

Lessons Learned 2022

Cyber Halo Innovation Research Program First Year

January 2023

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Acronyms and Abbreviations

CSUSB	California State University San Bernardino
CHIRP	Cyber Halo Innovation Research Program
PNNL	Pacific Northwest National Laboratory
SSC	Space Systems Command

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1.0 Introduction

The Cyber Halo Innovation Research Program (CHIRP) was introduced in November 2021 as a pathway for Minority Serving Institutions (MSIs), Underserved, Underrepresented communities to participate in the fulfillment of cybersecurity jobs at Space Systems Command (SSC) in Los Angeles. During the first year of the program, Pacific Northwest National Laboratory (PNNL) and SSC worked as a team to identify universities that would benefit from CHIRP and provide students a pathway to careers at SSC, PNNL, and industry partners. Candidate schools were identified, ranked, and visited based on a set of criteria developed by the PNNL team. California State University San Bernardino (CSUSB) was selected as a result identified in the academic landscape report provided to SSC in September 2019¹.

In this first pilot year, coordination between CSUSB, PNNL, and SSC was crucial to the identification of student candidates for CHIRP. The selection criteria for the students was minimal with emphasis on academic relevance, willingness to participate, and enthusiasm for a career at SSC. Each student provided documentation to the CHIRP selection committee that included a personal statement, resume, transcripts, and proof of enrollment at CSUSB. The students were then interviewed by PNNL, SSC, and CSUSB to gauge their interest, identify the needs of the student, and their basic knowledge of cybersecurity. No assumptions were made regarding student knowledge about space systems, rather students were questioned to determine whether they were interested in learning more about protecting space borne assets for SSC and Space Force. When the interviews were completed, SSC and PNNL selected 4 students as the first cohort for CHIRP. The students were required to participate in a summer institute focused on learning more about cybersecurity research and how the research would apply to SSC needs.

During 2022, the team identified program structural needs that should be addressed to make CHIRP sustainable and scalable as the program adds additional universities. This report provides insight into the lessons learned during 2022 and will outline additional steps needed to ensure the sustainability and scalability of CHIRP for the future. As we continue to grow, it is imperative to document and identify additional needs for SSC, PNNL, and the universities that CHIRP will partner with. The ultimate objective is to provide the students from the partner universities the mechanisms be successful as they pursue their careers with SSC, PNNL, or industry partners.

For the rest of this lessons learned document the term “CHIRP leadership” refers to PNNL and SSC leaders involved in the program’s day-to-day decision making and development.

¹ PNNL-29381

2.0 CHIRP Strategy

2.1 Communications

The CHIRP leadership team has identified the need for a strong communication strategy. This strategy would apply to internal communications, marketing communications, and public relations. The team will outline CHIRP communication goals, target industry and university messaging, and the development of a communications plan. This will ensure that clear communications and consistent messaging is occurring internally and externally. The strategy will include, but not limited to:

- Purpose
- Tasks
- Message delivery
- Clarity
- External engagement
- Consistency

As CHIRP continues to grow, templates will need to be provided to universities for their communication strategies pertaining to student recruitment, articles, and media relations that can be universal.

Leadership will also identify a message or contact platform that the students can use independent of their location. It is imperative that the students across all participating universities feel connected with each other, to build rapport, and build lasting relationships with each other and their mentors. This will also include a platform to upload deliverables and a place for document sharing.

2.2 University Selections

Selection criteria during the initial stages of CHIRP development focused on universities that were within a certain range from SSC Los Angeles Airforce Base. This limitation is not a feasible requirement as CHIRP continues to grow. The leadership team recognized that expanding the search barrier would provide greater access to potential talent for SSC. The leadership team recognizes that there are a larger number of eligible universities interested in the program across the nation. It is recommended that an application process be developed for universities that want to be added to CHIRP. This will have to be developed within the next 2 years to ensure that when year 3, additional universities can be identified and selected efficiently and strategically. Suggested selection criteria include:

- Underrepresented/underserved populations
- Minority serving, Hispanic serving institutions

- Center of academic excellence (although we recognize this should not limit the participating university) or other evidence of program strength
- Cybersecurity curriculum
- Strong systems of student support

Additional areas of interest expressed by discussions with Space Force leadership include:

- Engineering
- Material Science
- Physics
- Social Sciences

The CHIRP leadership will develop selection criteria to reduce bias on the selected institutions. In addition, an agreement should be developed for the universities to ensure that they are fulfilling the student needs for the program. Included will be an added section for mid-year reviews to ensure that all needs are being met for the university and the students.

