2023 HECC User Survey

HECC conducts an extensive biennial user survey utilizing the Qualtrics survey platform. Responses are generally representative of HECC user demographics and include all NASA mission directorates (including supporting university and industry personnel). The survey assesses twelve HECC service areas and includes both quantitative and qualitative questions. This information is used to help generate recommendations, actions to date, and year-to-year trends to inform management decisions. The goal is to evaluate and improve the services currently provided and identify ways that we can better serve you in the future.

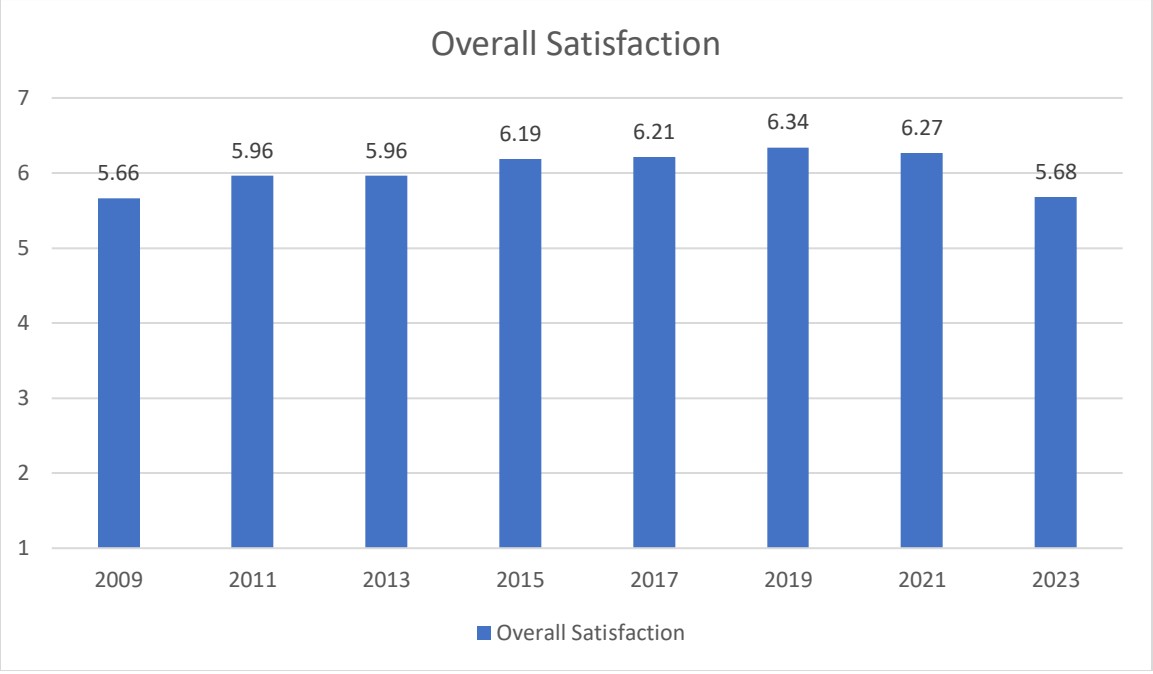
The 2023 survey was open from September 1st to October 6th and received 233 responses. This year, three new questions were added for Data Portal and Data Science, and the Human Exploration and Operations Mission Directorate (HEOMD) was replaced by the Exploration Systems Development Mission Directorate (ESDMD) and Space Operations Mission Directorate (SOMD).

This report is intended as a high-level overview of the survey results.

Comparison with Previous User Surveys

The chart below shows overall satisfaction reported in the 2023 survey, compared with past surveys (on a scale of 1–7):

The HECC survey measures user satisfaction in twelve HECC service areas. These quantitative results, as well as more detailed user feedback, help guide the HECC support team to focus on service quality improvements.
* Calibrated from 5-point scale



The following chart shows overall quantitative scores for each service area reported by the 2023 survey, compared with previous surveys:

