



## **2016 Highlights of ACS Achievements**

An annual report from Thomas Connelly  
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American Chemical Society

The year 2016 was a year of change and progress on many fronts for the American Chemical Society. We invested significantly in staff development through our HR Leadership Center. Our Leadership in Action program has now trained virtually all ACS staff in supervisory roles. Training was done in classes that mixed leaders from multiple units, combining DC with Columbus staff. For our Executive Leadership, we conducted a series of seven sessions, where we worked on our collaboration and leadership skills, in the context of improving our execution of the Strategic Plan. During the last three sessions, we added about 15 additional senior leaders, to broaden the training impact. All of our leadership training heightened our emphasis on a more collaborative approach to leading, and to stronger ties between the units within ACS. We realized real-time benefits of this training, as can be seen by ACS performance during 2016.

Both CAS and ACS Publications had very strong years in 2016. CAS launched its rebranding – new graphics, plus added emphasis on delivering solutions, rather than simply information. CAS launched new products such as MethodsNow™ and *Chemisches Zentralblatt*. The roll out of SciFinder<sup>n</sup>™ also occurred before year-end 2016.

ACS Publications launched *ACS Sensors*, *ACS Energy Letters* and *ACS Omega*, our global, open-access journal. All three have been well received. Total citations and downloads of ACS Publications set new records. ACS also announced our intent to explore ChemRxiv™, a chemical sciences preprint server.

Our work on membership is starting to yield results, but we experienced a year-on-year membership decline, albeit the smallest decline in recent memory. The Society ended 2016 with 156,129 members which is 0.5% less than year-end 2015 (156,876). Despite the overall membership decline, once again, international membership was a source of growth. We made progress in bundling membership with other Society programs, products and services.

Financially, 2016 was a solid year. For the thirteenth consecutive year, ACS generated positive operating results. We entered the year expecting strong challenges, and a lower net from operations than the prior year. However, through a combination of strict cost control, and focus on revenue growth, we were able to improve on prior year performance. Both CAS and ACS Publications generated record contributions. In addition, our effort to streamline and simplify our operations, which we now call Operational Excellence, is also making meaningful

contributions in IT, Finance and HR. We made progress on key metrics such as revenue growth, growing 2.9% to a record \$526.8M, despite currency headwinds. Free cash flow was positive, at \$20M, reversing the 2015 negative outcome. Also, unrestricted net assets grew 27% to \$206.5M, owing to net from operations, investment gains, and actuarial adjustments. All of this was achieved while increasing investment in new products and global reach.

Finally, December saw the largest reorganization of senior leadership at ACS for many years. Director of Membership & Scientific Advancement, Denise Creech, announced her intent to retire in early 2017, which precipitated a search process that began in mid-2016. Out of a large field of applicants, we were able to recruit a strong replacement, Kate Fryer, from the Society for Neuroscience, where she had a strong track record for building membership and running large, net revenue-generating meetings. Kate's arrival also allows us to separate Scientific Advancement from Membership, the new unit being led by Mary Kirchhoff, and promoting LaTrece Garrison to lead Education. The changes appear to be well received by staff and volunteers. I hope you will take the opportunity to introduce yourself to Kate in San Francisco and thank Denise for her many contributions over the years.

On a personal note, I would like to express my thanks to the ACS Board of Directors, Council, ACS staff, and the entire ACS membership for their support and assistance throughout my first, full calendar year as Executive Director & CEO. I believe we have positioned ACS for a strong year in 2017, and the years to follow.

Below are selected 2016 Highlights of ACS Achievements.

**GOAL 1—*Provide Information – Be the most authoritative, comprehensive, and indispensable provider of chemistry-related information and knowledge-based solutions.***

- **ACS Plans to Organize *ChemRxiv*<sup>TM</sup> as a Collaborative Chemistry Preprint Server**  
In August 2016, ACS announced its intentions to launch a preprint server for chemistry, *ChemRxiv*<sup>TM</sup>, as a joint endeavor with other non-profit organizations. Preprints offer authors and funders many advantages in rapidly disseminating research results and data, attracting constructive feedback from peers, and establishing priority in competitive research fields.
- **CAS Revenue Growth**  
CAS revenues grew by a solid 4.0% in 2016 (without the negative impact from year-over-year changes in foreign currency exchange rates). This growth rate was the largest for CAS in 8 years, and primarily driven by increases in SciFinder<sup>®</sup> and New Product revenues. As a result of the revenue growth and cost management efforts, CAS achieved a \$42.6M net contribution and a record return on revenue result of 13.4% for 2016.

- **New Product Initiatives**

CAS made major advances in new product developments, launching three new product solutions. Additionally, SciFinder<sup>n</sup>™ was launched to select customers in North America, and two more solutions are in the product pipeline for 2017. Launched new products include:

- PatentPak™ on STN was launched in January. More than 1.7M chemist indexing markup documents are now available, and other patent PDF full-text documents number more than 9M by year-end.
- MethodsNow™ was launched in February with complete functional capabilities and content sets. By year-end, MethodsNow had 3,581,384 reaction protocols and 320,736 analytical-bio protocols.
- *Chemisches Zentralblatt* was made available via SciFinder® as the product ChemZent™ in June with English-translated abstracts and associated indexing. ChemZent has more than 2.9M English language abstracts and more than 6M CAS index entries.
- SciFinder<sup>n</sup>™ was launched in November. This powerful new solution provides innovative answer relevancy capabilities, new and unique authoritative CAS content, and enhanced workflow features to help researchers be exponentially more productive.

- **Innovation**

CAS Innovation has begun building a pipeline of strategic initiatives that have the potential to extend CAS solutions in important new scientific areas. Internal Innovation efforts generated over 170 new ideas that CAS colleagues submitted. A company-wide Innovation Challenge resulted in the development of an expanded version of an IP service concept for Research decision makers that will be further vetted in 2017.

- **PMO**

CAS's Program Management Office (PMO) is fully operational and responsible for the execution of a portfolio of CAS's strategic projects. In 2016, the PMO delivered value across 16 strategic projects with CAS's product, technical, and business leaders by providing project management, standard processes, metrics and reporting.

- **Global Expansion**

Through ACS International, Ltd. (ACSI), in 2016 CAS continued to expand its global reach by hiring 14 new people in the following eight countries: UAE, Japan, France, South Korea, South Africa, Mexico, Taiwan and China. Expansion efforts now total over 50 new team members bringing direct representation to over 20 countries. Most importantly, these individuals can be credited with bringing over \$6M in new revenue since the expansion efforts began. These new representatives have helped create a significant number of new customer contacts and played a significant role in new product sales.

