on cruises as needed (tech Pool) and a mechanism to hire them	Currently a list of names that continues to grow.



# Scorecard

The 2009 RVTEC Plan	Action
Evaluate <b>ship schedules</b> for potential problems with staffing and <b>recognize opportunities to increase the level of technical support</b> when possible	Preliminary work completed, needs verification by Technical Managers
Develop and implement a <b>training program</b> for technicians with a focus on increasing versatility and skill level	Ongoing, discussed
Create <b>standard job titles</b> and job descriptions throughout the Fleet (?)	Complete. Decided this was not required, necessary or really possible.
Work with UNOLS office and Institutions to get an <b>accurate representation</b> on-line for the Fleet's <b>shared-use equipment</b> .	Investigations started and then tabled (but not dead). R2R vessel profiles and R2R Event Log will significantly improve this.



# Scorecard

The 2009 RVTEC Plan	Action
<b>Visit the UNOLS Institutions ...establish working relationships with the Technical Managers of the fleet .</b>	Ongoing. Visits to OSU, LDEO, DE, SCRIPPS, WHOI, URI completed. Discussions with all the tech managers.
Establish <b>mechanism for better documentation</b> throughout the fleet	Started – to be discussed this afternoon
<b>Develop</b> a template for a <b>Cruise Support Plan ...</b>	Started – to be discussed this afternoon
<b>Increase the visibility</b> and information about jobs on Academic Research Vessels and <b>explore establishment of an internship program</b>	Internship – created Increasing visibility - ongoing



# Scorecard

The 2009 RVTEC Plan	Action
Provide the fleet a resource that was heretofore unavailable	Attempting to on a daily basis
<b>OTHER</b>	
Assisting Tech Manager to find Technicians	
Cadet Placement	
UNOLS website Job Posting & Personnel Page cleanup	



# Tech Recruitment & Retention Program Progress Report

QUESTIONS?

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