3.0 CHIRP Students

3.1 Selection criteria

The selection criteria used for the first year was incomplete when the initial cohort of students were inducted into CHIRP. This has shown that there needs to be an establishment of identified criteria for student selections based on the needs of SSC and industry. A lot was learned about potential talent selection criteria and changes were made. The formation of a selection committee to review applicants from SSC and PNNL is recommended for future cohorts in order to avoid any bias introduced by participation of university representatives.

Selection of future cohorts of students should follow criteria that best meets the needs of SSC and the larger space community.

Such criteria may include, but is not necessarily limited to, the following:

- Prior academic performance
- Professor or instructor recommendations that have knowledge of their abilities to perform
- Biographical information regarding the applicant's career, academic and other relevant experiences
- Course of study
- Academic achievement, including grades
- Community/extracurricular involvement
- Leadership
- Work history

Some of the above criteria were included during the first cohort selection process but will need to be refined as we move forward with additional university participation. This will appropriately narrow the student selection pool to better meet the needs of the university and SSC.

3.2 Consistent Application Requirements

To ensure that there is consistency for the application process, CHIRP leadership worked with CSUSB on the first application design. Selection of future CHIRP cohorts requires the application process to be fully established and documented. A single secure location for applications to be stored must be implemented to ensure that all PII is protected. Application requirements must be documented so partner universities can better support student applicants to CHIRP via a single application portal.

3.3 Review Process

The selection committee will require 3-4 weeks to select students to interview, conduct interviews, and make the final selection of candidates for each CHIRP cohort. The review process should include, but is not limited to consideration of the following:

- Applicable documents have been provided
- Personal statement

Transcripts

- Resume
- References
- Financial need

The time for review must be extended so that the selection of students for the next cohort is equitable, reduces bias, and utilizes a consistent process. The first review took place in one week, which did not provide enough time for the first selection committee to reach a consensus on who to interview. The selection committee interviewed every applicant, which may have been avoided with sufficient time for application review.

3.4 Decision Process

The final decision process for the pilot cohort was conducted by PNNL and SSC. The time for decisions was limited due to the approaching start date for the first summer institute. Further recommendations are required for the decision process to ensure that all students are given a fair review by the selection committee. It is recommended that there is a selection matrix developed so that bias for students is limited. The selection matrix should include, but is not limited to consideration of the following:

- All organizations recruit students to apply - need clarity on who is eligible to apply.
- Universities review eligibility of their applicants and those who meet eligibility requirements move to application review phase of the process.
- SSC and PNNL review applications and rank order them for interviews based on identified criteria. Note that rank order is determined by more than merit - financial need, potential for success with and without the program, interest in the work, etc. as well as grades and achievements. Input from professors may be requested as needed.
- Interviews conducted by SSC with PNNL using standard job interview questions plus any additional that are program specific - notes on responses and use of a rubric to score candidates.
- Top candidates are determined by SSC with input from PNNL - again, more than merit - potential for success in the SSC environment, etc.
- The top candidates are offered appointments in CHIRP cohort contingent on successful completion of summer institute for which they receive a stipend. Could consider inviting 1-2 alternates to participate in the summer institute - perhaps without a stipend - in case someone declines or is unable to complete their internship

- Summer institute enables extended opportunity to assess candidate interest, potential for success, etc. Candidates may be counseled about changes needed for success or to consider declining the appointment as needed.
- After successful completion of institute, the candidates are again offered appointments and if they accept, they sign contracts, are hired by SSC or their industry partners, and become part of the CHIRP Cohort.

3.5 CHIRP Student Observations

3.5.1 Onboarding

The onboarding process for the first CHIRP cohort leveraged the experience of CSUSB in onboarding for their Scholarship for Service (SFS) program model. It has been determined that CHIRP has unique needs, and criteria will be developed for the upcoming cohort. It is recommended that an onboarding checklist be developed that can be used by CHIRP leadership to ensure that all students have their needs met to be successful in CHIRP. The onboarding process for CHIRP should begin with an orientation prior to the summer institute and conclude with signing of any agreements, hiring process, and receipt of laptops to conduct research between the end of the summer institute and the beginning of the students' fall term.

