



STRATEGIC PLAN

for 2018 and Beyond

ACS is a congressionally chartered not-for-profit 501(c)3 scientific society. The Society is committed to being a strong and sustainable organization, maintaining adequate financial resources and adhering to financial stewardship principles that will ensure its ability to accomplish the ACS goals today and into the future.

VISION

Improving people's lives through the transforming power of chemistry

MISSION

Advancing the broader chemistry enterprise and its practitioners for the benefit of Earth and its people

CORE VALUES

In everything we do, we are committed to the following core values:

- **Passion for Chemistry and the Global Chemistry Enterprise**
We believe in the power of chemistry and the chemical enterprise to provide solutions to the world's most pressing problems. We promote the health of the chemical enterprise by supporting investments in education, training, entrepreneurship, research, and innovation.
- **Focus on Members**
We provide programs, products, services, and experiences that make ACS indispensable to the success of our members and others in the global chemistry enterprise. Celebrating and recognizing the achievements and contributions of ACS members is crucial to the Society's member-value proposition.

- **Professionalism, Safety, and Ethics**

We support and promote the safe, ethical, responsible, and sustainable practice of chemistry coupled with professional behavior and technical competence. We recognize a responsibility to safeguard the health of the planet through chemical stewardship.

- **Diversity and Inclusion**

We believe in the strength of diversity in all its forms, because inclusion of diverse people, experiences, and ideas leads to superior solutions to world challenges and advances chemistry as a global, multidisciplinary science.

GOALS

Results from 2016-2017 national elections worldwide (e.g. UK/EU and US in 2016, others in 2017) will create uncertainty and possibly impact all four ACS goals. ACS will marshal its unique resources to:

1. Provide Information Solutions

Deliver indispensable chemistry-related information solutions to address global challenges and other issues facing the world's scientific community.

2. Empower Members and Member Communities

Provide access to opportunities, resources, skills training, and networks to empower our members and member communities to thrive in the global economy.

3. Support Excellence in Education

Foster the development of innovative, relevant, and effective chemistry and chemistry-related education.

4. Communicate Chemistry's Value

Communicate — to the public and to policymakers — the vital role of chemical professionals and chemistry in addressing the world's challenges.

Goal 1: Provide Information Solutions

Deliver indispensable chemistry-related information solutions to address global challenges and other issues facing the world's scientific community.

ACS will be the most trusted source of chemistry-related information. The Society will provide products and services, including high-quality journals and periodicals, databases, and meetings that advance the practice of chemistry and related sciences. Through creative collaborations, transformative technologies, and best practices, ACS will ensure that its information products and services are the most authoritative, indispensable, and accessible to chemical professionals addressing the world's challenges.

Challenges & Opportunities

- There are unprecedented constraints on U.S. government funding for scientific research and education.
- The worldwide recovery from the Great Recession continues – progress is slow, but there are some signs of improvement.
- Globalization of the chemistry enterprise continues, with students, members, and other chemistry-related professionals increasingly located in emerging markets such as Brazil, Russia, India, China and South Korea. This trend provides an opportunity to restructure and/or diversify information and knowledge-based solutions to meet regional and international needs and to establish a globally based workforce that supports the national and transnational activities of members and other customers.
- The number and scope of open access mandates by research funders and academic institutions are growing as are attempts to coordinate between different groups such as research funders or publishers. These trends provide the opportunity for ACS to continue to evolve policies on ensuring access to high quality science that have enabled authors to comply with mandates and to seek partnerships with organizations or groups seeking to organize the transition to open access. One such group is the Clearinghouse for the Open Research of the United States (CHORUS); ACS is a member of this group. Outside the U.S., the ACS Publications Division is engaged in open access matters emerging in the U.K. and European Union, as well as China and elsewhere in Asia.
- Chemistry-related information sources, including free resources, are increasing. Customers' expectation of more personalized offerings from organizations is growing, along with the technology that enables personalization.
- Curating content for customers is growing in importance as a way to manage the expanding sources and content of information. This provides the opportunity for ACS to develop solutions itself or partner with organizations who are well positioned to support this development.
- Information exchange through online technologies (hybrid, virtual, social, and mobile) is increasingly supplementing face-to-face meetings.
- Cybersecurity threats to the collection, distribution, and protection of information are increasing. This creates the opportunity for ACS to support and participate in initiatives that seek to develop novel, secure, and user-friendly technologies or methodologies that safeguard these activities.
- Predictive/AI (artificial intelligence) technology and ontologies are emerging and evolving in the scientific information research space. This offers the potential to improve understanding of customer/user behaviors and preferences to develop new information solutions as well as refine and adapt current offerings.
- Regional and political unrest is growing in Asia, the Middle East (particularly in China, Turkey, and Syria), and Europe (e.g. Catalonia in Spain, Lombardy and Veneto in Italy).