- **New Branding**

CAS launched new branding in 2016 with the initial ad campaign "Get to Know CAS," building off research that found, while people know CAS products, they do not connect the products to CAS. Promotions also included an inspirational video shared on [www.cas.org](http://www.cas.org)

and YouTube, development of an email and direct mail campaign, new templates, a brand story, and new brand usage guidelines.

- **Chemistry Class Advantage – Powered by SciFinder®**

CAS's Chemistry Class Advantage, a digital chemistry learning solution that provides undergraduate students with lessons based on peer-reviewed research, teaches SciFinder® skills, guides critical evaluation of journal literature and provides students with real world examples that illustrate the empirical nature of chemistry. A successful pilot and beta phase were completed in 2016.

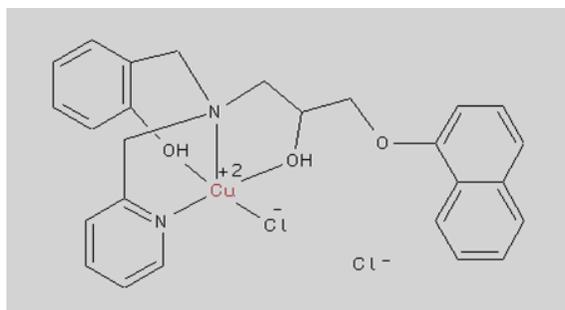
- **Innovation Summits**

CAS hosted Innovation Summits in Japan, China and Brazil, organized to engage business leaders and influential decision makers to collectively address business challenges that impact all organizations, regardless of geography. As a result of the events, ACSI country managers made valuable business connections with important customers and prospects. CAS also released [whitepapers](#) in Japan and Brazil, focused on issues relevant in each of these geographies. The events generated media coverage through international outlets.

- **Content Growth**

CAS achieved many content related milestones in 2016, including record levels as follows:

- A record number of new substance registrations occurred in 2016, totaled 21,542,278. This exceeded the prior record set in 2015 of slightly over 14.5M. Over half of these new registrations in 2016 were from chemical catalogs.
- The 125-millionth compound was assigned CAS Registry Number 2043648-32-2, identified from a Brazilian patent assigned to Universidade Estadual do Norte Fluminense Darcy. The substance is a novel coordination compound that demonstrates antineoplastic activities as an antitumor agent when tested in mice.



- More than 1.36 million indexed records were added to the CA/CAPplus family of databases. Patents continue to grow as a percentage of the total indexed records, now attributing greater than 1/3 of all records indexed by CAS scientists in 2015.
- Nearly 1.7 million new single step reactions were added to the CAS reaction collection. This exceeds the number in 2014 of 1.5 million, with reactions arising from more than 100,000 journal and patent documents.

- **Unified Architecture (UA) and Operational Excellence**

Strong collaboration and cooperation between Washington and Columbus Technology continues. The formal Unified Architecture (UA) initiative, which commenced in 2013, is now complete. UA enabled several new collaborative service offerings, such as a combined content repository for publication-ready data from CAS and ACS Publications, tools for analyzing customer sales analytics across both divisions, and subject-based email alerting and browsing of the new *ACS Omega* journal as enabled via semantic terms from the CAS lexicon. Moreover, UA established a new paradigm for continued collaborative efforts, such as the ongoing effort to normalize company name and address data across all ACS systems, and the Identity and Access Management initiative to provide seamless authenticated access across all ACS Web-based products and services.

Work in the areas of Information Security, Workplace Technology, Business Technology and Infrastructure Technology and Services have progressed and are delivering positive results. These include combining organizations in Workplace Technology to scale support of ACS staff worldwide, hiring a Chief Information Security Officer and amalgamating organizations to improve our overall security posture, and moving forward with combined business and infrastructure systems support to start to reduce overall costs.

- **CAS Campus Improvements**

The CAS campus, including the Data Center, was upgraded in the following ways to improve the employee experience:

- The Fourth Floor of Building B (4B) was successfully renovated for the Technology Division to facilitate an open, agile software development environment.
- Several upgrades to the campus were successfully completed in July 2016, including installation of new patterned concrete at the Building A main entrance and a new landscaped sitting area between Buildings A and B.
- In 2016, Data Center projects included the replacement of two Computer Room Air Conditioning (CRAC) units and two sets of Power Distribution Units (PDUs).
- Breakers were reset to reduce arc flash risk in all buildings' electrical infrastructure; an arc flash analysis was performed on all equipment and tagged to meet NFPA 70E and OSHA requirements.

The CAS Emergency Response Procedures were updated in August 2016 to include the Run, Hide, Fight protocol. Additional training was provided to the Emergency Procedures Team and an all staff session was held with Homeland Security personnel to familiarize staff with the details of this new procedure.

- **Advanced the Society's Mission through the Publications of Three New Peer-reviewed Journals - *ACS Energy Letters*, *ACS Sensors*, and *ACS Omega***

*ACS Energy Letters* and *ACS Sensors* performed well. *ACS Omega* was announced in late 2015 and began publishing in July as the Society's second fully open access journal. *ACS Omega* expands the global reach of the ACS Publications portfolio through four global Co-Editor appointments, provides a key strategy toward capturing and retaining articles within the ACS Publications journal portfolio, and provides an additional source of revenue for the Division and contribution to the Society.

- **Developed and Announced *ACS Earth and Space Chemistry*, Expanding into the Physics and Engineering Research Communities**

*ACS Earth and Space Chemistry* is positioned as a preeminent interdisciplinary journal featuring fundamental and applied research in earth and space sciences. This journal strengthens ACS brand recognition by capturing content from competitors and expanding our physical and applied chemistry portfolios.

- **Bolstered Global Presence and Outreach**

The ACS Publications International Symposium series was established with the inaugural event, “Innovation in Molecular Science” successfully launched in partnership with the Institute of Chemistry, Chinese Academy of Sciences in October 2016 in Beijing. The symposia series is intended as a prominent global forum to promote ACS brand visibility and expand international editorial engagement, customer base and drive membership.

A key strategy for the Division in 2016 was to undertake global expansion via establishment of an ACS Publications staff presence in other countries. In recognition that more than 60% of ACS Publications institutional revenue now comes from outside North America, the Division (through the ACSI subsidiaries) opened and staffed sales & marketing offices in Bangalore, Dubai, Tokyo, Shanghai, Hong Kong, and Singapore in 2016. Including staff based out of our Oxford (UK) office, ACS Publications now has more direct sales people outside the US than within. ACS Publications also installed the first *ACS Omega* Managing Editor based outside the US (in India) to perform outreach on behalf of that journal and the ACS Publications journal portfolio overall. Recruitment for additional editorial development staff in China and Europe is underway. In addition to our staffing efforts, a new Asian Editorial Advisory Council was recruited by ACS Publications senior management in 2016; the Advisory Council is led by Honorary Chair Prof. Chun-Li Bai, head of the Chinese Academy of Sciences, with Professor Li-Jun Wan as its inaugural chairman.

