



Strategic Plan: 2013 - 2017

EXECUTIVE SUMMARY

Since the late 19th century, the American Physical Society (APS) has evolved according to challenges facing physics and the needs of its members. The Strategic Plan for 2013-2017 provides a roadmap for ensuring that APS will continue to be:

- A highly valued membership organization for physicists in the US and around the world
- A global resource for physics information
- A strong and visible advocate for the discipline of physics and key communicator about physics to the community and general public
- A recognized leader in designing educational programs to serve the next generation of physicists as well as a more science-literate citizenry

As a result of extensive discussions, the APS Executive Board and staff have determined that the following four goals will shape the future programs and activities of the Society:

GOAL ONE: To Better Serve the Members

Attracting and serving a diverse and inclusive membership worldwide is of foremost importance. Finding new and more effective ways to communicate with APS members is essential to maintaining a large and engaged membership.

GOAL TWO: To Better Serve the Physics Community

APS is dedicated to providing world-class peer reviewed journals and organizing stimulating physics meetings, as well as leading and partnering outstanding physics education initiatives, deepening its global engagement, and advocating for a stronger physics enterprise.

GOAL THREE: To Better Serve Society

As a leading source of physics information, APS will build greater public support for physics and science generally. It will engage the membership in conveying the importance and excitement of physics to the public, and will provide opportunities for its members to bring their expertise and passion to bear on solutions to important societal problems.

GOAL FOUR: To Increase Organizational Excellence

To fulfill the goals and objectives of this strategic plan will require both unity of purpose by the entire APS staff and an appropriate supporting infrastructure, to allow for a common organizational vision and to ensure that the APS remains a dynamic scientific membership society.

INTRODUCTION

Over the course of its history, the APS Executive Board and staff have engaged in forward-planning discussions designed to ensure the steady growth and future health of the Society. The current planning process, initiated in 2011 by the Operating Officers and the Presidential Line, took as its starting point the APS Objective and the Mission Statement adopted in 2009.

APS engaged an outside consultant, who began the process with a series of interviews of Society staff in College Park, Washington, DC and Ridge, NY. A survey of both APS professional staff and volunteer leadership about their perceptions of the Society and its products, programs and services was also conducted. Planning teams were formed to examine APS activities, the Presidential Line prepared issue papers, and several meetings of the Executive Board, including a dedicated retreat, were focused on planning discussions.

During this process, the groups examined internal strengths and weaknesses as well as external threats and opportunities, with a focus on underserved cohorts of the physics community, better use of technology to facilitate all aspects of communication with APS members, increased international engagement, better branding and enhanced visibility of APS programs to the physics community and society at large, and partnering with other scientific societies at home and abroad to increase the impact of our scientific activities.

An important principle underpins the work of this strategic plan and will guide the actions of the Society moving forward: “One APS.” This principle articulates an important unity of purpose amongst APS members and staff to encourage common cause across the broad and diverse subareas of physics.

To achieve this principle, the three Operating Officers and the Executive Board are committed to improving communication across the Society and to integrating disparate activities and locations of APS to provide greater service to members of APS and to the larger physics community.

APS OBJECTIVE

“In the firm belief that an understanding of the nature of the physical universe will be of benefit to all humanity, the Society shall have as its objective the advancement and diffusion of the knowledge of physics.”

– *APS Constitution*
Article II (1899)

APS MISSION STATEMENT

(adopted June 19, 2009)

- Be the leading voice for physics and an authoritative source of physics information for the advancement of physics and the benefit of humanity
- Provide effective programs in support of the physics community and the conduct of physics
- Collaborate with national scientific societies for the advancement of science, science education and the science community
- Cooperate with international physical societies to promote physics, to support physicists worldwide and to foster international collaboration
- Promote an active, engaged, and diverse membership, and support the activities of its units and members

BACKGROUND

As part of this planning process, trends in physics and science in general were examined for relevance to the APS. In addition, strengths and opportunities of the present APS were critically examined as part of both a survey process and subsequent discussions amongst APS governance and staff.

TRENDS:

Physics is the most fundamental of the sciences, and other disciplines such as chemistry and biology build upon it in their own fashion. Yet, as we enter the second decade of the 21st Century, much is changing for physics and its role in American life. The field is increasingly inter- and multi-disciplinary, a trend highlighted in applications research areas such as energy, medicine, climate, and materials research.

The shifting demography of the United States poses a challenge to the physics discipline (as well as other scientific disciplines), which has historically been white and male. While much is being accomplished to address gender imbalance, there still remains a significant gap before the field of physics can be considered representative of the ethnic composition of the U.S.

Younger members, post-docs, and students are the lifeblood of the field and are the future of the APS. Fully 50-75% of physics PhD's find employment in industrial labs, high-tech start-ups, financial engineering, consulting, and science policy – outside the traditional realm of academia.