The initial CHIRP cohort did not finalize and sign their contract agreements with SSC until several weeks into their academic year. This led to a specific lesson learned that any contractual agreements must be completed before the academic year begins.

To facilitate eventual security clearance processes, CHIRP students currently have filled in draft answers to the SF86 questions. Their answers are reviewed by advisors familiar with the process to determine if there may be any barriers to the actual clearance process. CHIRP leadership should consider background checks for students as part of the initial selection process to reduce the risk of future issues. Note that hiring students as salaried interns from the time of appointment would enable SCC to begin the security clearance process before the students are converted to regular full-time employees after graduation and would include a background check at the time of CHIRP hire.

CHIRP leadership should coordinate with university representatives to clearly establish work schedules for the students during the first two weeks of the first fall term for the cohort. CHIRP will need to establish a consistent method for all appointees to record their work hours and review their work schedules and deliverables.

CHIRP appointees should have access to office supplies (e.g., computer, notebooks, pens, etc.), and a space to work at their university, even if they are able to conduct most or all their research work from home. CHIRP leadership should establish a system to ensure that appointees have all their research and academic needs met.

The CHIRP students should meet key members of SSC and PNNL leadership during the program orientation. Each cohort should have a core team made up of SSC, PNNL, as well as at least one representative from the student's university that are the students' primary point of contact for general interactions and programmatic needs/questions. The CHIRP leadership should identify training needs and time schedules for student onboarding (e.g., time billing,

student expectations, computer uses, space uses, etc.). The first cohort was not provided a comprehensive overview of the expectations for their participation in CHIRP, which resulted in some confusion by the students. Basic guidelines were outlined in the students' contract but was not signed until several weeks into their academic year due to delays in finalizing contract language. CHIRP expectations should be provided in writing and agreed to by the students as part of their appointment process. This will alleviate any issues or misunderstanding of what is expected of them during their CHIRP appointment and the first two years of their full-time employment. Students invited to participate in the summer institute should be provided clear expectations regarding the summer institute as well as the opportunity to review the expectations for the full CHIRP appointment.

Expectations regarding communication throughout their CHIRP appointment should be included in the overview of expectations for CHIRP. Students should be responsive to emails, text messaging, and phone calls regarding CHIRP deliverables or mentor requirements. Appointees will be expected to respond in an appropriately timely manner and address any action items provided to them by their mentors or CHIRP leadership team.

Candidates should present their summer work at SSC in early August. The visit to SSC should also include general knowledge transfer of the SSC mission and student tours of their mentor's workspaces, appropriate research facilities and other areas pertinent for the soon to be CHIRP appointees. Ideally, the visit would culminate in signing of contracts or other paperwork acknowledging their commitment to and expectations of the program. A student handbook that includes relevant SSC guidelines should be developed, reviewed, and updated regularly and provided to the appointees upon commitment to the program. The student handbook will serve as a student reference guide regarding basic tasks and expectations. SSC policies and guidelines that students are expected to follow during their time in CHIRP would be included in the handbook. Potential subjects include, but are not limited to, dress code while on base, computer usage, cell phone usage for company needs (if applicable), procedures for guest/visitors (if applicable), confidentiality of sensitive information, and procedures for notifying leadership of their absence.

Provide students with a briefing that overviews the SSC mission and goals as well as the importance of the SSC work to government and industry partnerships. Include a summary of the briefing in the student handbook for their reference.

A checklist should be developed for performance reviews and expectations. A quarterly review of appointee performance should be conducted by CHIRP leadership in collaboration with mentors to ensure that students are meeting expectations and goals set for continued growth and development. A rubric should be developed to help guide the performance review and a template should be identified for use in establishing expectations and goals for their performance period.

Appointees should be provided a schedule of required meetings with mentors and CHIRP leadership at the start of each academic term. These meetings are to monitor students' progress in developing and identifying as a future member of the SSC workforce, comfort with their work assignments, understanding of expectations, and any unanticipated changes to research direction or outcomes.

3.5.2 Stipends

The first-year stipends for the pilot cohort were based on recommendations from the initial partner university. This amount did not take into consideration the on-going needs of additional universities. It is recommended that CHIRP leadership research monthly stipends to better address the needs of additional universities unique needs. The stipends should follow guidelines set forth by SSC leadership and be based on the cost of local housing, travel, and food, as identified by CHIRP leadership.