- **Strengthened and Diversified the ACS Journals Portfolio Via New Editor Appointments**

Nine new Editors-in-Chief were appointed across *ACS Earth and Space Chemistry*, *ACS Energy Letters*, *ACS Omega*, *Biochemistry*, *Journal of Organic Chemistry*, and *Journal of Proteome Research*. The chief editor appointments included four individuals based outside of the US and two female scientists. These appointments serve to diversify and further revitalize the editorial leadership of the ACS journal portfolio, which now consists of 11 Editors-in-Chief based outside of the US (19%) and 12 female Editors-in-Chief (21%).

- **ACS Journals Continue To Be #1 in Impact Factor and/or Citations in 14 Scientific Categories**

ACS Journals continue to be #1 in Impact Factor and/or citations in 14 scientific categories—including six in core chemistry (Analytical, Applied, Inorganic & Nuclear, Medicinal, Multidisciplinary, and Organic) according to the 2015 Journal Citation Reports® (JCR), released by Thomson Reuters. Two-thirds of the 46 ACS journals featured in the report had an impact factor of 4.0 or higher, with a portfolio median of 4.820. In total, ACS journals were cited more than 2.76 million times in 2015, up from 2.6 million citations in 2014, for an

increase of 6%. Seventeen ACS journals received their highest-ever impact factors and new journals earned highly competitive inaugural impact factors.

- **Robust Reader Demand and Other Metrics for ACS Journals**

ACS Publications delivered a record 93.8 million COUNTER-compliant downloads of articles to users during 2016. Readers worldwide viewed 182 million abstracts from across our online platform.

- **Author Demand to Publish Peer-reviewed Research with ACS Remains Strong**

During 2016 more than 142,000 manuscripts were received for consideration by ACS Publications journals. This represents an overall increase in submissions of 9.0% from 2015. Published articles approached 42,000, an increase of 4.3% from prior year.

- **Open Researcher & Contributor Identification (ORCID) Requirement Implemented for All Submitting Authors, along with Integration of ORCID with the ACS ID.**

[ORCID iD](#) is a system of unambiguous identification for researchers ensuring accurate attribution of a researcher's work in the scholarly literature, and is now a cornerstone of the scholarly publishing ecosystem. ACS Publications began facilitating the integration of ORCID iD with the ACS ID in August 2016, for association across all ACS ID management systems. In October 2016, ACS Publications took an industry leadership position in the support of ORCID by requiring use of ORCID iDs by corresponding authors when submitting to ACS journals. Implementation of this requirement enabled ACS to become a signatory to the [ORCID Open Letter](#).

- **Manuscript Transfer Implemented across ACS Portfolio**

A streamlined, effective manuscript transfer process is essential to the success of ACS Journals publishing. During 2016, Global Editorial & Author Services staff led efforts to facilitate efficient transfer of submitted content from any journal in the ACS portfolio. Staff have collaborated with external editors to identify manuscript transfer patterns needed to optimize the transfer workflow and experience.

- **New ACS Reviewer Lab Introduced**

In support of global outreach and in the interest of educating and engaging an expanded and more diverse group of researchers, Global Editorial & Author Services staff led the effort to develop and implement an online course designed to educate and cultivate new reviewers. [ACS Reviewer Lab](#) was developed in close collaboration with the ACS Peer Review Advisory Group, consisting of six Editors-in-Chief from ACS journals, an instructional systems designer, and a cross-functional group of ACS staff. Post-graduate level researchers taking the course are provided with guidelines, tips, and recommendations that help them write a first-rate review. Their comprehension of the principles presented is evaluated through a series of assessments, and registrants must pass a comprehensive final assessment to successfully complete the course.

- **ACS Central Science Delivered Strong Editorial Growth Performance**

Since its launch in April 2015, *ACS Central Science* has made good progress in its quest to become established as the preeminent open access journal in chemistry, and one of the most

impactful journals in the ACS portfolio. Advances were made on several fronts: the journal published high-quality papers in a variety of interdisciplinary fields, including work from two Nobel laureates; the pilot embargoed press release collaboration with the Office of Public Affairs triggered scores of news stories and was broadened to include three other journals; the appointment of a sixth senior editor, Cristina Nevado (University of Zurich), added to the journal's geographic and topical diversity; and growth in the caliber and number of author submissions has enabled the editors to consistently achieve a selective threshold target of 10 original research articles per monthly issue.

- **C&EN Established New Native Advertising Programs for Clients**

With continuing declines evident for traditional print display advertising, the C&EN Media Group took steps to acquire the resources to mount native advertising (branded content) campaigns for clients. An internal reorganization led to the creation of a new team that is spearheading the creation and production of a variety of sponsored content, including white papers, Show Daily newspapers (for ACS and partners), and native advertising features. Programs were published in the C&EN magazine on behalf of several advertisers as well as CAS. The C&EN Media Group also managed the production of three profitable Show Daily issues for CPhI Worldwide in Barcelona, partnering with UBM. The C&EN Brand Lab group will play an important role in attracting and delivering sponsored content programs in 2017.

- ***C&EN Global Enterprise* Was Developed and Launched**

During the second half of 2016, the Division management engaged Digital Strategy staff to work alongside team members from C&EN, Journals Production, IT, Marketing, Sales, and WASH IT to develop a new C&EN electronic product for ACS Publications institutional subscribers. *C&EN Global Enterprise* went live with the first January 2017 issue, immediately doubling C&EN's global institution-based readership.

- **Key Enhancements Made to the ACS Publications Web Delivery Platform**

During 2016, the ACS Publications Digital Strategy team, in collaboration with Washington IT, successfully deployed a total of eight software platform upgrades to our hosted *Literatum* content delivery platform that is licensed from Atypon. In collaboration with several ACS editors-in-chief, digital strategy staff developed and introduced key enhancements on ACS Journal home pages during 2016; launched in June, these improvements raised visibility of *ACS Editors' Choice* open access articles and other special collection content selected by ACS editors. With regard to the former, the web production team used Atypon's new Pagebuilder CMS software tools to add an *ACS Editors' Choice* tab to the heavily-used content highlight section (ASAPs, JAMs, Current Issue) on each journal home page. The new tab displays a journal-specific list of the five most recent *ACS Editors' Choice* articles for each ACS journal title. Working with Washington IT, the digital strategy team automated this process, and web production staff coordinated the rollout with marketing managers and journal managing editors within editorial development. The web production team also worked with marketing colleagues on the design and development of *ACS Info Central*, a key channel marketing resource website for ACS Publications' global audience of academic librarians and other institutional customers.

