



The Canadian Association of Physicists 2014-2018 Strategic Plan June 2014

EXECUTIVE SUMMARY

Since 1945 the Canadian Association of Physicists (CAP) has been the vehicle by which Canadian physicists have collectively advanced the scientific, educational, public policy and communication initiatives of our profession. This 2014-2018 Strategic Plan provides a roadmap that will enable CAP to:

- Improve the impact of physics and physicists on Canadian society and
- Improve the value of CAP to its members and the broader physics community.

Following a series of extensive deliberations and broad consultative processes with the membership, the CAP Executive and Council, having considered the organization's mission and reviewed its strengths, weaknesses and opportunities, decided that the activities of the Association in 2014-2018 will be guided by the following Vision Statement and Goals:

CAP Vision Statement

The Canadian Association of Physicists strives to unleash the full potential of physics and physicists for the benefit of Canada

GOAL I: To Strengthen the Profession of Physics

Canada benefits from its citizens who have a physics education as they bring the physicist's discipline into all sectors of society. CAP will promote the profession by encouraging and enabling those trained as physicists to proudly identify themselves as such.

GOAL II: To Improve the Visibility of Physics and Physicists in Canada through Excellence in Communications

CAP will expand its communications with the public, as well as with the industrial and non-university educational sectors, on all matters related to physics in Canada.

GOAL III: To Effectively Advocate at All Levels the Value of Physics and Physicists

CAP will improve its advocacy for the profession and for our members with political decision makers and with public service agencies such as NSERC. It will expand its advocacy to other federal and provincial agencies, and work with industry partners where appropriate.

GOAL IV: To Achieve Organizational and Operational Excellence to Provide Services in an Effective, Efficient and Transparent Manner

CAP will more effectively accomplish its mission by enhancing communications with its members in both official languages, reviewing its programs and activities, and growing its membership base.

BACKGROUND

In spring 2012 the CAP Executive recognized the need for a Strategic Plan that would guide the future activities of its staff and volunteers and proposed to Council a planning process. This process began with a series of focused strategy meetings of the Executive and with unstructured input resulting from broad consultations with the membership. The deliberations of the Executive began with a re-examination of the existing mission statement of the Association. This led to a reaffirmation of that mission statement and the articulation of a vision that captures the overarching purpose and values of the CAP.

CAP Vision Statement

The Canadian Association of Physicists strives to unleash the full potential of physics and physicists for the benefit of Canada

CAP Mission

- **To promote scientific excellence and the pursuit of knowledge in physics**
- **To develop and promote the profession of physics**
- **To provide a forum for physicists to meet and discuss physics**
- **To increase the visibility of Canadian physics, and raise the profile of Canadian physicists, in Canada and abroad**
- **To provide a united voice for physicists on the national scene and to speak out on science policy and funding issues**
- **To raise public awareness of the significance of physics for the well-being of our country**
- **To encourage young Canadians to study and maintain a lifelong interest in physics**

From this process, the Executive identified the organization's key strengths and opportunities to move forward, and captured them as follows:

Strengths

CAP is valued:

- As a coherent, collegial, engaged community of physicists from across Canada with a committed base of members who provide high quality and enthusiastic volunteers, organized and served by a dedicated professional staff
- For its presence in all Canadian university physics departments and its coordination of the collective activities of department Heads and Chairs. It connects with undergraduate and graduate students through support of student conferences, prize exams and student competitions, and lecture tours
- For its advocacy of science in Canadian public policy and its engagement with Canadian government agencies. It is the main vehicle for the community to communicate with NSERC and sister professional associations and is a voice for physicists to coherently engage our governments
- For its support of the profession of physics and advocacy for the profession in Canadian society. It monitors provincial legislation governing professional activities and strives to protect the professional practice of physicists

- For its organization of the annual Congress, which brings Canadian physicists together from all areas of physics to share the excitement of our science and encourage cross-fertilization both in terms of geography and of areas of research. The Congress provides a forum that enables CAP members to coordinate their activities to promote physics
- For its timely communications on all matters relating to physics in Canada

Opportunities

CAP has a number of opportunities that will assist it in achieving its mission, including:

- Strengthening relationships with other relevant scientific, policy, and funding organizations
- Building stronger interactions with the heads of CAP's departmental and institutional members
- Taking advantage of CAP's membership network to undertake and coordinate statistical analyses relevant to the community
- Interacting more broadly with media professionals, through such organizations as the Science Media Centre
- Expanding communications to and engagement with both graduate and undergraduate students
- Connecting with new faculty in universities and growing membership in academic institutions
- Implementing improved communications tools
- Growing non-academic membership
- Growing Francophone membership
- Increasing our advocacy efforts for physics and physicists by initiating a dialogue with the Canadian Foundation for Innovation and other federal science funding agencies
- Engaging further with Members of Parliament (MPs) and other elected office holders as well as policy makers
- Enhancing the visibility of physics and physicists throughout Canada

Four broad themes for the plan emerged and were used to develop a survey designed to request more structured input on priorities from members. Within each of these themes, cast as four general goals, a small number of specific objectives clearly emerged as the priorities of the membership. These form the core of the 2014-2018 Strategic Plan.