Globalization of physics and science in general is accelerating. APS international membership has grown to 21%, and APS publications are already broadly international, with 65% of reviewers and 71.4% of corresponding authors for APS publications living outside of the United States.

Open access publishing poses a significant challenge to traditional methods of scholarly dissemination, as well as to the historical financial model of the APS. This will be a decade-long challenge.

Support for physics is under severe budget pressures at the federal, state and local level. Funding for research, support for graduate students, and development and maintenance of large research facilities are increasingly threatened. One particularly disturbing threat is the recent closure of a number of physics degree granting programs at US educational institutions.

Science illiteracy and the lack of adequate appreciation for the importance of science in society pose significant challenges. Recent concerns in K-12 STEM education focus on making the next generation of students more scientifically equipped to compete in a global economy. Recognition by the physics community of the importance of public outreach is growing.

The method by which information at professional meetings is presented and disseminated is evolving. How communities interact and share information is also undergoing a significant revolution, largely influenced by technology.

As traditional communications give way to new, web-based information services, social media are offering new opportunities for professional societies to communicate with their members. Communications using mobile devices have taken on increased importance. New technology will allow customized and individualized services to members.

TOWARDS THE FUTURE:

BUILDING ON STRENGTHS AND SEIZING OPPORTUNITIES

To better understand the state of the current APS and to examine its future needs, surveys were distributed to APS Governance, Unit officers and Committee Chairs and staff. The results of these surveys, including strengths and opportunities, informed the subsequent discussions between the APS Executive Board, Officers and Staff in developing the goals and objectives of this Strategic Plan.

STRENGTHS:

Members are at the heart of APS. The success of the APS mission is critically dependent on the commitment and passion of its members. The Society is strengthened by generous contributions of time and expertise on the part of its volunteers.

The APS is seen as the organization which binds the community of physicists around the common goals of advancing physics, promoting education and outreach, advocating for the discipline, and providing answers to societal challenges.

The APS produces well-recognized, world-class publications. The eleven APS journals are cost effective and comprise the largest and most complete suite of physics journals in the world. One third of all physics citations worldwide reference papers that appeared in APS journals.

APS Meetings serve as an important dissemination mechanism and networking opportunity for the global physics community. The majority of US physics students give their first scientific talk at an APS meeting and form life-long relationships that enhance their careers.

Members greatly value the role that the APS plays in advocating for physics. Through its Office of Public Affairs, APS brings expertise to bear on issues of national importance and influences the public policy dialogue on science-related issues.

APS education programs are recognized nationally as addressing critical issues. These issues include the shortage of well-trained high school physics teachers and the paucity of minorities receiving physics PhD's. In partnership with other scientific societies, APS promotes and disseminates physics education research highlighting effective methods and best practices for teaching physics.

APS Staff are lauded as helpful and knowledgeable partners who work well with the volunteer leadership in carrying out programs and activities of the Society. The Operating Officers of the Society are seen as effective leaders in part due to their physics background and recognition within the physics community.

OPPORTUNITIES:

APS must be committed to a diverse and inclusive membership if it is to thrive in the decades ahead. This commitment must include minorities, younger members, industrial physicists, women, and international members. Enhancing connectivity of these constituencies with APS throughout their careers is essential.

Recognizing the increasing globalization of science, the APS must expand its commitment internationally by greater engagement with its sister societies abroad, encouraging its members to participate in more international endeavors, and making its information more accessible to international audiences.

APS must strive to involve increased numbers of international members on standing committees and in society governance. APS must create more effective communications vehicles to better inform the membership about centrally administered programs and activities. These communications should be tailored to meet the individual interests and needs of the member. As part of its commitment to better communications, the APS will enhance its use of, and investment in, technology.

APS must become less dependent on funds generated from journal subscriptions and must aggressively explore alternative sources of revenue as well as creating a comprehensive development program, to ensure greater financial stability.

More emphasis should be placed on communicating the importance and excitement of physics to the general public. APS should increase media coverage of APS journal articles and significant presentations at Society meetings.

GOALS AND OBJECTIVES

The year-long process of discussion of the present and future direction of the APS has led to the creation of a focused set of goals and objectives to guide the organization over the next five years.

GOAL ONE: To Better Serve the Members

Serving over 50,000 APS members worldwide is of foremost importance. Engaged volunteers make critical contributions to the Society. Finding new and better ways to communicate with APS members, to provide them with better access to physics information, and to enhance their APS volunteer experience are essential to maintaining a large and active membership.

■ **Objective 1: Communications:** Improve communication between members, units, governance, committees and APS staff.

- Create a comprehensive member communications program for the APS that fosters connectivity and engagement.

■ **Objective 2: Membership:** Broaden the APS membership to be more inclusive and diverse.

