Category	General or Specific comment?	User Comment	CFN Response to User Comment
Resource Issues	General	Liquid nitrogen runs out or is not available for experiments that require it.	CFN staff appreciate being informed liquid nitrogen shortages. We realize that these can disrupt user research and will investigate ways to minimize the frequency of these occurances. In order to maintain a LN2 supply, CFN has purchased additional storage Dewars to have more on-hand. We encourage users to contact CFN staff when N2 shortages arise, in addition to providing this input on the year-end survey.
Resource Issues	General	The electron beam lithography tool has poor stitching and users sometimes spin too much photoresist.	Users should always feel comfortable informing staff of issues they encounter when using the lithography tools (and all CFN tools). While not every issue can be addressed immediately, knowledge of poor instrument performance helps us correct the issues in a timely way. Users can assist staff in maintaining the CFN by carefully conducting labwork in the way they were trained .
Resource Issues	General	Physical vapor deposition tools have difficulty reaching high vacuum and experience occasional deposition stability issues. Maintenance or replacement may be warranted.	The CFN etching and deposition tools are heavily utilized, and we are aware that the vacuum performance can suffer during period of high use, which can negatively impact user research. We are investigating options for upgrading the pumping packages on this important instruments, to address this issue.
Resource Issues	General	ICP etchers would perform better with separate liquid nitrogen lines and without artificially low restrictions on the bias power. The ICP-C wafer load system also jammed during use.	We encourage users to notify CFN staff of instrument issues (such as loadlock jamming), so that we can correct these problems right away. The CFN balances the need to provide resources to enable world-class science against the need for versatility and robust, reliable operation. The heavily-used ICP etchers must be operated according to manufacturer specifications (300W bias) to comply with safety regulations. We are considering possible solutions for more rapid cooling of the ICP-C instrument.

Resource Availability	General	Various ICP etcher problems result in tool downtime that slows down experiments.	We recognize that the ICP etchers suffered significant downtime during 2017. These can result in loss of samples and delays in user research. While unexpected instrument issues are inevitable, we are implementing a plan to better maintain a supply of replacement parts and consumables, to mitigate some of these problems. Users can assist staff by timely reported problems they encounter, and by operating the instruments according to the training they received.
Resource Availability	Specific	Yes, just like I said, because of the pump problem of Ebeam during after hours, I have to spend whole night to wait for the staff's help. At last, Mr. Aaron help me to solve it. Thanks for his kind help.	We recognize that performance of the heavily-used CFN deposition tools is sometimes sub-optimal, and are investigating options for mitigating some of these issues. Unfortunately, staff are unable to provide support outside of normal CFN operating hours (M–F, 8am–6pm).
Resource Availability	Specific	Greater access to Karl Suss Mask Aligner by limiting excessive use (i.e., 4+ hours of continuous use) by single users, to allow more users to access tool throughout the week.	The log of instrument use for the Karl Suss Mask Aligned (MA6) shows that historically this instrument has ample available time for us, with proper planning. Users are encouraged to contact CFN staff members for assistance, if they are having difficulty scheduling time on an instrument for their project.
Resource Issues	Specific	Better baking of the APXPS endstation between users; contamination such as CO and H2O degrade the quality of the obtained data	The current instrument scheduling arrangement sometimes prevents a thorough bakeout without loss of beamtime. We fully understand this concern and are exploring options to mitigate the issue, such as having a UV lamp in the analysis chamber for desorbing contaminant molecules from the internal walls between users.
Resource Issues	Specific	Separate (non-simultaneous) operation of CSX-1 and CSX-2 branches at NSLS-II would be desirable to avoid interference between the two (particularly during photon energy changes).	This has been a general concern for users, which has been resolved by separating the operations of the two beamlines. Currently CSX-2 (now called IOS), has complete control of the undulator and energy changes during the time allocated to IOS users. This has eliminated the issue of interference.

Resource Availability	General	To reduce wasted experimental time and ensure staff avilability, tools should be replaced faster; more chemicals, gases and consumables should be stocked on site to minimize gaps in supply; scheduling policies should be modified to give more users tool access throughout the week; and staff should better communicate available hours to users.	We are continuing to look for ways to improve our support for user projects. We have implemented processes to monitor chemical use and maintain supplies of spare parts to expedite equipment maintenance and repair. Users are an important part of this process, as they can assist by keeping staff informed when chemicals or consumable supplies are running low. Limitations on vendor service availability will always result in some downtime. Users are also encouraged to contact staff members for assistance if they are having difficulty scheduling instrument time for their project during the week. Available hours for nearly every CFN instrument are accessible via the Facility Online Manager (FOM) scheduling software. Users may also contact staff members for assistance with FOM.
Resource Availability	Specific	The beam line went down for an hour or so during one of our experiments. We were still able to collect all the data we needed though.	While beam dumps occasionally disrupt experiments and reduce beam utilization, NSLS-II operatations staff are working to continually improve beam stability to maximize time directed towards experiments.
Resource Availability	General	The high value and versatility of the dual beam focused ion beam (FIB) tool mean that it is almost constantly in use. This makes it a bottleneck for many users' research, and any tool issues or malfunctions may exacerbate the issue.	We recognize that the Focused Ion Beam (FIB) tool is a highly subscribed resource based on its versatility for use in TEM sample preparation and in more general nanofabrication applications. To address this issue in the short term, we have implemented new Helios booking rules that afford as many users as possible the opportunities to reserve the tool. We are currently investigating diffferent vendor options for a new FIB instrument to be added during 2019.
Resource Issues	General	Valuable composition data accompanying TEM images taken on the JEOL 2100F was lost due to a software issue with the Oxford analytical system.	We are very sorry for the loss of valuable composition data that accompanied the TEM images. This problem has been identified and as a result of intermittent hardware and software issues for the Oxford EDS detector with the JEOL 2100F. We are in the process of acquiring a new EDS detector for this instrument, to be installed later this fall.