- ACS Publications-CAS Curated Taxonomy Enables Discovery for ACS Omega**  
 In December 2016, working in collaboration with CAS, ACS Publications began featuring a new taxonomic filtering feature, allowing users to quickly narrow their results of ACS Omega articles, published across a broad multidisciplinary scope, to the disciplines and/or sub disciplines of their interest. Users can also choose to receive e-alerts based on any combination of their taxonomic terms of interest. This taxonomy-based discovery and alerting capability being piloted with ACS Omega is one that may be applied across the entire journals portfolio in the future.
- More than 650,000 Mobile Devices Now Paired with ACS Publications Via ACS2Go**  
 In 2015, ACS Publications introduced ACS2Go, a new mobile delivery capability that enables subscriber access to the ACS Publications suite of electronic products on smartphones and tablet devices. In order to monitor and analyze performance of this platform, usage data is pulled into Business Intelligence (BI). As the demand and importance of mobile usage increases, usage metrics have been incorporated into our monthly reports. As of 2016, ACS2Go has resulted in more than 650,000 unique smartphone and tablet devices having paired with the ACS Publications website.
- Multimedia Educational Webinars**  
 ACS Webinars produced 44 weekly webinars for members and prospective members in 2016. The live broadcasts drew more than 50,000 registrants and 25,000 participant sites combined—with an estimated 10% of sites having multiple individual participants. 22 of the weekly webinars were delivered as part of two industry series—focused on drug discovery and advanced materials. Notably, over 2/3 (69%) of participants surveyed stated they are more likely to join or renew their ACS membership as a result of ACS Webinars. In addition, the overall satisfaction rate for weekly webinars was over 90%.
- National/Regional Meeting Content & Networking**  
 More than 29,000 people combined attended ACS national meetings in San Diego and Philadelphia in 2016. The budget target for these meetings was achieved—due partly to successful ACS expositions and booth sales. In all, more than 21,000 scientific papers were delivered. The Kavli lectures once again met high standards for both content quality and participation, and the national meeting app was used by a growing majority of attendees. ACS also enabled the organization of six ACS regional meetings in 2016, which attracted more than 6,000 attendees combined—exceeding comparable 2015 regional meeting attendance—and more than 4,000 scientific papers.
- Empowering Local Sections and Younger Chemists**  
 Membership & Scientific Advancement continued to extend its multimedia broadcast program with two “Program in a Box” events in 2016, helping local sections and student chapters nationwide host hybrid onsite/online events featuring high-value broadcasted content online, interactive social media, and a ready-to-use materials kit to engage members and facilitate their learning and networking. Over 330 student chapters, local sections and ChemClubs participated in 2016—a 20% increase over 2015. The live events attracted more than 4,600 participants combined. More than 900 posts and pictures were shared on social media during the events.

- Green Chemistry & Engineering Conference**  
 The 20<sup>th</sup> annual Green Chemistry and Engineering (GC&E) Conference in Portland was a notable success, attracting 534 participants—exceeding the 2016 target. 94% of attendees rated the content good or excellent. Membership & Scientific Advancement also initiated notable new membership marketing related efforts at the conference. A new loyalty program was also created to recognize attendees who have attended at least five GC&E conferences in the past.
- ACS Petroleum Research Fund**  
 In 2016, the ACS Petroleum Research Fund awarded 203 grants, for a total of \$20.265M, in support of “advanced scientific education and fundamental research in the petroleum field.” PRF has awarded \$651.56M in research grants since 1954. Sir J. Fraser Stoddart of Northwestern University became the 29<sup>th</sup> Nobel Laureate with previous PRF support.
- Hazard Assessment in Research Laboratories Website Launched**  
 The Education Division and Web Strategy and Operations, in collaboration with the ACS Committee on Chemical Safety, launched a new website with a rich collection of methods and tools for assessing hazards in research laboratories at [www.acs.org/hazardassessment](http://www.acs.org/hazardassessment). The site is based on *Identifying and Evaluating Hazards in Research Laboratories*, a resource created in response to a recommendation by the U.S. Chemical Safety Board for ACS to develop guidance on assessing and controlling hazards in research laboratories.
- ACS Industry Engagement**  
 In September, Membership & Scientific Advancement and our Office of Public Affairs played a lead role in the successful Chief Technology Officer (CTO) Summit, SOCMA Tech Leaders meeting, and a joint ACS-SOCMA Scholars Golf Outing. The CTO Summit brought together 20 CTOs for a productive 1.5 day engagement. A half-day program was also held for several SOCMA Tech Leaders. Both events featured active engagement of federal policymakers and external content experts that further advanced ACS’s reputation as a neutral convener. The first ever ACS-SOCMA golf outing was a success and raised \$20K for ACS Scholars. Throughout 2016, ACS engaged with ACC at its annual meeting in June, collaborated on the Congressional Chemistry Caucus, a mini green/sustainable chemistry summit and a joint effort to halt use of chemical weapons.

**GOAL 2—Advance Members Careers – Empower an inclusive community of members with networks, opportunities, resources, and skills to thrive in the global economy.**

- A Robust ACS Membership**  
 ACS achieved 3 of 4 key membership performance indicators in 2016. The Society ended 2016 with 156,129 members, which is 0.5% less than year-end 2015 (156,876). Nearly 24,000 new members joined, slightly more than in 2015, including 3,685 from the Member-Get-A-Member program. ACS exceeded its target for international member growth, ending 2016 with 27,388 members—5% more than year-end 2015. The 2016 membership retention rate was 83.5%, down slightly (0.6%) from 2015 but well within the targeted performance range. Membership & Scientific Advancement also met its goal to increase the retention rate

for graduate students over the 2015 rate of 74.2%. The retention rate for graduate students was 76.2% at year-end 2016, 2% more than 2015.

- **Boosting Industrial Member Value**

Membership & Scientific Advancement increased its focus on retaining and attracting industry members in 2016, including new content, global events and outreach efforts to industrial scientists and their employers. Topical innovation conferences were organized with local chapters and partners in China (Shanghai) and India (Hyderabad)—drawing a total of more than 600 participants, high satisfaction, and new ACS members. A pilot workshop was organized on industry-university partnerships at the Southwest Regional Meeting in Galveston, TX.