- Provide services to help attract and retain members from underrepresented groups in physics.
- Provide greater opportunities for early career physicists to strengthen their connectivity to physics and the APS community.
- Provide members with access to information to enhance their career opportunities and professional development.
- Increase retention of student members.
- Attract and serve more industrial members.
- Increase the visibility of APS prizes and awards and the recognition of recipients.

■ **Objective 3: International Engagement:** Attract and serve increased numbers of international members.

- Involve more international members in APS governance, committees, and unit leadership.
- Expand APS information and services directly relevant to the needs of non-US members.

GOAL TWO: To Better Serve the Physics Community

APS will strengthen its commitment to the physics community by continuing to provide world class peer-reviewed journals, by broadening the physics constituencies served, by leading and fostering outstanding physics education initiatives, by deepening its global engagement and by advocating for a stronger physics enterprise.

■ **Objective 1: Dissemination of Physics:** Provide the physics community platforms with which to communicate the knowledge of physics.

- **Journals** – Produce the premier journals that span the full breadth of physics and provide leadership in the science publishing community in addressing the challenges of the digital era.
- **Meetings** – Re-imagine APS meetings to ensure that they are “must attend” events, with meeting content, including plenary sessions and invited talks, available online.

■ **Objective 2: Advocacy and Strategic Alliances:** Serve as the principal voice for physics to policy makers at all levels.

- Increase APS advocacy locally, nationally, and globally.
- Increase global engagement by fostering new and existing partnerships with sister societies to advance physics.
- Raise the visibility of the Presidential Line to APS membership and to external audiences.

■ **Objective 3: Education and Diversity:** Be a leading voice in physics education and diversity programs, creating and partnering in models that can be replicated by other scientific societies.

- Serve physics departments by providing access to knowledge regarding best practices for teaching and learning physics, and for ensuring strong undergraduate and graduate degree programs.
- Coordinate and lead an innovative program to increase the number of underrepresented minorities obtaining a PhD in physics.

GOAL THREE: To Better Serve Society

As the leading source of physics information, APS will build greater public support for physics and science generally. In addition, it will engage the membership in conveying the importance and excitement of physics to the public. APS will provide opportunities for its members to bring their expertise and passion to bear on solutions to important societal problems.

■ **Objective 1: Physics Information and Public Policy:** Be the unbiased authoritative source of physics information.

- Enhance opportunities to bring physics information to the public.
- Expand and deepen the influence of physics knowledge on shaping public policy to benefit society.

■ **Objective 2: Outreach:** Increase public appreciation of and excitement about physics and its importance to society.

- Publicize and facilitate opportunities for members to engage in outreach to the public.

■ **Objective 3: STEM Education:** Provide innovative programs that enhance student physics education for the 21st century.

- Raise the levels of physics competency among students by leading programs focused on increasing the quality of physics instruction.
- Provide leadership on policy issues involving STEM education.

GOAL FOUR: To Increase Organizational Excellence

To fulfill the goals and objectives of this strategic plan will require both unity of purpose by the entire staff and an appropriate supporting infrastructure. The former will allow for a common organizational vision and the latter will ensure that the APS remains a dynamic scientific membership society

■ **Objective 1: Organization:** Become “One APS”– a unified organization that shares a common vision and purpose.

- Brand and market APS more effectively to increase visibility and market share for APS products and services.
- Align the staff and aggressively incorporate cutting-edge technology to increase the efficiency and effectiveness of the organization.
- Evaluate in an on-going way the various programs undertaken at APS as to their relevance, efficacy, and service to physics, the physics community and society.
- Arrange seamless integration across the APS web sites so that users may have a personalized experience based on any of their various connections to APS.

■ **Objective 2: Financial Stability:** Build financial stability across the entire APS, including developing new revenue streams and maintaining a robust business model for publications.

■ **Objective 3: Development:** Undertake efforts to build a comprehensive development strategy that includes a strong annual giving program, fundraising for targeted activities, and preparation for a major development campaign.

GOING FORWARD

This Strategic Plan puts the needs of APS members and the physics community at its heart. Over the next five years APS will offer new and better ways to communicate with its members, to make available content from its meetings and its journals, and to facilitate and support valuable programs and activities for the physics community. More specifically, an evolving implementation plan to fulfill the strategic goals and objectives will be developed by APS leadership, assisted as necessary by Task Forces and committees of APS members. A hallmark of the Society must be its commitment to excellence in its programs, products and services. This should help to ensure the continuance of a loyal, enthusiastic, and involved membership, with dedicated and active volunteers, key elements in a forward-looking APS.

In the future the APS will be a more diverse and inclusive organization, with an enhanced international focus. It will better engage and serve the needs of younger members, international members, and industrial physicists. The APS will continue to be seen as an authoritative source of physics information, a recognized leader in physics education, an effective and visible advocate for physics, and a voice for communicating the excitement and importance of physics to the public.