Resource Issues	Specific	Elemental analysis measurements using the EDS peripheral on the JEOL 1400 TEM is currently unavailable.	We are sorry for the lost opportunity to characterize sample composition profiles in the TEM. This year, the EDS detector on the JEOL 1400 was under repair for several months due to a vacuum leak. It has now been reinstalled and is in operation. CFN staff work to maximize the availablity of tools to users and to provide reasonable alternatives during instrument downtimes. Users are encouraged to speak with staff members about concens during instrument downtime, and we will try to assist in finding alternate solutions.
Resource Issues	Specific	JEOL 1400 TEM was down quite a few times and our imaging was delayed as a result.	We are sorry for the extended downtime for the JEOL 1400 this year, which was due to a vacuum leak that has since been resolved.
Resource Issues	Specific	I lost one session of JOEL 2100F HRTEM facility time due to the malfunctioning of the camera. The problem was apparently known to facility manager but was not known to general user like me. If the problem was posted in form of email or notification on the FOM platform, the user would know before the actual session and make adjustment in the schedule accordingly.	We are sorry for the lost TEM session. The root cause of the problem with the camera has been identified and fixed. We appreciate the insightful comment about timely notifications of users, and we will continue to work to improve communications with users.
Resource Request	General	It would be helpful to have access to an ultra-microtome for cutting thick and thin sections of biological materials (e.g. cultured cells).	We appreciate this input on future equipment that would benefit the user community. This is an important aspect of our planning process, and users are always encouraged to talk with staff about the present and future equipment needs.
Resource Request	General	Users made requests for various tools/resources/capabilities	We appreciate all user inputs on new tools and capabilities that would benefit their research, in areas like lithography, film deposition, advanced imaging and scanning probes, and other forms of characterization. The CFN invests at least 10% of its operating budget each year in new capabilities for nanoscience, and user inputs are an important factor in investment decisions. To stay at the forefront of nanoscience, the CFN balances new acquisitions and upgrades to maintain a portfolio of both new/unrivaled capabilities, and robust and reliable "workhorse" instruments.

Amenities	General	A larger time range and higher frequency for shuttles to BNL would make it easier for users and especially students to access the CFN.	We recognize that transportation limitations are a barrier or hindrance for many BNL users. The CFN Users Executive Committee meets regularly with BNL management to discuss solutions. One plan currently under consideration would provide increased-frequency shuttle service to the Yaphank LIRR station.
Amenities	General	Access to food close to the CFN would be a major boon to user productivity, especially outside of the normal cafeteria operating hours.	Outside of the BNL cafeteria in Berkner Hall, BNL provides micromarkets in both Building 400 and Building 740 (NSLS-II) to provide meals and snacks to users 24 hours/day.
Amenities	General	BNL needs to substantially improve on-site lodging and the quality and availability of food options.	The Chair of the CFN Users Executive Committee (Don DiMarzio) meets regularly with BNL management to discuss issues including transportation, amenities and quality of life. A particular focus is planning for BNL Discovery Park, which is scheduled to begin construction in 2019. Discovery Park is an exciting BNL initiative that will ultimately provide a new user center, conference center, expanded food options, and new housing.
Training and Administration	Specific	For the electron microscopes, there is too much irrelevant training on the aberration corrected machines, as those are often run by CFN staff. Streamlined training access is suggested.	We appreciate this comment — it is a common request from users working with staff on aberration-corrected TEMs. This year we have implemented a streamlined training protocol designed with these and similar users in mind.
Training and Administration	General	Training should be streamlined to eliminate unnecessary, redundant, or non-specific training.	CFN must ensure that all facility users and staff are equipped with information on known hazards and specific safe work practices. As such, the online courses and hands-on training are tailored to the type of work that is conducted in those labs to which you will have access. Although we examine CFN training requirements periodically to look for those that are no longer necessary, we find that in general our practices place a greater emphasis on caution compared to other institutions. We appreciate your feedback on where there is redundancy and how we can streamline the training process.