ACS Green Chemistry Institute also launched a new Biochemical Technology Leadership Roundtable and increased industry attendance at the Green Chemistry and Engineering Conference.

ACS organized a Chief Technology Officer (CTO) Chemical Sciences Summit in September featuring roundtables on “US R&D Infrastructure” and “Industry Collaboration with Non-Governmental Organizations.” 20 CTOs participated in this summit.

- **Membership Bundling and Enterprise Solutions**

Membership & Scientific Advancement worked with ACS Publications and CAS to advance enterprise membership-related offerings in key international markets—including China and India. Bundling memberships with topical meetings and conferences was particularly successful, resulting in more than 400 new members. Membership & Scientific Advancement partnered with ACS Publications to bundle membership with registration for the ACS Publications symposium in China (200 new members). Membership & Scientific Advancement also bundled one-year memberships with the non-member registration rate for the inaugural ACS industry topical conference in India (40 new members), as well as the Green Chemistry and Engineering Conference in Portland (160 new members). Finally, bundling a complimentary one-year membership for students participating in a CAS pilot of its new Chemistry Class Advantage™ tool for organic chemistry students attracted 60 new members in 2016, with more expected.

- **Membership through Staff Education and Local Currency/Pricing**

In addition to enabling the collection of dues in India with Rupees, ACS established differential membership dues pricing consistent with World Bank economic rankings in countries where ACS has an international chapter presence. Membership & Scientific Advancement also advanced an enterprise approach to membership by increasing awareness of membership benefits and options among ACS and ACSI staff. Training efforts included a quick guide to membership benefits, new membership slides, redesigned brochures and branding videos for sales & marketing staff across divisions.

- **Helping Chemical Practitioners Thrive in the Workplace**

The ACS Career Navigator™ achieved more than 8,500 substantial interactions with ACS members and potential members worldwide to meet their professional needs, exceeding the

2016 goal. This represents over 27,000 hours (approximately 3 years) spent in the classroom and in consultation with ACS members and stakeholders among the following offerings: career services (6,700 participants), professional education (1,000 participants), and leadership development (800 participants).

- **Engagement through International Chemical Sciences Chapters**  
Membership & Scientific Advancement made a concerted effort to create new and strengthen existing chapters in 2016. Following the approval of new international chapters in Australia, Brazil, India, Nigeria, Peru, Taiwan and the UAE in 2015—the ACS Board approved three new chapters in 2016 in Southwestern China, JingJinJi China, and Iraq.
- **Advancing Goals through Alliances**  
ACS entered into formal alliances with several organizations in 2016 to advance mutual goals and activities. Memorandums of Understanding were signed with the Chinese Chemical Society, the Chinese American Chemical Society, EuCheMS, the Mexican Chemical Society (SQM), NOBCCChE, the Chemical Research Society of India, Société Chimique de France, and ABCChem. The agreements are designed and executed to advance a range of mutual goals through collaborative efforts—including member benefits and discounts, conferences, networking, mentoring, awards, ethics and safety, outreach activities, and public policy.
- **ACS International Center™**  
The ACS International Center™ attracted more than 36,000 unique visitors and more than 110,000 page views in 2016. The increased traffic over 2016 demonstrated the increased role the ACS International Center™ plays as the premiere online resource for chemistry-related scientists and engineers seeking opportunities to engage in globally-related training and collaboration.
- **Division Leaders Workshop Held**  
Supported Membership & Scientific Advancement’s Member Communities & Recognition by conducting a first-of-its-kind, pilot workshop to introduce participating ACS Division leaders to new concepts and business approaches for attracting and keeping Division members through improved value propositions, better ways to deliver service, and improved internal processes to better address member needs.
- **The Member Insurance Program Delivered Insurance and Financial Security Information to ACS Members**  
Mini-workshops were held at both ACS national meetings on *Insurance Matters for International Professionals—International Term Life*, and *Chemical Educators—Safety Risks and Your Personal Liability*. At the Fall National meeting, in partnership with the American Institute of Certified Public Accountants, younger members had the opportunity to attend a financial planning workshop entitled *Personal Finance: What’s the Equation?* Additionally, staff presented two posters at SciMix through the Division of Professional Relations and sponsored safety seminars featuring distinguished safety experts at two Regional Meetings. Webinars were presented on *Long Term Care 101*, *Chemical Educator’s Liability*, and *International Life Insurance*.

**GOAL 3—*Improve Education* – Foster the development of the most innovative, relevant, and effective chemistry education in the world.**

- **Chemical Safety**

A variety of Web- and Chemical Safety-related engagements have been in motion. In June, 2016, [www.acs.org/hazardassessment](http://www.acs.org/hazardassessment) was publicly launched; a digital re-imagining of "Identifying and Evaluating Hazards in Research Laboratories". The resulting site is being used by educators today as core material for their chemical safety practices.

This source material was created by the Hazard Identification and Evaluation Task Force of the ACS Committee on Chemical Safety (CCS) in response to a recommendation by the U.S. Chemical Safety Board (CSB) that ACS develop guidance on assessing and controlling hazards in research laboratories.

Presented at the Philadelphia National Meeting, hazard assessment has set a cornerstone for a broader Chemical Safety presence on ACS.org. Currently, [www.ACS.org/safety](http://www.ACS.org/safety) is the home for the CCS. This will change. "/safety" will become the home for Chemical Safety-related content, enabling findability and discoverability of this valued content.

To assist educators with integrating safety throughout the entire chemistry curriculum, ACS has issued new Guidelines for Chemical Laboratory Safety in Secondary Schools and Guidelines for Chemical Laboratory Safety in Academic Institutions. The guidelines include student learning outcomes statements which clearly state the expected knowledge, skills, attitudes, and competencies in the area of chemical safety that students are expected to acquire as they progress with their education.

Additional Chemical Safety publication-to-website conversions are underway, including Guidelines for Chemical Laboratory Safety (for both secondary schools and academic institutions).

Further, as requested by CCS members during the Philadelphia National Meeting, Web Strategy and Operations is developing guidelines to help authors support conversions of their chemical safety materials into web experiences. Writing for paper is different than preparing a website. These guidelines will help enable growth of our online Chemical Safety presence.

- **Ten Millionth Visit to Middle School Chemistry Website**

Since launching in the fall of 2010, Middle School Chemistry <http://middleschoolchemistry.com> has received a total of 10,021,365 visits from 234 countries and territories. The entire book has been downloaded 44,030 times.