Objectives

1. Strengthen the ability of CAS and ACS Publications to provide unparalleled information solutions to the global scientific community.

2. Together with other chemistry society and publisher partners, position ChemRxiv as a preprint server for the global chemistry community.
3. Position the ACS appropriately in countries and regions of increasing importance to the future of the chemical enterprise, taking into consideration the full span of ACS activities.

Goal 2: Empower Members and Member Communities

Provide access to opportunities, resources, skills training, and networks to empower our members and member communities to thrive in the global economy.

ACS will develop and provide resources to enable chemistry-related professionals to succeed in the global scientific enterprise. The Society will support members in their quest for technical competence, a strong ethics and safety culture, and professional advancement. ACS will also help members form and maintain communities worldwide — both traditional, established communities as well as limited-lifetime, self-organizing communities — as they work to collaboratively address the major chemistry-related problems of our time.

Challenges & Opportunities

- Despite increasing awareness of the importance of having an active safety culture in the workplace, some practitioners see safety as interfering with success.
- Employers of chemists are increasingly diverse, smaller, and more service-oriented (for example, contract testing labs or analytical services versus research or innovation-focused companies).
- The wider mix of jobs held by chemistry-related scientists and the growing multidisciplinary nature of science is causing fewer scientists to identify themselves as chemists.
- A mis-match exists between the current training of new graduates and the jobs available, particularly in light of the increasing importance of automation and AI in the chemical industry and the resulting need for “tech skills” in addition to traditional lab skills.
- Chemistry-related companies increasingly require external R&D partnerships to innovate.
- A general decline in association membership is occurring.
- Members want more targeted, mobile, and video resources and messages.
- Online technologies are being integrated with onsite meetings and courses.
- Constraints on volunteers (including greater job demands, less time given by employers for volunteer activities, and expectations of 24/7 connectivity) warrant new tools and support to facilitate volunteers’ work and grow their ranks.
- Customers increasingly expect services to be customized to their needs and to be very simple to access or obtain.
- The millennial generation will shape future management styles, culture, and expectations.

- Globalization and the changing demographics and needs of the chemistry enterprise are redefining diversity and offering associations opportunities to assist in that transformation.
- ACS alliances to advance mutual goals—including with ACS technical divisions, local sections, international chapters, and peer societies—are increasing in importance.
- The value proposition for membership has been disrupted by social, economic, and technological changes. This demands more targeted services, creative recruitment/retention strategies, and evaluation of alternative membership models.
- Global industrial acquisitions, consolidations, and closures are expected to remain prevalent. Companies are focusing more on developing their core strengths and are looking to acquisitions to deliver growth and greater shareholder value.

Objectives

1. Increase and communicate the value of ACS membership, leading to strong recruitment and retention of members.
2. Develop career roadmaps to promote and enhance the career preparation of chemical science students and professionals for a wide range of career options.
3. Organize an ACS Safety Summit to identify strategies that will accelerate the adoption of safety cultures across the chemistry enterprise.

Goal 3: Support Excellence in Education

Foster the development of innovative, relevant, and effective chemistry and chemistry-related education.

ACS will support reforms and initiatives that result in highly effective chemistry education, safer laboratory practices, and the preparation of technically competent, ethical, and competitive chemists ready to address global challenges. Through educational resources, instruction, and mentorship, ACS and its members will promote principles of safety and ethics throughout pre-college, undergraduate, graduate, and post-graduate education. The Society will promote the development and dissemination of evidence-based practices in chemistry education to foster a scientifically literate citizenry and ensure a highly qualified chemical workforce.

Challenges & Opportunities

- As the STEM community seeks to address systemic challenges in educational reform, the chemistry community can be a key partner, pursuing collaborations that involve other STEM disciplines and experts in education and social science.
- In a rapidly changing educational landscape, chemistry educators need assistance in developing relevant courses, measuring student skills, using technology effectively, and assessing learning.
- U.S. students must excel in STEM subjects to contribute to societal needs, yet they score low in international tests of STEM achievement.

