RCD Nexus Day 2023 Final Report

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Funded by a Cyberinfrastructure Center of Excellence Pilot grant from the National Science Foundation, RCD Nexus Day 2023 brought together 95 research computing and data (RCD) professionals from institutions across the U.S. The event took place on July 23, 2023, and was an official co-located event of the PEARC'23 conference in Portland, Oregon. Thirty-three attendees received travel support, which allowed them to attend both RCD Nexus Day and the full PEARC23 conference.

In addition to a combined opening session and an evening networking session, the event included two concurrent workshops. Workshop 1 was related to using the RCD Capabilities Model assessment tools and was led by Patrick Schmitz of Semper Cogito Consulting, while Workshop 2 was on the topic of staff and student onboarding and led by Claire Mizumoto of University of California, San Diego. These workshops are described below in more detail.

Workshop 1: Understanding the RCD Capabilities Model assessment tools and how best to use them at your institution

This workshop was designed to provide an introduction to the RCD Capabilities Model and how institutions have approached using the assessment tools, with a focus on small-group discussion and exploration of tools and practices. A total of 49 professionals from 37 institutions participated in this workshop, including a wide range of different Universities from large R1 institutions to R2s as well as a number of smaller schools and several minority-serving programs. We also had participants from funding agencies and industry. Participants especially liked that breakout groups gathered those with similar goals and institutional profiles, allowing them to discuss issues with peers. Table groups ranged from very large R1 programs with more than $500M in annual research expenditures to "Small to Moderate" programs (e.g., Carnegie R2s or relatively recent R1s) and "Very small or Newly emerging" programs with limited

research expenditures. While these different groups faced distinct challenges resulting from the varied size and complexity of their research programs, a number of common themes emerged.

Most participants planned to use the tool as part of their strategic planning process, and found it very useful in making the case for continued or increased investment in their RCD programs. The benchmarking reports were seen as particularly useful, although nearly everyone wanted the simpler and more focused/customized reports that the new Data Exploration Portal will provide.

Challenges and approaches to completing an RCD Capabilities Model assessment

Participants described a common challenge in getting campus partners to participate, although there were variations on the nature of the challenge:

- Some institutions (large and small) could not get attention from busy/overworked staff.
- Some institutions had political issues that needed a top-down mandate to contribute.
- Some institutions had challenges communicating why they were conducting the assessment and how it would benefit their RCD program and the institution more generally.

Larger institutions had the additional challenges of identifying numerous campus partners who contribute to RCD support, and synthesizing answers from a wide range of contributors to an assessment. When the breakout groups came together to share their findings, they noted that the time and resources invested to do an assessment is dependent on the institutional context, including the size and growth-stage of the program, as well as challenges in coordination and the goals of doing the assessment (what data is needed, what quality of data, etc.).

In response to these challenges, many institutions planned to conduct an initial assessment using a small, focused team in the first year; the results of which would be used to make the case for a broader and more thorough assessment in a succeeding year.

There was an engaged discussion about interpreting assessment data, especially given that some institutions may be overly critical of their program just as others feel they need to put themselves in the best light possible. Working group organizers noted that based upon analysis of the three years' data gathered so far, at least some of the biases balance out and the community data set seems to be fairly representative. However they also noted that care must be taken not to make detailed or overly-bold claims about what the data says.

Areas for improvement of the model/tools

Participants also discussed possible improvements to the assessment tools and supporting documentation. Specific suggestions included:

- Incorporating the **importance of RCD in support of education/instruction** in both the wording of the questions as well as in the supporting documentation. Especially at institutions with smaller research programs, there may be greater institutional support for investment in RCD infrastructure and services when it is clearly connected to STEM

education, as well as classes that provide training in computationally and data-intensive techniques.

- More support for **correlating data from RCD Capabilities Model assessments and other metrics** like research expenditures, PhDs granted, etc. Some of this may be possible with the Data Exploration Portal currently under development, but this may also be an area for interested community members to dig into the data and contribute their analysis.

- Many participants were interested in the general functionality of **assessing how well their programs supported different domains** across the institution, but did not feel that the implementation in the current version was effective. Rather than weighting the overall assessment results with domain coverage, they wanted to see domain support assessed for each [Facing](#) (that is, each type of RCD role), and then included as a separate aspect of the summary report. This feedback led to new functionality incorporated in the new version of the RCD Capabilities Model assessment tool. Participants also wanted greater granularity in describing domains (vs. the roughly half-dozen areas currently specified).

Feedback on the workshop

When asked about the workshop overall, participants were generally positive. Attendees liked the structure of the breakouts based upon institution sizes, and enjoyed staying in these groups and building rapport with other participants. Everyone seemed pleased at the number of people at the workshop as well as the diversity of institutions represented.

There was a request for more workshop-like events on individual areas of the assessment tool, and in response the working group plans to offer office hours sessions that dive into each Facing.

