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As we reviewed the updated report from NSERC reflecting the feedback and inputs from the research community, the Canadian Network of Scientific Platforms (CNSP) would like to add additional recommendations tailored to how scientific platform infrastructure and expert platform scientists can better contribute to NSERC's goal of world class research and training of the next generation of scientists and engineers.

Background: The [CNSP](#) is a pan-Canadian network of professionals leveraging the capability of research infrastructure and expertise to build innovative research capacity. Scientific platforms and the CNSP also play a key role in training the next generation of scientists and engineers in Canada by providing educational opportunities and support to ensure excellence in research. The CNSP is a highly diverse community committed to building the Canadian research ecosystem by leveraging state-of-the-art infrastructure and expertise. Founded in 2016, the network has attracted many scientists and research professionals from across the country since its inception. The CNSP membership includes technicians, platform directors, vice-presidents of research from major Canadian academic institutions, administrators, independent consultants, and technology

experts. The network currently represents 194 scientific platforms that are responsible for ~\$1 billion of research infrastructure, has 45 institutional members from 9 provinces and member platforms serve ~30,000 researchers and ~10,000 research laboratories. The CNSP defines scientific platforms as facilities, resources, and related services that are used by the scientific research community to conduct top-level research in their respective fields and covers major scientific infrastructure; knowledge-based resources such as collections, archives, or structures for scientific information (information and communications technology-based infrastructures such as Grid, computing, software, and communication), biobanks or tissue banks or any other entity of a unique nature essential to achieve excellence in research. Such infrastructure may be “single-sited” or “distributed”.

The CNSP recommendations are centered around the key recommendations published in the “NSERC 2030: A Strategic Plan: What We Heard report”.

KEY RECOMMENDATIONS: NSERC 2030: A STRATEGIC PLAN: WHAT WE HEARD REPORT

Continue to prioritize the Discovery Grants program. There was broad support for the critical role that the Discovery Grants program plays in the natural sciences and engineering (NSE) ecosystem and calls for NSERC to prioritize increasing the funding envelope for this program over launching more targeted or mission-driven funding opportunities.

CNSP Recommendation: The CNSP agrees with this recommendation as discovery grants are used for scientific platform fees across many fields of research. Increases in the funding envelope are needed to keep pace with the increasing costs for reagents, infrastructure repairs and maintenance and increases in platform scientist salaries to keep up with inflation.

Increase the number of scholarships and post-doctoral fellowships offered by NSERC as well as the award values. A common theme heard throughout the consultations was the need to better support research trainees, by offering more opportunities for funding as well as by increasing the value of the awards offered to relieve some of the financial burden placed on students and post-doctoral fellows.

- i) **CNSP Recommendation:** *The CNSP agrees with this recommendation but also sees tremendous value in including the expert scientific professionals that work in scientific platforms term “platform scientists” in these fellowship calls or awarding “**Platform Scientist Fellowships**”. Platform scientists are often early career at the same career stage as postdoctoral fellows or senior technologists, staff or early career assistant professors. They are still building their professional toolkits and skill sets. They are critical to support and advance high-quality research for hundreds of laboratories at their institutions. They are often funded with platform fees that fluctuate a great deal, are not reliable from year-to-year and do not provide long-term stable positions for platform scientists. The concept of the “post-doctoral cliff” was raised on more than one occasion with participants suggesting that more needed to be done to support the transition from fellowship to faculty position or to roles outside of academia. Platform scientist positions are now a clearly chosen career path for many MSc and PhD graduates who want to stay in academia, play a central role in research progress, keep a research and technology development focus and support 100s of HQPs but do not want to establish their own research program. Funding one platform scientist fellowship would result in support for hundreds of undergraduate, graduate and postdoctoral trainees. These fellowships could provide an opportunity to offer stability and open these diverse career streams to retain this talent pool in Canada.*

Where possible, streamline and harmonize program requirements to relieve administrative burden. Participants expressed concern that the workload associated with grant applications and reporting was taking away from time spent on research and made recommendations for how to relieve some of that burden.