2023 Service Area	2023	2021	2019	2017	2015	2013	2011	2009	Comperable 2011-2009 Service Area
Overall Satisfaction	**5.68**	**6.27**	**6.34**	**6.21**	**6.19**	**5.96**	**5.96**	**5.66**	**Overall Satisfaction**
Account Management Services	6.34	6.43	6.35	6.39	6.3	5.75	5.78	5.53	Account Management Services
Allocation Management Services	6.3	5.9	5.81	6.3	6.45	5.75	0.78	5.53	Allocation Management Services
Long-term Storage	6.24	6.3	6.26	6.26	6.34	5.8	5.75	5.7	Long Term Storage (Archive)
Help Desk	6	6.47	6.58	6.5	6.51	6.34	6.23	6.03	Help Desk
Communicating with Users	5.92	6.46	6.29	6.37	6.46	5.98	5.57	5.36	Communicating with Users
Short-term Storage	5.89	6.05	6.13	6.04	6.09	5.65	5.75	5.7	Short Term Storage (nobackup)
Website, Knowledgebase, and Training Material	5.87	6.07	6.09	5.97	5.88	5.38	5.24 4.68	4.84 4.65	HECC Website & Knowledge Base Training
Visualization and Data Analysis	5.8	5.81	5.9	5.78	5.84	5.15	5.21 5.21	4.97 4.97	Visualization Data Analysis
Data Transfer To/From NAS	5.72	5.8	5.69	5.84	5.75	5.17	5.63	5.33	Data Transfer To/From NAS
Application Performance and User Productivity Services	5.68	6.22	5.99	6.12	6.01	5.8	5.9	5.62	Application Performance and User Productivity Services
High Performance Computing	5.51	6.08	6.05	6.02	6	5.88	6.08	5.84	High Performance Computing
System Upgrades	4.26	5.84	5.97	5.79	5.65	5.7	-	-	System Upgrades

*The chart shows average scores for each service area on a scale of 1 to 7. *Scores have been normalized from a 5-pt scale to a 7-pt scale.*

All service areas scored lower than the previous survey in 2021, except for Allocation Management Services, which increased from 5.9 to 6.34.

In addition to qualitative scores, HECC User Services also assessed hundreds of comments left by users when compiling results and recommendations.

Survey Highlights

Analysis of the 2023 survey included the following highlights:

- Scores decreased from the 2021 survey, with Overall Satisfaction scoring a 5.68 out of 7.0, compared to 6.27 in the previous survey.

- Based on the overall service area scores and user feedback, the highest areas of satisfaction were indicated as the following:
    - Account management services
    - Allocation management services
    - Long term storage
    - Help Desk (Control Room)

- 114 users answered the question, “What aspects of HECC service are outstanding?” Of those responses, 72 referenced support, followed by hardware/high performance computing (35) and the website/training/knowledgebase (14).

"Support is the best I have ever worked with, and I've used a reasonable number of national-class supercomputer centers. I prefer to work at NAS over any of the others largely for this reason." - User

"NAS is a vital national resource with hundreds of thousands of compute nodes. I presume the hardware node count and performance will continue to grow as more users inevitably increase the demand for resources to perform more and more demanding calculations." - User

"Website is very comprehensive, and when I began using the resources, it was super easy to follow and get started."- User

- 128 users answered the question, "What aspects of HECC service need the most improvement?" Reliability (36), downtime (34), and job turnaround (33) were the most prominent areas in which users experienced issues. Responses to this question also indicated polarized experiences with HECC support staff/ticket resolution.

  "Somehow, it seems like there's been more reliability problems in the last couple years compared to say 5 years go. Just having jobs fail more frequently and systems being down and things like that. It's still very good overall, just noticeably a little less reliable (on [P]leiades more so than [L]ou)." - User

  "The amount of downtime and unscheduled periodic loss of functionality of Pleiades, Electra, and Aitken this year has resulted in weeks/months of not being able to run jobs. This in part has caused large queues to build and resulted in even less run time. As such, customer deliverables have had to be delayed due to the poor management of these services."- User

  "I cannot run anything. Queue times are atrociously long and when a job does get off the queue, one of the nodes almost always fails." - User

Next Steps

Based on your responses four key areas were identified for improvement, which we will focus on in the coming year: system reliability, downtime, job turnaround, and user support.

A list of recommendations was generated and approved by management. The recommendations are now being projectized, and several activities have already been completed or are in progress.

Thank you to all of you who participated in the 2023 NAS User Survey. Your input is invaluable and we look forward to hearing from you again next year!