

MOVE THE NEEDLE

Halfway Project Report



WHPC
WOMEN IN HPC

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TABLE OF CONTENTS

Introduction.....	2
Project Overview.....	3
Accountability Team (A-Team).....	5
• Demographics.....	6
• Topic Focus.....	7
Noted Achievements.....	8
Lessons Learned.....	9
Knowledge Portal.....	10
Onsite Opportunities.....	12
Conclusion.....	13



INTRODUCTION



The "Move the Needle" project, founded by Alces Flight, aims to promote a more positive and open culture in High-Performance Computing (HPC) by focusing on equality, diversity, inclusivity, and accessibility (EDIA), as well as building legacy/sustainability in the field.

Recognizing the link between our project and dedicated volunteer organisations, we have partnered with Women in HPC (WHPC) to advance equity in the HPC community. WHPC works to increase the participation of women and underrepresented groups in supercomputing.

Together, we are collecting information on workplace inclusion initiatives and creating an accountability program to assess their effectiveness in promoting EDIA.

PROJECT OVERVIEW

The "Move the Needle" project, which began in January 2024 and will last for 12 months, invites HPC students, enthusiasts, and professionals to commit to one to three actions aimed at advancing inclusion. We are tracking individual and organizational efforts through surveys and online check-ins, with the goal of analyzing these findings and publishing the results at the Computing Insight United Kingdom (CIUK) conference in Manchester, UK, on December 5-6, 2024. Our aim is to demonstrate achievements, celebrate successes, and address barriers.

Initially, the project focused on building an Accountability Team (A-Team), which submits three surveys detailing their goals, progress, and lessons learned. Online meet-ups supplement these surveys, though participation is optional due to the global distribution of A-Team members.

The A-Team began with ten core members, including three leading team projects, supported by two project managers from Alces Flight. After the second survey, one member left, leaving nine to complete the project. So far, we have received two sets of surveys and alternative format updates*, and held two online meet-ups.



PROJECT OVERVIEW

The project has since expanded to include a Knowledge Portal and in-person meet-ups and sessions. The Knowledge Portal features video interviews and blog posts from HPC and tech community members sharing their experiences and efforts in advancing inclusion. As of now, five interviews have been conducted, with three more planned.

Additionally, we have hosted and plan to host several in-person events: the UK KTN Green Computing Workshop in Manchester on March 26, 2024, Durham HPC Days in Durham on May 9, 2024, and a mini-session at Sustainable Reality in Bletchley Park on September 25, 2024, where self-selected A-Team members will present their experiences to the broader UK HPC community.

Project At-A-Glance

- **Duration:** 12 months (January - December 2024)
- **Participants:** HPC students, enthusiasts, and professionals
- **Actions:** Commitment to 1-3 actions aimed at advancing inclusion
- **Tracking:** Surveys and online check-ins for individual/organizational efforts
- **Goal:** Analyze findings and publish results at the CIUK conference (December 5-6, 2024, Manchester, UK)
- **Purpose:** Demonstrate achievements, celebrate successes, address barriers

* This project centers on the unique goals and needs of its participants, which may not be fully captured through standard surveys. As such, we encourage, have, and will accept alternative reporting methods. By allowing participants to contribute in ways that suit them best this supports our aim of fostering an inclusive and equitable environment, respecting individual preferences, and enriching the project with diverse perspectives and insights.

ACCOUNTABILITY TEAM

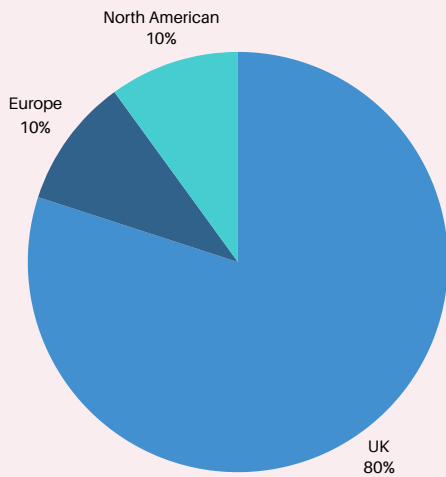


The Accountability Team, or “A-Team,” consists of nine members plus two project managers. Voluntarily recruited between December, 2023 and February, 2024, these individuals pledged up to three goals that they agreed to track over the project cycle.

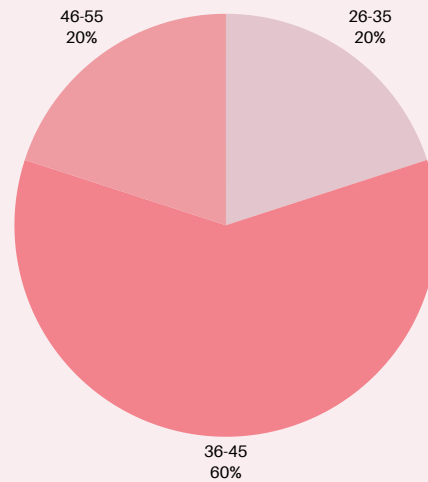
Their reports, plus the online and in-person meet-ups, form the foundation of this report.