An implementation document prepared in parallel with this Strategic Plan identifies the tasks that will support our goals, and the measures and deliverables used to evaluate progress on the execution of the 2014-2018 Strategic Plan.

MOVING FORWARD – GOALS AND SPECIFIC OBJECTIVES

GOAL I: To Strengthen the Profession of Physics

Objectives:

- Enhance peer and public recognition of achievements in Canadian Physics and of CAP members

CAP will play an enhanced role in recognizing publicly the many achievements of CAP members that may currently be unknown outside of the physics community and underappreciated even within the community. CAP should strive to promote the most accomplished Canadian physicists for national and international awards such as prizes, medals, and membership in learned societies. When such recognition does happen, CAP should take an active role in publicizing it to CAP members, to other Canadian scientific societies, and to the general public.

- Promote the diversity of physics career options

Students want to study physics because they wish to understand how the world works and the techniques used to discover how it works. But in today's world, many students also ask how their field of study will lead to interesting, meaningful and challenging careers. A key role for CAP is to promote the diversity of physics careers to students, educators and employers. This will be accomplished by, for example, providing physicists with opportunities for professional development; encouraging national conversations about curriculum and program development; renewing the CAP Careers website; profiling interesting career paths in Physics in Canada; and providing a portal to information prepared by other organizations.

- Strengthen the recognition and status of the P.Phys. certification

The P.Phys. certification is the cornerstone of CAP's strategy to engage physicists outside academia and to improve the recognition of physicists' expertise in the industrial, research, and corporate sectors. We will continue to articulate this message, and enhance the professional development activities associated with the P.Phys. certification.

- Increase corporate and non-academic membership in CAP

The future of Canadian physics as a profession and CAP as an organization depends on our ability to engage young people in physics. We therefore must spread the word that physics is relevant to a variety of fields and professions outside academia. This in turn requires our membership to be well represented in the industrial sector. Ideally, we would like Canada to follow the German model in which those working in industry are proud of their physics background and constantly strive to maintain some contact with

physics as a discipline. An immediate short-term objective will be to develop a coherent strategy to increase our corporate and non-academic membership.

GOAL II: To Improve the Visibility of Physics and Physicists in Canada through Excellence in Communications

Objectives:

- Improve public awareness of CAP members' activities

CAP is seen as the collective voice of physics and physicists across the country and the impact of the activities of CAP members and physics in general should be clearly enunciated to all sectors of society. This includes celebrating achievements in physics research, communicating contributions to important public policy decisions, as well as communicating the impact of physics on the maintenance of our health care systems, and contributions to our energy, industrial, communications and resource sectors. These are all hidden contributions to the technologically-advanced comfortable life style that we enjoy. CAP will play a significant role in removing the technology shroud that the public is reluctant to penetrate and in making physics accessible to the common person.

- Improve engagement with high school and college physics teachers

High school and college physics teachers are actively engaged in physics on a day-to-day basis. In the spirit of life-long learning, they often seek opportunities to keep abreast of the latest developments. CAP will provide a forum for exchange of best practices and recent developments in pedagogy and opportunities for outreach activities. CAP will provide value to this community by informing them on a regular basis of the contributions of Canadians to the advancement of physics. This information can then be passed on to their students, who comprise the next generation of physicists and decision makers. By improving our communications with K-12 and college educators we will raise the visibility of Canadian physics, increase public awareness to the significance of physics for the well-being of our country and encourage young Canadians, both men and women, to study physics. We will thereby advance several of the high level goals listed in the mission statement in the short term and for the future.

- Improve engagement with physicists in non-academic sectors

Traditionally CAP has tended to focus on serving the academic and research community. CAP must now broaden its scope to engage the much larger community of physicists whose careers are in non-academic sectors of industry and government. In the next five years CAP will open up effective channels of communication with these sectors. This requires identifying and providing for their information needs and adding a value proposition with this information. The objective is to create connections with partners and programs of common interest, which will

lead to non-academic physicists' engagement and support of a more visible physics community represented by a more broadly based CAP in the future.

