



Canadian Association
of Physicists
Association canadienne
des physiciens et physiciennes

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Written Submission - Capstone Consultation

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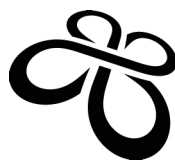


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Endorsed by:



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About Us

Physics research and development in universities, research centres, and companies is essential for economic growth and societal advancement. It drives technological innovation, creating new industries and improving existing ones, leading to job creation, increased productivity, and economic prosperity. Technologies developed through physics research, such as medical imaging devices and renewable energy technologies, directly benefit public health and environmental sustainability. Moreover, investments in physics research enhance Canada's competitiveness in global markets by training a skilled workforce and attracting high-tech industries. For example, quantum science and technologies, with their potential for revolutionizing computing, communication, and sensing capabilities, are poised to shape the next generation of technological advancements. Overall, physics research not only expands scientific knowledge but also plays a critical role in driving economic development and improving quality of life for citizens nationwide.

Incorporated in 1945 and currently representing 1,700 members, the [Canadian Association of Physicists/Association canadienne des physiciens et physiciennes](#) is a national network of physicists working in educational, industrial, and academic settings from coast to coast to coast. The CAP strives to unleash the full potential of physics and physicists for the benefit of Canada and the world.

Response to consultation questions

Budget 2024 laid out important new investments in Canada's research system, and a commitment to evolve federal research support to meet the needs of mission-driven, interdisciplinary and international challenges. CAP supports this effort, endorsing the plan outlined in a [joint ministerial letter of June 17](#) to establish an organization promoting collaborative, international, and interdisciplinary research. We are encouraged by this positive response to the [Bouchard Report](#).

However, care in the creation/set-up of this new capstone organization is crucial to prevent unintended negative impacts on Canada's research system (including major research facilities). Maintaining the independence, excellence, and foundational grant programs that have long bolstered Canadian research is essential. Interdisciplinary and mission-driven research relies on disciplinary experts. We urge the federal government to minimize disruption to vital programs, communicate clearly to avoid uncertainty and engage in thorough consultation with the research community for well-designed policy mechanisms. The success of the new agency will depend completely on its operationalization.



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Ultimately, CAP's goal is to help maximize the positive impact of physicians and all Canadian researchers both locally and globally. We lay out the following core principles and potential risks to help in the design of the new agency.

Principles

Principle 1: Robust Support for Investigator-Driven Research

In Budget 2024, the Federal Government committed significant new investments in tri-council funding, particularly needed for the development of Highly Qualified Personnel as future scientific leaders. The Bouchard Report underscored the current agencies' excellence in fostering knowledge and talent. *"Recognizing that the core of the research and innovation ecosystem lies in the development of talented researchers and innovators, a coordinated and equitable approach to supporting the next generation of Canadian talent is key."* The new agency must not detract or delay the increases to tri-council funding.

Principle 2: Scholarly Excellence Evaluated through Peer-Merit Review

Program design and funding decisions must prioritize scientific and scholarly excellence. Canada's research governance should uphold the principle that support for researchers and projects is based on the merit of their ideas, thoroughly assessing their scholarly contributions to advancing knowledge and impact. Peer-merit review must remain the gold standard for evaluating excellence across all facets of the new agency. Peer review should also continue to evolve so that it recognizes scholarly merits and impact beyond simple publication counts or citations. By embracing a more holistic approach to peer review, Canada can better foster innovation and ensure that research investments lead to meaningful societal benefits and advancements.

Principle 3: Independence

Advancing scientific frontiers and addressing critical challenges necessitates sustained, long-term vision independent of political cycles. Program development and funding decisions must be insulated from political influence. The new organization should be meticulously crafted with robust systems ensuring steadfast non-partisanship.

Principle 4: Whole Lifecycle Design

The new agency has a unique opportunity to enhance the research ecosystem to overcome current gaps. For example, supporting key infrastructure past deployment, through operations, maintenance, and upgrades, often falls between funding mechanisms. Ideally, funding strategies should provide support through all lifecycle stages, from initial infrastructure investments,



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staffing (including technicians and HQP training), maintenance, and upgrades, and transcend funding organizations (including CFI). Considering their importance as national assets that support Canada's scientific enterprise, the new agency also has the opportunity to implement a more strategic approach to the management of major research facilities.

Principle 5: Ongoing Consultation from Diverse Groups

Consultations and the organizational structure should incorporate diverse perspectives to rectify past shortcomings, in full consideration of EDI priorities and ensuring proper representation of students and postdoctoral fellows.

Risks

Risk 1: An added administrative layer adds complexity, confusion and diverts funds away from research and essential improvements to the support of students and postdoctoral fellows.

In the short-term, consultations and planning of the next agency could detract and disrupt promised improvements to current programs. Once operational, the new agency could increase administrative complexity. This could lead to heightened bureaucracy, slower decision-making processes, and added administrative burdens for researchers. Furthermore, establishing a new agency requires resources that might otherwise support research grants, potentially impacting the autonomy and flexibility of current research organizations. Coordination challenges, such as overlapping responsibilities and conflicting priorities between the new agency and existing bodies, could also arise, potentially undermining efficiency and clarity in funding allocations. Careful consideration of these risks is essential to ensure that any new governance structure enhances rather than detracts from the research ecosystem's effectiveness and support for scientific advancement.

Risk 2: Increased separation between government decision-makers and disciplinary experts

The current status of Tri-Agency Presidents as equivalent to Deputy Ministers ensures direct access between disciplinary experts and government decision-makers. Any new capstone organization must prioritize effective communication of issues and perspectives from all three agencies to the ministerial level.

Risk 3: Decreased agility and increased separation between agency leadership and researchers

Introducing a new capstone agency could undermine the autonomy and flexibility that existing organizations currently have in tailoring their support mechanisms to meet the specific needs of



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their respective research communities in the pursuit of questions identified by those communities. One size often fits none.

Summary

In response to the consultation questions, CAP supports Budget 2024's initiatives to enhance Canada's research system, including the expanded support for streamlined support for interdisciplinary and international efforts. While endorsing the plan for a new organization promoting mission-driven, international, and interdisciplinary research, CAP stresses the need to safeguard the independence, excellence, and foundational grant programs crucial for Canadian research. Emphasizing continued support for investigator-driven research and scholarly excellence evaluated through peer-merit review, CAP highlights the importance of maintaining independence from political influence and improving comprehensive infrastructure lifecycle support. Addressing potential risks, including added administrative complexity and the risk of increased separation between decision-makers and experts, CAP urges thorough consultation and careful implementation to maximize Canadian researchers' positive impact both locally and globally.