- **AACT Membership Tops 4,000**

AACT ended 2016 with 4,052 members. Of this total, 88% are K–12 teachers of chemistry. In 2016, AACT received \$95,000 in grants from the Camille & Henry Dreyfus Foundation and PPG Industries to support the development of online resources. The second and third Dow & AACT teacher summits were held in Louisiana and Texas. Thirty-six teachers

participated, 200 teaching resources were created, and attendees rated their summit experience and overall impression of AACT a 4.9 on a 5-point scale.

- **Record: Over 20K Undergraduate Student Members at Year-end**  
There are 20,609 undergraduate student members, compared to 19,862 in December 2015. There are currently 513 active student chapters (1,123 in total), with 28 international student chapters chartered.
- **College to Career Website Traffic Continues Steady Increase**  
In 2016, the *College to Career* website received a total of 1.4 million page views from 545,000 unique visitors. This represented 69% and 82% of web traffic, respectively, to the ACS Careers content area. Approximately 77% were first-time visitors and 42% of users were from countries outside the United States. Compared to 2015, views increased by 27%. The site now has garnered a total of three million page views since its launch in January 2014.
- **Career Development Tool Grows and Poised to Broaden Scope and Reach**  
ChemIDP™, a career development tool introduced by ACS in late 2015, expanded in 2016. Nine ChemIDP™ workshops were held at both ACS national meetings, at regional meetings, and at Cornell University. The associated web tool was enhanced and updated to further serve graduate students and postdocs in the chemical sciences, with over 1,300 new user accounts created. New program funding approved in 2016 set ChemIDP™ to grow in scope and reach, with additional features, heightened internal and external collaborative endeavors and a broader customer base.
- **Successful Transition to ACS-Sponsored Postdoc to Primarily Undergraduate Institutions (PUI) Professor Workshop**  
The Postdoc to PUI Professor (P3) workshop was hosted by Furman University in Greenville, SC, on April 7-9. Previously hosted at Hope College biennially under an NSF grant, ACS officially added the workshop to its repertoire of career workshops for graduate students and postdoctoral scholars for 2016 and beyond. Modifications to the workshop allow it to be held annually at different universities throughout the country, with an expanded cohort of facilitators, and expanded reach to prospective participants. The 2016 workshop attracted 48 applicants, with 26 being selected and attending. P3 provided information and knowledge on how to apply for and succeed in chemistry faculty positions at PUIs. The 2½-day workshop received excellent reviews from the participants, who rated the overall experience 4.8 out of 5, and 100% of the participants stated they would recommend the workshop to a friend.
- **General Chemistry Performance Expectations Workshop Held at ACS**  
On September 16-18, ACS hosted a pilot workshop for creating General Chemistry Performance Expectations. Thirty-three faculty members from fifteen diverse institutions (including research-intensive, primarily undergraduate, and community colleges from across the United States) attended the workshop after a competitive application process. Structured workshop activities were adapted from those developed for K-12 teachers, with the aim of giving faculty versatile tools to create and implement performance expectations in their own

general chemistry courses on their campuses. Seven Organizing Committee Members facilitated the workshop, with assistance from ACS Education staff.

- **Project SEED**

Since 1968, the program has placed nearly 10,300 students from economically disadvantaged backgrounds to gain research experience in academic, industrial, and governmental laboratories. In the summer of 2016, Project SEED placed 414 high school students with 435 volunteer scientists and coordinators from more than 120 institutions in 38 states, the District of Columbia, and Puerto Rico. The Project SEED Scholarship Subcommittee awarded 31 Project SEED College Scholarships to alumni entering their freshman year. And, three Project SEED College Scholars received the Ciba Specialty Chemicals scholarships for three-renewable years beginning in their sophomore year.

- **U.S. Chemistry Olympiad**

The U.S. team successfully competed in the 48<sup>th</sup> International Chemistry Olympiad in Tbilisi, Georgia, with 260 other students from 66 nations. The team won the eighth highest ranking gold medal, two silver medals, and a bronze medal.

- **ACS Scholars**

The [ACS Scholars Program](#) continues to help underrepresented minority students achieve their dreams of degrees and careers in a broad range of chemical sciences. In all, 2,840 African-American, Hispanic/Latino, and Native American students have participated in the program since 1995. Of those, 1,692 have earned bachelor's degrees in a chemical science. More than 268 of these ACS Scholars have gone on to earn doctoral degrees in chemistry, chemical engineering, or a related discipline.

- **ACS Development Office Produces Professor Robert Langer/Dr. Keith Reed Video**

Development worked with more than one hour of videotaped, unscripted conversation between MIT University Professor Robert Langer and former ACS Scholar Keith Reed to create a compelling three minute video. The story that emerges is that of the impact of mentors on their educational and career decisions. Dr. Reed's experience as an undergraduate at MIT was made possible in large part by a scholarship from the American Chemical Society. Dr. Langer strongly endorses the ACS Scholars Program as one way to help develop new leaders in the chemical profession. The video received wide distribution.

#### **GOAL 4—*Communicate Chemistry's Value* – Communicate chemistry's vital role in addressing the world's challenges to the public and policymakers.**

- **Improving Public Awareness of Chemistry**

Out of the 185 ACS local sections, 153 (83%) participated in National Chemistry Week activities in October 2016. More than 130,000 copies of *Celebrating Chemistry* were distributed, as well as 18,000 copies in Spanish. 39 local sections also submitted photos for C&EN related to their National Chemistry Week.

- **Media Outreach**

The Office of the Secretary and General Counsel (OSGC) improved public appreciation of chemistry in 2016 by connecting chemistry with the public through print, electronic and video initiatives. In 2016 our media outreach resulted in more than 21,200 articles in print and online news media outlets with a potential audience of 18.6 billion people. In collaboration with the Publications Division, OSGC launched an embargoed journal content pilot project in 2016, which included issuing more than 25 embargoed press releases, which resulted in more than 300 news stories that reached a potential audience of 2.2 billion. ACS *Reactions* videos became ACS's largest social media brand with more than 430,000 combined followers on YouTube, Facebook and Twitter. In total, ACS videos and podcasts were downloaded more than 12.3 million times. ACS Experts engaged 170 times with the news media and general audiences including *The Today Show*, *Good Morning America*, *CBS Evening News*, *CNN* and the *Wall Street Journal*. National Historic Chemical Landmarks (NHCL) grew to 83 in 2016 and page views of the website are on track to exceed last year's record 550,000.