GOAL III: To Effectively Advocate at All Levels the Value of Physics and Physicists

Objectives:

- Engage with federal political decision makers in Ottawa and in their ridings

CAP will strive to formally represent the physics community to the Government of Canada. Beyond its regular pre-budget submissions to the House of Commons Finance Committee, CAP will seek direct audiences with appropriate cabinet ministers and their advisors, including key officials at Industry Canada responsible for Science and Technology policy that affect the funding agencies and physics profession. CAP will also use other opportunities as they arise, such as political or science policy conferences, to reach out to politicians and policy advisors.

Engagement of politicians in their ridings will require the grassroots efforts of individual members. CAP will support its members by offering best practices for building a relationship with their MPs, by making timely suggestions regarding issues about which to speak to their MPs, and by providing appropriate background information.

- Expand our engagement with NSERC and other federal science funding agencies

In particular, the Canada Foundation for Innovation (CFI) is becoming an increasingly important source of funding for the physics community, not only for capital investments, but also for operating funds for large research facilities. The Government of Canada signaled a long-term mandate for CFI in Budget 2013. Thus, CAP will work to establish productive two-way communications with CFI concerning existing and potential funds that affect physics research on a scale similar to CAP's current engagement with NSERC. Other agencies will be engaged as resources allow.

- Engage industry partners in promoting basic and applied research and in advancing our other advocacy goals

To achieve effective advocacy through the above efforts, a priority for CAP will be to engage industry partners who are willing to support our efforts. Support from industry for basic research through physical presence or written communication will help policy makers distinguish CAP's requests from those with specific vested interests.

As government attention is often achieved through media coverage, a second approach for CAP will be to build on recent media coverage of its positions. While funding for basic and applied research will continue to be priority issues, CAP will need to leverage government attention on other issues.

As CAP operates with limited volunteer resources, it will be necessary for CAP to continue to leverage the resources of umbrella organizations such as the Canadian Consortium for Research (CCR) and the Partnership Group for Science and Engineering (PAGSE), and cooperate with other scientific societies on specific issues of mutual interest.

GOAL IV: To Achieve Organizational and Operational Excellence to Provide Services in an Effective, Efficient and Transparent Manner

Objectives:

- Increase members' awareness of CAP and CAP activities

For CAP members to maximize both their benefit from and their contributions to the organization, it is important that they be aware of all of the activities and functions of CAP, both long term and day-to-day. This requires that they can quickly and easily identify the resources, opportunities and activities carried out by CAP and that they receive updates of new events and activities, as well as news of relevance to the profession on a regular basis. Such clarity and awareness will enhance engagement of members and improve the efficiency and effectiveness of their day-to-day activities. This will require an efficient communications strategy, up-to-date web content generated in a timely manner, clear and easy to navigate web pages, and regular notifications using the latest communications tools. One area requiring particular attention is promotion of the P. Phys program, including its function and its importance.

- Review existing CAP activities to identify any that can be dropped

CAP currently has a large number of wide-ranging activities that include outreach, advocacy and facilitating scientific exchange. CAP strives for excellence in all that it does, and it is essential that all its activities have clear value and relevance to its members and to its mission. CAP operates with an excellent but rather small staff, limited financial resources and the vital assistance of a large number of dedicated volunteers. To maximize its impact, CAP will examine in detail all its activities, with the specific goal of dropping the less fruitful ones in order to focus on those that are deemed to be most important and relevant.

- Develop a long-range membership growth strategy – 2020 members by 2020

The ability of CAP to achieve the first three goals in the 2014-2018 Strategic Plan requires strong membership in order to provide crucial financial resources through membership fees and to build our volunteer base. A strong membership will also ensure that CAP is truly representative of the practice of physics in Canada and physicists working throughout the industrial, governmental, and academic sectors. This will give the organization both the credibility and expertise to achieve its goals. To this end a key objective of this strategic plan is to develop a long-range membership growth strategy: to reach 2020 members by the year 2020 – representing a growth of approximately 25% over our current membership.

IMPLEMENTATION – A PLAN FOR ACTION

The goals and objectives articulated in the previous section will result in a stronger, more diverse organization, focused on the CAP Mission and in support of our vision of unlocking the potential of physics and physicists for the benefit of Canadian society. They are high-level goals that cannot be achieved overnight; they provide a roadmap for the organization's activities over the next five years.

The achievement of these goals will require a detailed implementation plan that the CAP Executive is preparing in parallel with this Strategic Plan, and which will be presented at the 2014 CAP Congress. The implementation plan will identify a set of specific tasks that will support our goals, and will include the measures and deliverables used to evaluate progress on the execution of the 2014-2018 Strategic Plan.