ASSEMBLING AND MANAGING A LARGE, DIVERSE, INCLUSIVE TEAM: EDIA LESSONS LEARNED FROM MY FIRST TWO YEARS AS PI OF MER PORTAL. S. B. Cole[1], [1]Space Science Institute, Boulder, CO, scole@spacescience.org.

Introduction: In 2021 I submitted a Planetary Data Archiving, Restoration, and Tools (PDART) proposal for the Mars Exploration Rovers Portal to Observations, Resources, and Tools to Advance Legacy Science (MER PORTAL); it is my first grant. The goal of the MER PORTAL is to enable *everyone* to find and use *Spirit* and *Opportunity* rover data. It is a large project: we have about three dozen team members, including four Co-Investigators, two Consultants, dozens of MER Team members who signed up to share their knowledge of the mission through one-on-one interviews, and a handful of Mars researchers who were not on the MER team who will beta-test our products. I wanted the project to reflect my EDIA-focused values in terms of its goals (yes, I mean *everyone*, from experienced Mars researchers to undergrads in Earth-focused geology departments to schoolteachers and the general public, living in any location in any country, using any device, with any abilities and disabilities), team members, and project organization. You can learn more about the MER PORTAL project on our prototype website at https://mer-portal.spacescience.org.

The purpose of this presentation is to share lessons learned in developing the project and proposal, and in the first year and a half of running the grant. Most of these ideas are not my own; I learned them through the 2022 Advancing IDEA in Planetary Science conference, the DEIA White Papers for Planetary 2023 supported by the Cross-AG EDI Working Group [1], various workshops, and conversations with colleagues.

Use experts, and pay them for their expertise: My website, project, and team are better for having a Web Developer, an Interview Consultant, and an Accessibility Consultant, and paying them fair wages. This is better, faster, and potentially but not necessarily cheaper than attempting to do everything myself. I *could* design, produce, and maintain our website, but it would likely look as if it had been written circa 1999 and would be less effective in advancing the project goals. I have some experience in conducting interviews, but just enough to know that the precise phrasing of interview questions will affect the corporate knowledge that we elicit from our MER Team Collaborators. I am familiar with accessibility concepts, but not with current Web Content Accessibility Guidelines (WCAG 2) [2].

You can also pay people to work on aspects of your project for which you do not (yet!) have sufficient experience, and to do tasks that you dislike. For example, I wanted to involve Indigenous youth in MER PORTAL because American Indians/Alaskan Natives are severely underrepresented in planetary science [3], but I knew that such a collaboration must be built upon long-standing relationships [4], which I do not have. I recruited a Co-I who has worked with many Indigenous groups and organizations for decades. Similarly, I do not like coding; I could do it and be miserable, but our team is happier and our product better because we have a programmer.

Talk to people at the edges of your network, and ask them to connect you to people in their network: As I wanted to incorporate accessibility from the start, I needed to find an Accessibility Consultant, and I wanted that role to go to someone who identified as a person with disabilities. I contacted a colleague with disabilities who I had met at a few conferences but did not know well. She recommended an early career geoscientist who she knew through their mutual work with the International Association for Geoscience Diversity. He is now my Accessibility Consultant, and she is one of my beta-testing Collaborators.

Listen to recommendations: I have an aversion to artificial intelligence because it can be used to avoid paying people for doing their work. But several of my MER Collaborators suggested that I contact a computer scientist who used Machine Learning (ML) on MER projects, including identifying geologic content in image data, which was a task I had planned for my interns. The MER PORTAL would not be what it is today if I had not followed their advice. This is another instance of the previous lesson learned: I had never met this person or her group, and her colleague is now my Co-I. The ML classifier will not replace our interns, but it will reduce the drudgery of their work and enable them to contribute to the project through other tasks. Because I listened to my colleagues and dared to contact this computer scientist, I am now an author on ML publications and conference presentations, and I have different ideas for what MER PORTAL can do, and a new appreciation for ML.

Dare to ask: If people say, "I'd like to support your project; ask me if you need anything," don't be afraid to contact them. Ask them for advice, ask them for help, ask them to join your project. I presented the initial idea of what became MER PORTAL at the final MER Team Meeting in 2019. One person who wasn't on the mission team itself but had developed

educational and outreach materials for the mission said it was a great idea, and to contact her if there was anything she could do to help. Another person at the meeting, an investigative journalist who had covered the mission since launch, said something similar. The first person is my Co-I who works with our Indigenous colleagues, and the second is my Interview Consultant.

Don't let your expectations or assumptions limit your team members' roles on your project; let their roles be determined by their knowledge, interest, and experience(s): My original plan for the project involved several interns, and I specifically wanted to recruit members of groups historically excluded from planetary science. I knew that I wanted an out-of-the-hierarchy mentor with experience mentoring people in this demographic. I contacted a colleague who is a Woman of Color with a focus on mentoring students of color in planetary science. I thought she would have a relatively small role in the project, mentoring our interns and serving as Ombud. Little did I know she had worked as a Project Engineer on the International Space Station. She has an excellent understanding of systems engineering, requirements definitions, and other aspects of leading a large project. Her role on MER PORTAL is remarkably different from what I had expected, and she is invaluable.

Know your people, and work with them: While I know that my Co-Is care about MER PORTAL, they do not always reply promptly to my emails, nor do they attend every scheduled meeting. I acknowledge and value that each of them is a person with a life outside of work, and I have learned that it is most effective to use whatever media work best for getting responses from each of them (email, text, phone calls, Teams, etc.). I have also learned that sending meeting reminders a few days ahead of time as well as the day before can improve meeting attendance. I have not yet figured out how to balance my need to get responses with my desire to be kind and accepting of disruptions that happen in my team members' lives, but I try to avoid scheduling meetings close to due dates for their proposals, and to work around their family events and work deadlines in addition to my own.

***We* are a team:** I attempt to keep my entire team apprised of the project's status (I do not always succeed). When I send team emails, I am careful to talk about "our project" and what "we've been working on". I make sure to invite everyone to our full-team online meetings, and include everyone on our website. My Interview Consultant was surprised that I wanted to include her picture with those of the rest of the team because she's "just a consultant" (her words), but she has contributed a huge amount of work to the project – of course she's part of the team!

Respect your team members' privacy: I recognize that members of my team may have privacy issues of which I am not (and have no need to be) aware. I do my best to use BCC when emailing multiple people unless I have their permission to display their email address to the others.

Mentor and be mentored: Most of my Co-Is are more advanced in their careers and have more experience with grants than I do. In addition to their research responsibilities on the project, they are teaching me about running a grant, leading a large project, and cataloging planetary data.

My Accessibility Consultant, on the other hand, is new to consulting and invoicing NASA grants. I created an example invoice (by removing all identifying information from one of my experienced Interview Consultant's invoices), and he and I had a meeting where we went over it.

Use project titles rather than honorifics: When I started writing my proposal, I used honorific titles (*e.g.*, Dr.) for each team member to show respect for those who had PhDs. However, there can be emotion-filled reasons why someone does not have a doctorate. One of my team members, a particularly amazing woman, told me that despite completing the work of a PhD, her institution refused to grant her degree specifically because she is a woman; she told me she would understand if I did not want her on my team(!). Another team member, a particularly incredible woman, suffered terrible experiences at multiple graduate schools and opted to leave. There is no need to remind them of those experiences, nor to point out to anyone that they do not have PhDs. In proposals, team communications, presentations, etc. I refer to people using their project title: PI, Co-I, Collaborator, Consultant, etc.

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