3.5.3 Tuition Remission

Tuition remission for the first cohort was delayed and took place after the university deadlines for tuition payment due to challenges in determining the funding process. The funding process for both students and universities need to be reviewed and alternative pathways considered well in advance of student tuition due dates so that there is no risk to student academic progress.

3.5.4 Support

Strong system of student support is critical to student and program success. Access to appropriate system of support during the CHIRP appointment can aid development of a student's identity as both a STEM professional and member of the SSC mission team. Support and identity development will increase student retention and persistence in the program despite unexpected challenges and obstacles they may encounter. CHIRP student support helps students by giving them the tools to be successful. This support can include, but is not limited to, mentor support, leadership support, mental health services, and crisis support that supplements the support provided by their academic institution.

It is recommended that CHIRP leadership identify potential unmet or supplement support needs of students which may include mentor support, networking opportunities, cultural events, peer mentoring, and possible skills workshops. As our society continues to provide remote and hybrid work opportunities to the workforce, it is critical to create opportunities to help students feel included and connected. CHIRP leadership values student success and wants to ensure that appointees have available to them the right tools to be successful. Some recommendations include:

- Including appointees in social interactions
- Inviting the first CHIRP cohort to be ambassadors to share their experiences
- Automatic and spontaneous emails to serve as reminders for deliverables, encourage participation in social interactions, and facilitate communications across cohorts by celebrating successes.

3.5.5 Allocation of Space

Although the first cohort has done much of their work remotely from their homes, it is imperative that space for student research is identified as their universities. CHIRP leadership should identify the expectation for the research space that may include, but is not limited to, secured spaces, square footage, wireless accesses, office equipment, video conferencing needs, and

other student or university needs. Additionally, it is noted that space needs may change due to different types of research assignments for future cohorts.

3.5.6 Allocation of Equipment

It is imperative that CHIRP students have access to laptops to use when conducting their work. These laptops should include access to adequate and appropriate digital resources at either SSC or their research partner. The current cohort of CHIRP students are only now in the process of getting access to equipment provided by PNNL.

For future cohorts, CHIRP leadership will develop an equipment checklist and identify the most efficient process for assigning needed equipment for research assignments. This process will begin prior to final appointment to ensure that future cohorts will have the tools they need to begin SSC research at the start of their academic term.

3.5.7 Research Needs

Material required to conduct the assigned research, beyond standard office equipment, must be identified as soon as the research mentor has made a commitment to participate. This may include, but is not limited to, software, initial reading material, laptops, spaces, support, etc. These needs should be fulfilled within the first weeks of CHIRP appointment to ensure full research participation.

3.6 Summer Institute

3.6.1 Involvement

The first summer institute included in-person meetings once per week for eight weeks. Meetings lasted 5-8 hours with approximately one hour for a community lunch. At least one member of the CHIRP leadership team was present at each meeting. The leadership team was tasked with introducing the students to cybersecurity research. The team used materials sourced by a PNNL STEM Education Consultant from a variety of resources including materials developed by PNNL scientists (e.g., book, presentation materials). The outline and goals for the summer were collaboratively developed prior to the institute and agendas for each week were drafted weekly as the institute was being developed. There was no standard curriculum that had been used or developed and as a result the leadership team relied on past experiences and discussions with the students to develop ad hoc weekly lessons.

Based on the experience from the first summer institute, the leadership team is developing a recommended plan for future summer institutes, beginning the summer of 2023. Considerations include the schedule, in-person vs remote learning, location, learning objectives, and deliverables for participants. The outcomes include, but are not limited to:

- Planning documentation
- Learning objectives
- Introduction to Cybersecurity Research
- Team building exercises

- Introduction to Cybersecurity security policy and guidelines
- Expectations
- Final presentation and visit to SSC

One important consideration in the development of the CHIRP summer institute is that traveling may be difficult for some candidates, so the leadership team will identify the needs of travel, locations, and/or virtual presence. In addition to the scheduled summer institute time, ideally students will work with one another throughout the summer on small a research project that they identify. Their interactions with each other on the research and team building exercises are imperative for the cohorts to understand that cybersecurity is a team sport. The team is actively working on this and identifying what should be included for the next summer institute.

