

NSLS Industrial User Enhancement Plan

The overall goal of this plan for enhancing the NSLS Industrial Users' Program is to encourage greater use of synchrotron tools by industry researchers, improve access to NSLS beamlines by industrial researchers, and facilitate research collaborations between industrial researchers and NSLS staff, as well as researchers from university and government laboratories. The implementation of this plan will also involve modifications of the existing user access policy.

The plan includes the following major elements:

Improve the NSLS proposal review system:

- Proposal rating review criteria has been modified to reflect the importance of technology development. We have reworked these rating criteria to make the rating rubric more broadly applicable to both academic and industrial proposals.
- Dedicated proposal review panels (PRPs) for industrial proposals will be added. These panels will include industrial researchers as members.

Increase availability of beamtime to industrial researchers:

For experimental techniques with high demand from industrial users, the NSLS will increase the total capacity by adding new capacity, increasing throughput, and working with Participating Research Teams (PRTs) to increase the general user fraction. In addition, on selected beamlines, up to 10 percent of beamtime will be reserved for users with funding from industrial institutions for their research. Industrial Users' proposals would be reviewed and rated by an Industrial PRP that has the expertise to evaluate the merit of the proposals and their value to industry in general. Once Industrial Users are allocated on a particular beamline, any remaining beam time will be returned to the General User rapid access pool. If industrial needs go beyond the reserved beamtime, those industrial proposals which are not allocated will be put back in the general user rapid access pool.

In the beginning of the implementation of this policy, the following beamlines are selected. They are the beamlines providing the techniques currently used most frequently by industrial users at NSLS:

- X14A for powder diffraction;
- X18A for x-ray absorption spectroscopy;
- X27C for small angle x-ray scattering; and
- X20B for x-ray scattering and reflectivity (planned).

Additional beamlines will be included as demand warrants.

As a condition for this reserved access, Industrial Users will be required to submit a corporate impact statement of the value of the work completed at the NSLS, within 6 months after the conclusion of their experiment.

Industrial program support:

Scientific support to industrial users is categorized into four areas: consultation, collaborative research, paid services, and training.

- **Consultation:** Industrial researchers are encouraged to consult the NSLS Industrial Program Coordinator if they are interested in using the NSLS for their research. The Coordinator will help them to identify the most suitable techniques and guide them to the appropriate beamlines. Beamline staff will follow up and interact with the prospective users, and work with them to develop the best possible beamtime proposal.
- **Collaborative Research:** Industrial users and the NSLS Industrial Program Coordinator will work together to develop collaborative research on their challenging problems. The collaboration may include pursuing joint funding opportunities and writing proposals, developing new techniques, methods and instruments, performing experiments, and analyzing data.
- **Training and Outreach:** The NSLS Industrial Program Coordinator will work with NSLS Information, Outreach, and User Administration and JPSI to identify needs for specific training resources and research opportunities related to industrial user applications. The Industrial Program Coordinator will also work with NSLS staff on participation in meetings of interest to various types of industrial users (such as trade meetings).
- **Paid Services (under development):** The NSLS Industrial Program Coordinator would work with beamline scientists to have them perform experiments and analyze data for industrial users under a preapproved agreement. Industry would pay for this service. The NSLS will work with BNL to establish appropriate guidelines and fees.

Industrial Research Tracking

- **Corporate Impact:** The principal investigator of the industrial research proposal is required to submit a corporate impact statement to the NSLS Information, Outreach and User Administration office within 6 months after completion of the experiment. The statement will include:
 - Proposal number and affiliation.
 - Title of experiment.
 - Name of beamline and experimental method.
 - Journal title/Trade Publication/Conference and expected date of publication. If none, state the reason.
 - A statement of the importance of this work to the company.
 - A brief summary of the results of the work.

Industrial users will be emailed on a fixed schedule throughout the year in order to collect a corporate impact statement from them, which will help substantiate the need for the enhanced access and will also be used to assist in rating proposals (under the category of “experimental group’s track record”). The NSLS will also add trade journals, identified by industrial users, to their standard publication searches.

The NSLS will create a matrix, to include a list of the people who have done experiments at the NSLS with these selected highlights. The matrix will provide an overview of the research problem, the NSLS technique and/or beamline used, and the results and applications of the work done. This matrix can be shared (through a limited-access database) with academia so that the NSLS facility’s Industrial Program Coordinator could connect the industry researcher with an academic researcher to foster collaborations.

The PI will have the choice of submitting either a confidential or an open impact statement, or both. If the PI chooses open, then the NSLS will have the freedom to use the information for publicity (e.g., on the Industrial Program website) or other appropriate metrics. The open impact statement could be used as evidence of track record in the proposal scoring rubric. If the statement is confidential, then in the event that the NSLS wishes to use any part of the statement, it will seek approval in writing.

- Industrial User Statistics
- Publications
- Funding sources

Industrial Program Advisory Committee

An Industrial Program Advisory Committee will be established to act as a consulting body to the NSLS. The main function of the Advisory Committee will be to work with NSLS to continue to improve this Program. Regularly scheduled meetings of this Committee will be established. The proposed Advisory Committee members are: Simon Bare, UOP; Daniel Fischer, NIST; Jean Jordan-Sweet, IBM; and Yan Gao, General Electric.

Facilitate collaborations and partnerships:

The NSLS will work with the Joint Photon Sciences Institute (JPSI) to identify new industrial research opportunities, and facilitate the formation of research teams.

Enhance NSLS outreach to industrial researchers:

A new web page dedicated to industrial research has been created to introduce synchrotron techniques to industrial researchers, highlight industrial research performed at the NSLS, and provide targeted communication to industrial users.

An Industrial Program Coordinator position has been created to interact with industrial users, lead the efforts described above, and to continue to further develop this program.