- **Advanced ACS Policy Priorities**

The Office of the Secretary and General Counsel was able to secure bi-partisan passage and enactment of the Frank R. Lautenberg Chemical Safety for the 21<sup>st</sup> Century Act; secured language boosting federal investment in sustainable chemistry in the American Innovation and Competitiveness Act; successfully launched a Congressional Chemistry Caucus, productively helped develop legislative recommendations to address the nation's helium shortage, and secured passage of our key green chemistry provision. ACS also hosted six Science & the Congress briefings on a number of timely topics to inform policymakers and developed a unique webinar focused on the outcome of the 2016 US election and how ACS would work with the 115<sup>th</sup> Congress and Trump Administration to advance its policy priorities.

- **DAM (Digital Asset Management)**

Washington IT launched the DAM in June 2016. With DAM, C&EN now has a state-of-the-art Digital Assets Manager, which facilitates the management and rendering of all of C&EN digital assets. It also streamlines the editorial processes and provides many useful functions like search and version control. The DAM will be integrated into the revised C&EN workflow in 2017.

## **ALL STRATEGIC PLAN GOALS—Support for ACS Governance and Operations**

- **ACS Maintains a Robust and Evolving Strategic Plan**

The *ACS Strategic Plan for 2017 and Beyond* was approved and launched on the web (at <http://strategy.acs.org>) in January 2017. It provides the basis for all of the Society's work in support of the Vision, Mission, and Core Values. The Core Values were expanded to include both safety and ethics for 2017. The four Goals are each supported by a new set of objectives representing the most important priorities for the ACS to pursue. The strategic plan is the result of broad engagement with governance and staff members, consolidated by the Planning Committee, and approved by the ACS Board of Directors.

- Ongoing Environment Scan Informs ACS Strategy and Operations**  
 In 2016, ACS continued its ongoing scan of the environment for chemists, chemistry, and the ACS. Key trends were prioritized by the Board Standing Committee on Planning, and the most significant uncertainties were explored and discussed by a wide range of ACS volunteers and staff. Engagement with ACS committees, members, and other stakeholders expanded, and focused presentations were discussed in numerous venues throughout the year. The Environment Scan not only drives the Challenges & Opportunities included in the ACS Strategic Plan, but has informed strategic and operational planning at all levels of the Society.
- ACS International Expansion**  
 The Office of the Secretary and General Counsel provided critical legal advice and support enabling the Society's ACS International, Ltd. (ACSI) subsidiary to expand its global footprint; ACSI's expansion in 2016 included opening new offices in China, Hong Kong, Japan and South Korea.
- Governance Advances**  
 The Office of the Secretary and General Counsel supported a Board Retreat; several major task force activities (N&E's VOTE 20/20 and the Governance Design Task Force and its two predecessors); presented a major overhaul of the Board Regulations, which passed unanimously; and managed successfully the abrupt transition to a new election vendor for ACS National elections. When asked to rate their level of satisfaction with the web voting process, 96% (11,161) of those casting ballots said they were very satisfied or satisfied. This office added further value by proposing and implementing an overhaul of the Board agenda, freeing up time for larger discussions; proposing a revamped Board orientation format; and organizing N&E's consideration and response to a local section election appeal.
- Support Extended to the Members of the Presidential Succession**  
 The Office of the Secretary and General Counsel coordinated arrangements and travel logistics, and prepared presentations and/or remarks for many of the following events where the Presidential Succession and the Board Chair represented ACS: two national and seven regional ACS meetings; participation and presentations at five local sections; and eleven international trips and visits to scientific societies, congresses, and meetings. Staff also supported and organized their participation in multiple meetings across the US with other chemical and scientific societies, university groups, government entities and other similar groups.
- Innovation, Collaboration, and Engagement**  
 The Office of the Secretary and General Counsel supported innovation, collaboration, and engagement through five (5) complimentary skill-building *workshops*; the 2016 *Speaker Series*, which featured three highly-regarded experts in the fields of customer development, team building, and change management, respectively, whose presentations averaged close to 600 staff participants and received a 4.6/5.0 satisfaction rating; the *Innovation Fair*, which showcased 15 posters and was attended by more than 225 staff; the *ACS STAR Awards*, which have been given 146 times; and the *Weekly Digest*, which has seen an increase in readership of more than 189% since October 2015.

- **Internal Audit**

In 2016, the Society successfully completed an internal audit of its lobbying activities. This is the second year ACS has undergone an internal audit and management is finding the audits add value to the Society's operations. The audit firm, Baker Tilly, issued its report in September 2016 and the Society implemented Baker Tilly's recommendations to strengthen internal controls and reporting over lobbying activities by November 2016.

- **Enterprise Financial Systems Program Implementation**

In 2016, Finance continued our work on the Enterprise Financial Systems Program (EFSP) implementation. As background, in 2014, PeopleSoft 9.2 and Hyperion Planning Plus were selected as the financial reporting and budgeting systems to be used across the Society. In addition to gaining operating efficiencies, the primary benefit of using common financial systems is easier and standardized access to financial information across the organization. The EFSP implementation started in mid-2015 and is comprised of three projects:

- *Chart of Accounts (COA) Re-Design* – this project was completed in December 2015 and will provide the basic chart field structure for use in the financial systems.
- *PeopleSoft 9.2 Implementation* – this project will provide a common hardware and software environment, common chart of accounts structure and common business processes to support financial accounting and reporting for ACS operations in all locations. This will go live April 2017.
- *Hyperion Planning* – this project will establish the new software and processes for how ACS will budget and forecast. This project will also coordinate with the COA Re-Design and PeopleSoft 9.2 Implementation projects to determine how and where financial reporting will be performed. It will provide a common hardware and software environment, common dimensions and common business processes to support ACS operations in all locations. Implementation was completed in 2016 and will Go Live for use in the 2017 Probable 1 budget cycle.

- **Media Services Group (MSG) Upgrade**

In June 2016, Publications Business Support upgraded MSG-Circulation (Pubs Subscription Revenue System) and MSG-Ad Manager (Pubs International and Classified Advertising System). This upgrade continues the recent trend of moving functionality from the client-based system to a cloud-based system. This included testing, training, changing business practices and creating new reports for users. As part of the upgrade, credit card processing was streamlined by moving it from Skipjack to PayPal as the gateway provider. This ensured PCI compliance plus put MSG on a common credit card platform with other Society systems. Additionally, the unit was able to align cash application practices and procedures between MSG-Circulation and MS-Ad Manager since all AR functionality for both modules now resides in the cloud-based system. This facilitates improved accuracy of cash applications as functionality and business practices are more aligned.