CNSP Recommendation: *The CNSP supports this recommendation.*

Continue to promote equity, diversity, inclusivity and accessibility. Consultations revealed widespread support for NSERC’s efforts to ensure that the NSE research ecosystem is more equitable, diverse, inclusive and accessible. To date, progress on EDI remains uneven; more granular understanding of the persistent barriers is required, through comprehensive and disaggregated data, and meaningful engagement. Simple solutions will not be sufficient. Rather a culture of excellence that values a wider range of skills, experiences and expertise must evolve, along with scientific production.

CNSP Recommendation: *CNSP strongly supports the recommendation to continue to promote equity, diversity, inclusivity and accessibility. CNSP as described above in the background engages with a diverse talent pool ranging from academic platform scientists and administrators, and non-academic research scientists. Scientific platforms are most often open to any researchers who would like to access the services, infrastructure and expertise. Support for scientific platforms ensure equitable*

access to these essential research resources for early, mid or late career principal investigators, HQP at all levels (undergraduate, graduate, postdoctoral), small or large laboratories and researchers from small, large, academic, government or industry laboratories. A 2016 survey of the CNSP membership also revealed that female scientific platform scientists, managers and directors make up close to 50% of the workforce ([CNSP-RCPS Submission Federal Finance Committee-July2017](#)). Thus, support for scientific platforms means support for women in science. The CNSP strongly favors a culture of excellence that values a wide range of skills, experiences and expertise that must evolve, along with scientific production.

Engage with Indigenous communities to identify and support their research priorities. Meaningful advancement of Indigenous self-determination in research was viewed as an important step towards reconciliation and the decolonization of research practices. Discussions centered around the need for openness and flexibility to support Indigenous-led research and around greater recognition of the uniqueness of Indigenous Peoples requiring a unique approach to engagement. This will involve allocating sufficient time and space to meaningfully engage Indigenous communities on research involving their communities or their land.

CNSP Recommendation: The CNSP supports this recommendation. Scientific platforms can also play a role in engaging indigenous communities with their focus on training and education. This could be tailored and adapted for indigenous communities and their specific needs.

Create more opportunities for partnerships between colleges and universities. Participants were supportive of fostering collaborative and mutually beneficial partnerships between colleges and universities and of moving away from the binary view of research that takes place at colleges being completely apart from the research taking place at universities.

CNSP Recommendation: The CNSP supports this recommendation. Scientific platforms are by nature collaborative environments and tend to attract scientists who enjoy working in a collaborative team science manner. It is likely that scientific platforms exist at colleges. The CNSP could play a role in bringing the leadership and staff from college level platforms into the community and promoting their platforms at the national level.

ADDITIONAL CNSP RECOMMENDATIONS

Expand eligibility criteria for Discovery and Alliance grants. The CNSP supports expanding the eligibility criteria so that platform scientists and directors can apply as principal applicants or co-applicants for NSERC Discovery and Alliance grants. The wider research community recognizes that advanced research infrastructure and novel instrumentation are essential to support breakthrough research at the frontiers of science. Funding for research and development projects within the

platform or as a collaboration between the platform scientist/staff and principal investigators will engage and build collaboration focused on technologies and services within platforms.

Include platform scientists and platform directors in applications for and review of NSERC Research Tools and Instruments (RTI) Grants. Platforms often need small equipment upgrades that will impact the broader community. Often researchers using scientific platforms are unaware of the need for equipment repairs or of the latest technology upgrades and which ones are most well aligned with the platform user base. Giving platform managers/directors and scientists the ability to apply for NSERC RTI funding and principal applicants or co-applicants will ensure these equipment upgrades are prioritized. Platform scientists have tremendous expertise in their service or technology area. Including them in the review of RTI grants will ensure the quality of the proposals, integration within platforms and ensure redundancies are minimized.

Incentivize the placement of RTI infrastructure in scientific platforms: Placing research infrastructure in scientific platforms ensures that it is accessible to the broader research community, it is maintained, high quality up-to-date training, education and technical support is readily available, ensures redundancies are minimized. Prioritizing funding for RTI grants for infrastructure that will be placed in platforms will add value to the investments NSERC makes and ensure the investments impact the broader scientific community.

Engage the CNSP actively in NSERC 2030 planning as a key stakeholder with a unique and important perspective for the science and engineering research ecosystem. The CNSP would like to be engaged with NSERC in discussions of the funding ecosystem and how scientific platforms, platform scientists and platform administrators can contribute to keeping Canada at the frontier in research and enabling the best possible training and education for the next generation of scientists and engineers.