A-Team participants kindly submitted basic demographic information about themselves. This survey concluded with responses from the initial 10 individuals, with an equal gender distribution of 50 % male and 50 % female. The dataset encompasses various aspects of participants backgrounds, highlighted in the following page:

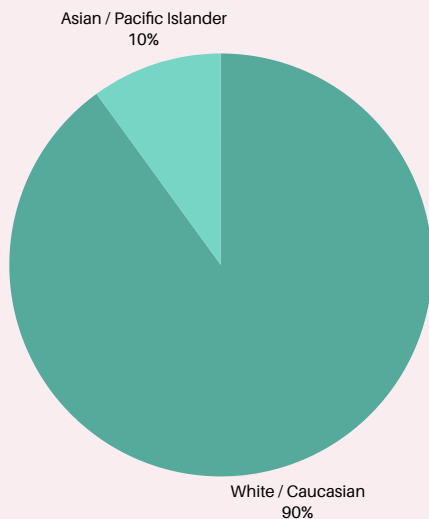
A-TEAM DEMOGRAPHICS



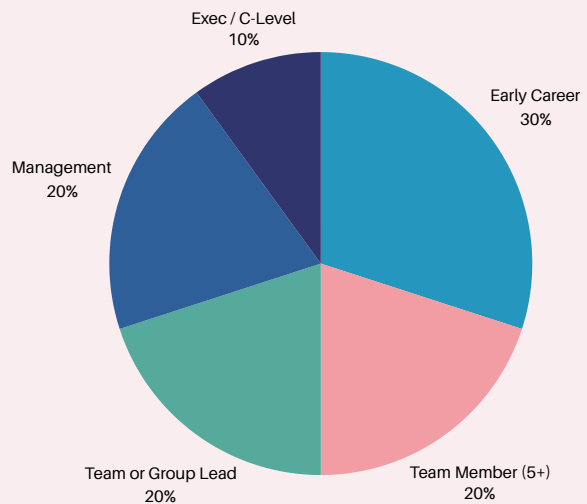
Geographical Location



Age Range of Participants



Race and Ethnicity



Career Level

A-TEAM TOPIC FOCUS

CORE AREAS

In February, 2024, our A-Team committed to goals in specific areas of focus. Utilizing surveys submitted, along with alternative reporting methods, our A-Team are primarily looking at three key areas:

1. **Staffing:** Emphasizing hiring practices and improving overall staff retention.
2. **Engagement:** Fostering mentorship, advocacy, allyship, collaborations, partnerships, and coaching.
3. **Long-Term Impact:** Ensuring business and institutional continuity and promoting environmental sustainability.

We are pleased to report that after two surveys and two online meet-ups, none of our A-Team members have needed to make significant changes to their goals or areas of focus. While some barriers have emerged, these have proven to be an aid to developing best practices, which can be seen in our “Lessons Learned” section.

STAFFING

Focusing on:

- New role creation
- Updating roles + responsibilities
- Clear HR policies and practices

ENGAGEMENT

Focusing on:

- Collaborations and Partnerships
- Mentorships, Advocacy and Allyship

LONG-TERM

Focusing on:

- Legacy and Institutional Evolution
- Environmental Sustainability



NOTED ACHIEVEMENTS

Over the past six months the A-Team, as well as the project at large, has exceeded initial expectations in several areas. This includes:

STAFFING

- Successfully utilising EDIA checklists to improve job advertisement and hiring practice.
 - Re-establishing core role responsibilities to help define better career trajectory.
 - Review and propose new HR strategy around defining and improving policy around leaves of absence.
-
- Noted mentorship opportunities in the HPC space were not difficult to locate and engage in.
 - Noted rise and elevation of importance in 'bridge building' roles such as Community Manager and Research Software Engineer (RSE).
 - Noted shift towards community and conference engagement on 'soft skills' and alternative networking.



ENGAGEMENT

LONG-TERM

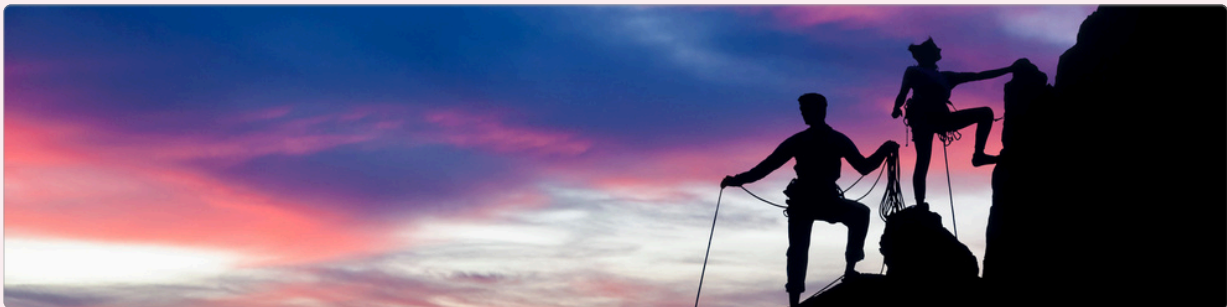
- Continued work on ecological sustainability, primarily in terms of carbon emissions.
- Continued review on understanding company culture and building sustainable work environments.
- Continued buy-in from overall leadership in Move the Needle project engagement and outputs.

