Focus on Inspiring, Developing, Recruiting, and Retaining a Diverse Pipeline

Overarching approach:

*Share widely that career paths in deep submergence and operations are open to all.*

- K-12 outreach
  - Live streams with groups like "Exploring by the Seat of Your Pants"

- Undergraduates at NDSF and WHOI Deep Submergence
  - Example success story: Summer 2021, female ocean engineering research student at DSL is returning in 2022 to sail with ROV Jason

- Diversity in vehicles groups (MATE interns, increased diversity in engineers/operators for 2022 cruises)
  - Previous success with Alvin!
Live Streams from Ships: Expanded bandwidth enables greater inclusion

**Increases the capacity to reach classrooms, scientists, and engineers on shore**

- **Fall 2021 – Live streams from RR2107 (ndsf.whoi.edu)**
  - Exploring by the seat of your pants
    - Focus on technology-based careers
    - Reached general public and live links to classrooms in USA & Canada
  - Sentry & Jason team members
  - Live stream from seafloor
    - Live stream hosted on shore at WHOI
    - Focus on marine operations careers (video of interviews of shipboard careers)
- **Capability to stream ROV Jason video and now AUV Sentry data live to shore → enabling greater inclusion**
Internships

- 4 MATE Internships between Jason and Sentry for summer of 2022
  - Interviews are almost complete
- Partnering with Tuskegee University through OECI
  - Encouraging a diverse team of students to come to WHOI

- Establishing a relationship with the University of Southern Mississippi
  - Plan to provide internship opportunities to Ocean Engineering students in 2023
<table>
<thead>
<tr>
<th>Challenges</th>
<th>Approaches to Success</th>
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<tbody>
<tr>
<td>§ Housing at WHOI is a huge challenge, especially in the summer</td>
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<tr>
<td>§ Housing &quot;crisis&quot; on Cape Cod currently</td>
<td>§ Limits our ability to bring interns to WHOI</td>
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<tr>
<td></td>
<td>§ Looking at alternative housing options</td>
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<td></td>
<td>§ Bringing interns to sea</td>
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<td>§ Mentor availability / Berthing availability</td>
<td>§ Working with ship schedules to identify cruises that can include interns</td>
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<td>§ Mentorship training and inclusive practices</td>
<td>§ Scheduling appropriate training for mentorship and inclusion</td>
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<td>§ COVID-19 Impacts</td>
<td>§ Utilizing a cohort model when possible</td>
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<td>§ WHOI climate study is on-going</td>
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<td>§ Hopeful for 2022 to be smoother</td>
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<td>§ 2023 may be able to include more interns as hopefully restrictions decrease</td>
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Pipeline activities

- DeSSC new user program – Day 2 Activities (May 2022)

- Presentations at conferences (e.g., SWE, SACNAS)

- Development of a collaborative marine technology workshop with local community colleges
  - NDSF, Ship Ops, SSSG, OOI

- Outreach events to K-12 utilizing small ROVs
  - e.g., Girls in Science Camp @ Penikese Island (summer 2022)

- Presentation to WHOI Ocean Science Journalism Fellowship program