3.7 Student Presentations

3.7.1 Dates

The first CHIRP cohort presentation date was not determined until well into the summer institute, limiting attendance at SSC. Dates for future CHIRP appointee presentations should be determined and organized 3-6 months prior to the event. Ideally, the dates for all CHIRP cohort presentations will be established on a regular schedule (e.g., first Tuesday in August, last Thursday in May, etc.)

In reviewing the templates used during the first CHIRP presentation in August 2022, the CHIRP leadership team identified missed opportunities to better prepare students for their final presentation. A CHIRP presentation template is now available to provide more consistency and uniformity of presentations. This was used for the presentation students made at the CyberExpo in November 2022. Additional preparation activities for the future include peer presentation practice, mentor guidance, and leadership review.

3.7.2 Virtual Presence

The students presented in person at SSC at the end of the summer institute. This was ideal and will continue to be the preferred option. The CHIRP leadership team will take steps to provide options for audiences to join virtually. The first presentation had limited space and limited access to equipment needed (e.g., cameras, computers, microphones) for a virtual presentation. Leadership has also recognized the opportunities provided by recording the presentations for future cohorts and other partners that may not have time to attend. The recordings should also be uploaded into a centralized location for easy access internally and externally.

4.0 CHIRP Specific Messaging

4.1 Communications

Communications among CHIRP participating organizations provided plenty of learning opportunities. The leadership teams from SSC, PNNL, and the partner university initially held weekly meetings as CHIRP was being developed; however, the time and date for these meetings was inconsistent. This resulted in miscommunications and a lack of clarity on direction from one meeting to the next. The leadership team has improved communications by scheduling consistent time and days for meeting, adapting as needed for partners' schedules and by drafting agendas and taking meeting notes. As each partner has their own schedule challenges, it is imperative to keep communications open and make the necessary changes to ensure that we can meet on a consistent basis. After the initial development, university communications with PNNL were reduced to focus on identifying the needs of the students and program needs for the university. Conversations that occur outside of regular scheduled meetings without including all members can result in unintended consequences and misdirection. This was observed early during the program development and the leadership team has changed communications styles to address this.

4.1.1 News & Articles

News articles and announcements are an opportunity to raise awareness of CHIRP for potential new partners and to build reputation of the program. Each organization has its own approach to handling communications. Key takeaways from the first year that can help improve future communications. Missed opportunities included:

- a. A Senator visited the university, and the university posted an article about a Senator's visit that include CHIRP information not approved by SSC and PNNL
- b. A professor was showcased during a news conference and time ran out for SSC and PNNL to approve an article to be published.

To avoid future missed opportunities, consistent messaging about the program that has been pre-approved by PNNL, and SSC will be shared with the university for general use with publications, news outlets, and internal website information. This pre-approved messaging will be reviewed and updated quarterly and provided to all universities participating in CHIRP. This will reduce the possibilities of missed opportunities in the future.

4.2 Engagement Requirements (PNNL, SSC)

As noted in the communications section, clearly defined expectations regarding engagement of CHIRP universities and the CHIRP leadership team with one another should be implemented to minimize conversations that are not shared or inconsistent communications. If the university has an issue or a need to discuss between meetings, there should be constant guidelines for communicating with the leadership team.

As CHIRP continues to grow, each element will need to be adjusted to ensure message consistency.

5.0 Student and University Funding

5.1 University & Students

The induction of the first university into CHIRP included funding for the university to support the students (e.g., stipends, tuition remission, childcare, professional development), administrative costs (hiring and retaining), support for professors to provide direction and support of the students, and indirect costs. CHIRP leadership identified that some of the initial projected costs for CHIRP did not directly address student needs or support of the program. The initial cost estimates for professors and for the administrator were greater than what was needed to support CHIRP student participation and initial program development.

The leadership team recommends further review and modification of funding allocations to support university participation. The leadership team will re-evaluate the needs of the university versus the needs of the students. Any adjustment would reflect the allocations made to the university regarding funding for professors' time and administrative support. Each university has their own way of calculating appropriate support for professors and administration. The program should be consistent across organizations as to funding provided in support of student participation. As additional universities are added to CHIRP, these requested university support costs could be drastically different. The team will seek to understand and identify if the cost for professors and administrators is needed for students to be involved in CHIRP, how much is beyond what a student would generally receive in support from professors and staff. While CHIRP has already reached a contractual agreement with the first university in support of cohort 1, we will revisit the allocation for future cohorts. This will also provide the information needed to make the adjustments.