Training and Administration	Specific	Some on-line training courses are not accessible outside of the BNL-CFN intranet. Opening access so all such segments of required training can be completed prior to arrival would greatly accelerate the on-boarding experience for the in-person components of training.	Online safety training must be completed prior to starting work in CFN. To facilitate timely start of projects, we have made all online training modules accessible via the internet. For new users, a link is sent to their training dashboard website, which indicates required training and provides links to each course. Reminder emails are also sent to returning users to inform them of expiring trainings.
Training and Administration	General	It is sometimes difficult to find staff available to provide suggestions or assistance.	We appreciate this feedback. CFN staff strive to be a resource for users. Although some delays may be expected as staff balance their time among competing priorities, a user should always be able to find someone to assist them. The user proposal the point-of-contact is a resource to help on this matter when needed. We will discuss this feedback among the entire staff at an upcoming all-hands meeting.
Training and Administration	General	It can take longer than anticipated to gain access and check-in, especially for non-US citizens.	Citizens of non-US countries may always experience some delays to access as BNL complies with national security mandates. However, we are anticipating further improvements to the registration and check-in process once BNL completes Discovery Park – an exciting BNL initiative that will ultimately provide a new user center, conference center, expanded food options, and new housing.
Training and Administration	Specific	Extend after-hours access to etching and chemical work. A staff member would have to be stationed for this 'late-shift', but opening up this productivity window would significantly decrease the prep-time/intermediate processing for lithography work.	We are unable to support additional CFN staff during the hours outside of normal operations (M–F, 8am–6pm), who are required to be present to ensure safe conduct of certain types of laboratory activities, including use of hazardous chemicals. Unfortunately, these important safety considerations limit the types of activities that can be performed outside of normal operating hours of M–F (8am–6pm).
Training and Administration	Specific	The new format for the General User Proposal does not have the character count at the top of each prompt for the Research Description section. It would be helpful to have this, as most users likely write in a text editor and do not copy over until they are finished.	This year, we have removed the character limits in the user proposal questions, which hopefully is a convenience for proposers who copy their text from a separate editing program.

User Experience	Specific	As an end-user who visits CFN infrequently, I would like to see more efforts from the part of the existing permanent staff to make visits of people like us more friendly and make visitors more welcome! As it is, it can feel quite alien for visitors at CFN at times. I have a wonderful, wonderful experience and interaction with my collaborator and the front office, otherwise.	We appreciate this feedback and we are sorry to hear that your user experience was not fully welcoming, which is a goal we aspire to. We are pleased to hear that your experience with the user office and with your CFN collaborator was positive. All CFN should be ready to assist new users in acclimating to CFN, BNL, and Long Island. We will discuss this feedback among the entire staff at an upcoming all-hands meeting.
Amenities	General	It would be nice to have access to fitness facilities.	CFN users and guests have access to BNL fitness facilities. Please contact the Brookhaven Employees Recreation Association (BERA): https://www.bnl.gov/bera/
Action Items			
User Experience	Specific	Online access to library for visiting users. (I'm not sure if that is possible)	Guests and external users may access the online library. They have to apply for a BNL Domain Account and VPN. Please contact the User Office so that we can assist you in applying for an account.
Amenities	General	Temporary desk space and sofas to rest on for visiting users	Users requiring temporary desk space can see the User Office. There is limited office and cubicle space at the CFN, but we will do our best to accommodate your needs.
Amenities	General	Easier access to coffee would be appreciated	We appreciate this comment and are working to implement a method for after-hours access to a coffee machine within CFN.
Amenities	Specific	Vegetarian food.	The CFN User Administrator will speak with BNL's Associate Laboratory Director for Facilities and Operations, who oversees the Micro Markets, and the Manager of the Guest/User/visitor Center. She will report back on the outcome.
Training and Administration	Specific	To have an automatic notifications when the required training is updated so that there is no interruption in the budge functioning.	Thank you for this feedback. The User Office sends emails to users reminding them to notify us when they have updated their training so that we can update their badge access accordingly. We will discuss the possibility for automated email notifications with the BNL Training Office

Resource Availability	General	Long queuing times can limit access to computer clusters and are especially inefficient for small jobs, while short time constraints are not adequate for some larger user jobs.	We appreciate feedback from users of the computing cluster, as they inform our efforts to maximize the research productivity of the cluster in the fairest, most efficient way. Because the CFN cluster is now part of a large shared computing facility at BNL, we must follow the queuing policy that governs all users. However, the CFN legacy cluster is for CFN users only, allowing us to implement CFN-specific queueing policy. For example, to accommodate the computing needs of quick feedback small jobs, we have recently started a new partition 'gen4debug' that accepts exclusively jobs of 2 hour limit. We continue to explore more flexible allocation strategies to accommodate longer user jobs. We encourage all users of the CFN computing facilities to raise concerns or make suggestions regarding operations of the system through their point of contact in the theory and computation group.