LESSONS LEARNED



SIX FACTORS TO CONSIDER

The Move the Needle project focuses primarily on people rather than technology. Consequently, any positive outcomes are likely to be categorised as best practices rather than definitive guidelines. Because of this we are developing a set of consideration factors essential for the success of any project. Currently, the following factors must be taken into account for any EDIA/sustainability initiative:



1. The size of your organisation can determine how quick/slowly any change or improvement works from idea to implementation.
2. To improve in any aspect of EDIA/sustainability it is best to first fully understand your company/institutional culture.
3. Clear goals with appropriate, actionable steps (and accountability - if possible) have a better chance at succeeding over vague goals and no measurable follow-through.
4. Leadership must be bought-in to improvements and an active part of the process.
5. Allyship is a very important and under-valued aspect. Having representation from all team members can result in a more equitable outcome.
6. There must be a clear investment in the project - either agreed time, budget, or both - as well as a defined outcome.

KNOWLEDGE PORTAL

So far, we've led discussions and activities with five experts in High-Performance Computing, Education, Coaching, and Mentorship. These interviews have provided insights into how organisations and individuals are advancing diversity and inclusion, as well as pushing boundaries in our field. Here is a brief summary of our interviews to date:

DAN OLDS AND ADDISON SNELL

Student Engagement in HPC

The Winter Classic Invitational Student Cluster Competition aims to address two key objectives: attracting young talent from diverse communities, particularly Black and Hispanic universities in the United States, and providing students with hands-on experience in High-Performance Computing.

This project is so large it took two interviews! Explore how project engages students with Dan Olds and to find out more about the project history watch our interview with Addison Snell.



VASHTI WHITFIELD

Coaching and Legacy Building

Vashti's insights illuminate the process of reframing challenges, establishing a lasting legacy, and the essential qualities to consider when selecting a coach. Her coaching methodology integrates psychological, neuroscience, and emotional intelligence aspects, emphasising the initiation of change from within.

Her interview covers her coaching style, and how it relates to building better technology, as well as social legacy.



KNOWLEDGE PORTAL

JAY LOFSTEAD

Mentorship and Advocacy

In his interview, Jay gave valuable insights into various types of mentorships, the significance of advocacy, and talked about his work in relaunching the WHPC Mentorship Programme. He highlighted the roles mentors can play in mentorship, sponsorship, coaching and advocacy.

Included in his interview are considerations for selecting the right mentor, details about WHPC Mentorship Programme, and advice on establishing a mentoring initiative.



NAGES SIESLACK

Creating Inclusive Events

Since 2011, the ISC High Performance Conference Series has actively pursued initiatives to foster an open and inclusive environment at their events. Central to their approach is the principle of 'Put People First', which guides their initiatives and has become integral to the conference's identity.

In her interview, Nages walks us through the history of ISC in regards to how they have and continue to build 'social sustainability' for the people of HPC.



<https://alces-flight.com/move-the-needle-knowledge-base/>

ONSITE OPPORTUNITIES

We are deeply grateful to the HPC community for offering us the opportunity to create sessions and present what we are learning for the Move the Needle project. Our sessions have so far included:

UK KTN GREEN COMPUTING WORKSHOP

March 26, 2024 - Manchester Museum of Science and Industry



Innovate UK
Knowledge Transfer Network

The workshop highlighted social sustainability, focusing on skills, staffing, engagement and long term impact. Hosted by UKRI, the event underscored the need for technical and soft skills, inclusive staffing, active engagement, and lasting impact to build a resilient HPC ecosystem. Highlights included bridging the skills gap, developing competency frameworks, the need for clear sustainability guidelines, and fostering a collaborative, risk-taking culture.

HPC DAYS - DURHAM

May 8 & 9, 2024 - University of Durham

Over two sessions on separate days, we engaged in discussions about skills, talent, and hiring; presented a draft of our six factors for consideration; and participated in a Lyceum, or open panel discussion. During these sessions, we explored problem-solving strategies and reframing approaches to address current issues in EDIA and HPC.



Durham
University

CONCLUSION



ONLY HALFWAY, AND SO MUCH ACHIEVED

We extend our heartfelt gratitude to the HPC community for their openness, generosity, and dedication in making the Move the Needle project a reality. With six months remaining, we are excited to share the progress and insights we've gained so far.

Our deepest thanks go to the A-Team, who consistently report on their goals, our community experts for generously sharing their knowledge, the UK KTN and University of Durham for providing platforms to present our work, the Women in HPC Executive Committee, and the Alces Flight project team.

We look forward to presenting our complete findings at CIUK24 in Manchester this upcoming December.



THANK YOU



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CONTACT INFORMATION FOR FURTHER INQUIRIES

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