All tuition remission, stipends, university support costs, etc. are currently provided to the university through a contract between PNNL and CSUSB. This model is not likely sustainable beyond 2-3 universities and cohorts. To enable sustainability and scalability of the program in the long term, the leadership team recommends students be hired as intern/employees by SSC with a salary model to provide stipends directly to the students. This will ensure that the managing of the stipend funds exists solely with SSC and student's expectations are met per employment guidelines with SSC. SSC should explore any other costs that can be provided through this option. Future contracts with universities would cover tuition remission, a set amount for faculty and administrative support of the program, professional development funds and other incidentals not possible through the employee relationship. This is like an apprenticeship model, with the student earning a salary by working while they learn. This employment option will also reduce costs for the university, the professors, and administration needs and may help provide the necessary billets needed for continued employment after completion of CHIRP. Other options are being explored should early employment by SSC is not possible at this time.

As additional universities are added to CHIRP, the leadership team will need to assess and possibly adjust stipend amounts, tuition remission costs, professional development allocations, university costs, and other budget needs. The team recommends identifying a flat rate that can be allocated to each university and student regardless of location. This will ensure that the cost is uniform, and costs are more predictable from year to year. The team will revisit the cost on a bi-yearly basis to ensure that it is adjusted as needed for inflation, and other unidentified costs or needs for the program.

6.0 CHIRP Mentor Needs

To help CHIRP mentors to be successful, the leadership team has identified some key elements to take into consideration when developing the CHIRP mentorship program. When identifying mentors for CHIRP the key attributes to consider can include, but not limited to:

- Willingness to share knowledge, skills, and expertise with their students. The mentors should understand that the relationship that they build with their students will take some time. They should be willing to contribute to student successes by sharing their skills and expertise in their chosen field, knowing that the students are still in the learning phase of their career. Support and commitment are imperative to a successful mentor.
- Active and effective listening skills are important to demonstrate to the students that they have been heard and understood. This can build trust between the mentor and the students by showing genuine interest in their questions, concerns, overall eagerness to learn. Active listening will also alleviate obstacles the students feel they may have as they navigate through their work and SSC.
- Ability to provide constructive feedback to the students to promote continued growth and improve their skills as they strive for excellence at SSC. This will also foster the student's development and the feeling of accomplishment as they continue their research.
- Engagement in professional development of the student, including networking, conference presentations, publications, and writing skills. This is a new field for most students and having a mentor that can help them navigate each area can provide the knowledge and confidence needed to be successful.
- Willing to consider feedback and additional training to help their growth as a mentor.

CHIRP leadership should provide students with the email, phone numbers and other appropriate contact information for their assigned mentors so that students may consult their mentors as needed regarding their research assignments. Mentors should be encouraged to assist in helping the students as appropriate.

As the CHIRP Mentor program continues to mature, the leadership recognizes that training will need to be a part of developing a successful CHIRP mentor. The team is recommending developing a training program for perspective mentors. This training will provide the mentors the necessary skills to be successful with the students in CHIRP. This will also encourage others at SSC and industry to become mentors and could alleviate a future shortage of mentors for students. PNNL has the resources and staff to help develop and provide the training that is appropriate for CHIRP mentors.

Mentors for CHIRP are the backbone to student success in the program. It is imperative that CHIRP provides the support and guidance that the mentors need to be successful and feel accomplished during their time as mentors. The leadership team has also recognized that mentors may change during the 2 years that the students are participating in CHIRP. The team is recommending developing a process for transitioning mentors and students between different research opportunities. The development of a formal mentoring team will enable the transition of the primary mentor to another qualified mentor as needed. The process would provide mentors and students the avenues for continued growth and contributions to the SSC mission. It will also

expose the students to additional work that SSC, PNNL, and industry partners are doing for the nation, creating additional excitement for their commitments to SSC.

7.0 Conclusion

Each identified lesson has potential for further development and sustainability of CHIRP for future cohorts and universities. CHIRP leadership can take these lessons and develop solid program elements that can create success for all parties involved. As the next phase moves forward, the leadership team will take an approach of addressing each lesson and continue to build the program document to reflect each recommendation. These are *recommendations*, and do not need to be adhered to if SSC feels they are not warranted or needed for CHIRP success.

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