Some of the comments in our follow-up survey included:

> "I had a wonderful time hearing the thoughts from people in the community around RCD regarding their personal challenges and objectives, and learning the Capabilities Model tool … as well as brainstorming how the data collected from the model could be used. I found all of it a very worthwhile use of my time, and appreciate making connections in the community."

> "Solid opportunity to get to meet / work with new colleagues and learn about this neat tool."

Workshop 2: Onboarding RCD staff and student workforce

The 2023 RCD Nexus Day student and staff workforce development track was hosted by the Staff and Student Workforce Development interest group co-chairs with almost 50 people in attendance. This year's topic was *"Onboarding: Introducing the Who, What, Where, When, and Why to new RCD Staff."* The goal was not only to be informative and spark discussion, but also to to work towards deliverables that would be useful in the broader RCD community. The materials generated from the workshop are being further refined and developed by the CaRCC Staff and Student Workforce Development Interest Group to be released as resources for the community.

The program was a series of activities that generally started with informative and motivating short presentations followed by breakout activities in groups. The breakout activities generated ideas as individuals, these ideas were then discussed and summarized in small groups, the groups then presented a summary to everyone with a general discussion at the end. The first set of activities were to set the stage to help participants view a RCD program/group from a high level and to provide context and perspective to later activities that would produce outcomes for the day, mainly a staff and student onboarding checklist and a list of quality onboarding and training resources.

Activity 1: First meeting with a new hire

The first activity set the stage for the rest of the workshop: discussing the *"first meeting"* with a new hire on their first day.

The following themes emerged from the discussion: team integration and collaboration, individual success and contribution, skill development and career path, organizational value and vision, detailed onboarding process, cultural aspects and work/life balance.

Activity 2: Showing the big picture

The follow-on activity was how to present a center/program's *"big picture"* to a new team member and to determine the intentionality of how you show a program to the world and how important members of the team are to that vision. Attendee reactions and follow-on comments included the potential application to use these ideas beyond internal team and new team member onboardings but also for use in telling the institutional program story to leadership and beyond. Taking deliberate time to recognize the big picture can be beneficial to sustaining and growing the RCD program at individual institutions.

The agenda progressed to an exercise to develop and present an *"elevator pitch"* to communicate what a RCD center does in a clear and succinct way. Attendees took the time to gather their thoughts, discuss in small groups and present at their tables.

Activity 3: Defining our offerings in research computing and data (RCD)

The next activity was about *"defining RCD offerings"* and how to present them in comprehensive and consumable ways so that the new member of a team can be successful. Participants were asked to identify their major organizational activities and services and the interdependencies.

The discussions indicated that mission statements (description of an organization's **purpose**) are prevalent in most organizations and are crucial for providing guidance, understanding the big picture, and aligning with the organization's strategic initiatives. However, tenets (an outline of core organizational **values**), while not as common as mission statements, were recognized as valuable. Overall the consensus was that mission statements and tenets are seen as tools for effective communication, both internally and externally and they facilitate proper decision-making, especially in addressing larger problems and conveying messages upward within the organization.

Activity 4: Creating an onboarding checklist

The previous activities were then used in the next activity to *"create an onboarding checklist."* The checklist activities were combined and categorized by staff or student, specific Facing (systems-facing, researcher-facing, data-facing, software-facing, etc.). The result of this activity was a series of checklists that could be combined for the specific needs of new team members based on their new role.
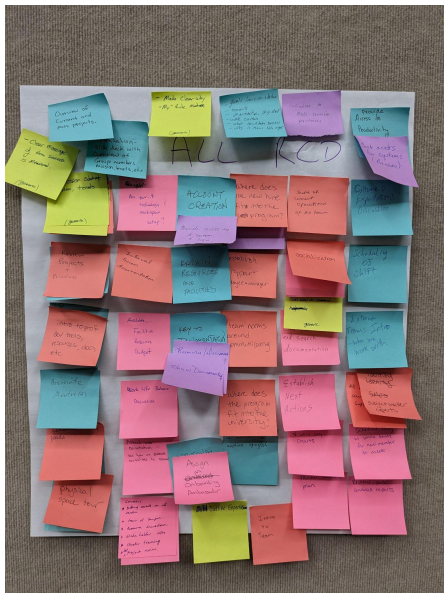
Idea collection during the workshop
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The final activity was to collect quality resources that could be used by new team members during their onboarding process and subsequent professional development. These resources were grouped and categorized (same categories as before) to be recombined later based on the

needs of the new team member based on their background. An additional follow-on activity was to identify gaps in the resources.

Feedback on the workshop

Overall the workshop was seen as a success and there was significant interest in followup discussions and work in future sessions of the RCD Staff and Student Workforce Development Interest Group. It was suggested that the follow-on work include prioritizing onboarding into First Day, First Week, and First Month priority. The approach taken in this workshop to develop outcomes, collect data, and set the community up to continue work in the area of workforce development support was achieved. The discussion begun and the work completed are foundational to the ongoing work planned for CaRCC and the Staff and Student Workforce Development Interest Groups and future work teams. This represents the interest groups' ongoing effort to collect input from as large a number of constituents as possible.