- As subject mastery is being redefined and the use of science standards and competencies expands, science and engineering practices will need to be incorporated into chemistry programs and assessed.
- As educational programs work to build a culture of safety, resources for implementing effective practices and guidelines in classrooms and laboratories are needed.
- With the expansion of research on mentoring and career development, evidence-based practices need to be utilized across the education levels.
- Efforts to prepare and support K-12 teachers and higher education faculty can be enhanced by high quality professional development and mentoring in a chemistry context.
- Increased access to online educational programs and resources is requiring a change in the way that information is delivered, experiences are facilitated, and learning is assessed.
- With the growing political and social unrest, global efforts are needed to promote the importance of STEM education and encourage strategic investments.
- ACS is positioned to serve as a resource for addressing issues in science and technology education through a multitude of education, public policy, and outreach activities.

Objectives

1. Increase engagement with student communities and expand the reach of student-serving programs, products, and services.
2. Increase membership in and expand resources of the American Association of Chemistry Teachers (AACT) for K-12 teachers of chemistry.
3. Expand the Society's professional development opportunities that will help graduate students and new faculty use evidence-based instructional, individual development, and mentoring practices.

Goal 4: Communicate Chemistry's Value

Communicate — to the public and to policymakers — the vital role of chemical professionals and chemistry in addressing the world's challenges.

ACS will lead in communicating the value of chemistry. The Society will also encourage and support the active participation of members in public outreach efforts by providing training, connections, venues, and other assistance. In collaboration with other professional organizations ACS will advocate for support for science, engineering, innovation, and chemical stewardship. Through its advocacy efforts, the Society will encourage the creation and retention of chemistry-related jobs.

Challenges & Opportunities

- In the information age, an overwhelmed public often fails to understand the extent of chemistry's positive impact on people's lives and accepts inaccurate sound bites or opinion as fact.
- Enhancing public science appreciation and literacy is difficult and expensive to measure and achieve.
- Expanding partnerships with other groups involved in improving public appreciation of science and engineering present an opportunity for greater impact.
- Scientists, engineers, and others can be encouraged to lead in communicating how chemistry can solve global challenges and improve people's lives.
- Global economic and government budget constraints impact research output, demand and mobility.
- Increasing politicization of science negatively impacts U.S. government support of science policy, scientific research and scientific education.
- As the world's population increases, natural resources are under pressure, exacerbated by climate change. Chemical sciences and engineering are increasingly central to solving global challenges in energy, environment, water, health and food.

Objectives

1. Secure coverage of press conferences and releases associated with ACS national meetings; produce, distribute and secure placements/coverage of ACS videos, podcasts, and ACS PressPacs; and leverage efforts to place ACS members in public dialog with news media, policymakers, opinion leaders, and the general public.
2. Pursue global engagement opportunities focused on communicating chemistry's contributions to addressing global challenges represented in the 17 sustainable development goals in the United Nations 2030 Agenda for Sustainable Development.
3. Empower ACS members and allied organizations to communicate key ACS policy priorities with policymakers. Implement key ACS policy priorities through legislative or executive branch initiatives.

Terms used above:

VISION

Vision statement expresses the desired future state when the Society has achieved its mission. A vision is concise, inspiring, motivating, energizing, core values-oriented, and futuristic by tapping into what we wish the future would be.

MISSION

Mission statement asserts the Society's and its subunits' purpose and reason for existing as the ACS in terms of who it is, what difference it will make, what it will do, and how it will do it. It is short, clear, easily understood, and believed in by the members.

CORE VALUES

Core Values are the underlying, fundamental, deeply ingrained beliefs of the Society that guide how all ACS staff and volunteers act and conduct their work to fulfill the ACS mission and vision. Core Values are the essence of the Society's identity, support the vision, define the ACS culture, and reflect what drives ACS work.

GOALS

Goals are broad, ambitious outcome statements or directional themes to be achieved to advance the ACS vision and mission. These outcome statements serve as guides for the choice of specific objectives and strategies for ACS staff and volunteers of the Society.

CHALLENGES

Challenges are the identified internal weaknesses of the Society and external threats to ACS or its subunits from the Environmental Scan (EScan) of the landscape external to the Society unit in question that need to be considered in formulating goals and objectives.

OPPORTUNITIES

Opportunities are possibilities identified when the Society or its subunits do an EScan of the external landscape and finds these favorable to achieving the ACS mission and goals.

OBJECTIVES

Objectives explain how goals will be accomplished by describing what achievements must be completed by a specified time for goal attainment.