- **Development Office Bolsters Planned Giving Program**

With a renewed focus on gift planning, ACS brought its Charitable Gift Annuity program in-house to be administered by Northern Trust Bank with state registration and reporting managed by Copilevitz & Cantor, the firm that currently manages ACS state fundraising registrations. Enhanced stewardship of members who have included ACS in their estate

plans includes an emphasis on recognition of this group, such as the presentation of pins to the newest Legacy Leaders at the Senior Chemist Breakfasts. The future value of all documented estate intentions is approximately \$7.0M. A newly created position of Manager of Major and Planned Gifts will help extend this continuum of individual giving to support ACS educational programs that help develop the next generation of scientific talent.

- **News Alerts Service Redeveloped**

Research Services staff migrated the existing news alerts service for staff to a new platform, LexisNexis Newsdesk, offering access to both licensed and open Web content—ranging from newspapers, Web sites and broadcast news sources to blogs and other social media channels. Using LexisNexis Newsdesk, Research Services can identify, curate, and distribute meaningful information for data-driven decisions to staff. During this migration, staff worked closely with experts and stakeholders within staff to ensure that alert topics are closely aligned with the ACS Strategic Plan. Staff can now receive these curated news alerts via email for each of the four strategic goals as well as the following strategic initiatives: Globalization and the Scientific Enterprise, Diversity & Inclusion, and Chemical Health & Safety.

- **Additional Tools for Enterprise Content Management Introduced with Laserfiche Upgrade**

Office of Society Services staff worked closely with Washington IT Operations to upgrade to Laserfiche 10.1. In addition to bringing our Laserfiche installation up-to-date with system standards, this upgrade brings new tools including workflows, online forms, and enhanced document imaging, content capture, and records retentions processing. This upgrade and new tools improve our ability to manage information, automate document-driven business processes, and make timely, informed decisions.

- **ACS Intranet Enhanced**

Research Services staff designed and implemented changes and enhancements to the ACS Intranet to address user needs identified by Sue Hanley, a recognized expert in the field of SharePoint intranets. The most prominent activities include: complete audit of all intranet content with deletion of obsolete content, expansion of the publishing model to include a content manager role, developing governance policies to ensure growth and maintenance of the intranet, designing new page templates with improved visual interest, and developing pages with responsive design for an improved mobile experience.

- **Invoice Tracking System Pilot Success**

The Invoice Tracking System Pilot Program was launched in 2016 and provides automated workflow for contract invoices. The system brings visibility and transparency to the invoicing receipt and approval process. Over 1,400 invoices were processed through the system in 2016, with service level improvement achieved as the system decreased the time to process an invoice by 28 days.

- **Two Travel Program Enhancements Introduced**

The “Know before you go” program was launched for international travelers. The program is a personalized Travel Advisory which includes current events that could potentially affect

your travel plans or safety, as well as important information such as entry requirements, health and medical requirements, local laws and customs, embassies and consulates, etc. A National Car Rental contract was signed which will provide cost savings of approximately \$11,500 per year.

- **Launched Staff Safety & Security Intranet Page**

Upon realizing and identifying several instances of cross collaboration, where staff safety and security procedures often go hand-in-hand, it was decided that to better serve the Washington staff and enhance Security protocols, there needed to be one location where staff, contractors and visitors could access needed information in these areas. The “Staff Safety & Security Intranet Page” was developed and now serves as a single source of information containing a variety of well-developed topics, illustrations and Web links associated with the Society’s safety and security protocols.

- **Launched Lynx Mass Emergency Notification System**

In order to enhance ACS Washington staff safety and security, the Security office in collaboration with Washington Information Technology implemented and launched the Lynx Notification system in March 2016. The Lynx system allows a way to discreetly communicate information and instructions through three mediums simultaneously – a desktop pop-up screen, direct email, and an SMS Text Messaging to all ACS-owned mobile devices. This notification system will be used in the event of an active shooter occurrence at or near ACS Washington Headquarters.

- **2016 Favorable Security Analysis**

The ACS Security Office retained the services of the Department of Homeland Security to perform a general security assessment of ACS Washington buildings. The resulting report indicates that ACS’s security protocols rated favorably in the Protective Measures Index (PMI) and Resilience Measurement Index (RMI). The favorable index scores were derived from a comparative study of over 250 similar structures from across the country; that like ACS, are classified as Stand-Alone Office Buildings. The report also provides recommendations for areas that are or could become vulnerabilities in the future. The ACS Security Office is reviewing the potential vulnerabilities and recommendations to determine the most appropriate action(s).

- **Improved Security**

A new position, Chief Information Security Officer was established. This enabled ACS to combine its technology security management across the enterprise. This change will result in improved security and improved incident response. The position was filled in November and integration of the formerly separate security units is under way.

- **Integrated IT Workplace Technology**

In order to more effectively serve a global work force, formerly separate IT Workplace Technology functions were combined. Over time this will result in improved service levels for help desk tickets, cost efficiencies through standards and the elimination of unnecessary duplication. This change will result in more consistent service levels regardless of a user’s location.

- **Search Enhancements**

Two significant experience and functionality changes were made to ACS.org search. The first focused on the initiation of the search experience: suggest-as-you-type (SAYT). The second focused on the search results page (SRP).

SAYT enhancements created a dynamic experience that responds to their typing. Curated results are provided as they type their search terms. Simultaneously, SAYT provided active, dynamic links to search other ACS properties (Publications, CAS, and C&EN).

SRP enhancements included design simplification and the addition of Curated Results. Tapping into institutional knowledge and analysis of user patterns and trends, we now provide users with added-value search. Recommended links and supporting content for high-value terms are highlighted at the front of the search experience, enabling a richer, more personal search experience.

- **Volunteer Portal**

The Task Force on Web-Based Resources for Volunteers was created to help consolidate and focus content-related to ACS volunteer opportunities, resulting in increased outreach participation and awareness of volunteer opportunities. Combined input from task-force members, review of existing usage data, and user research with current and potential volunteers at national meetings and the 2016 Leadership Institute, determined that most participants look for specific and local ways to volunteer in response to a need that is meaningful to them. Having a volunteer website on [www.acs.org](http://www.acs.org) is an important element to increasing awareness of opportunities, and it must be supplemented by other marketing tools to engage and inform potential participants. Coordination with local groups, opportunities, and contacts is expected. A project to develop a volunteer-matching platform for a variety of ACS programs is underway. A new volunteer portal website that is engaging, welcoming, focused on specific options (e.g., “do hands-on demonstrations,” and “get involved in local leadership of your ACS section”), and offers specific suggestions was developed. Testing is underway with the Member Insight Panel prior to the presentation at the 2017 Leadership Institute and will be launched on [www.acs.org](http://www.acs.org) soon after.

- **Enhanced Disaster Recovery Capabilities**

Washington IT implemented enhanced disaster recovery capabilities for several existing applications to improve the organization’s business continuity preparedness. The largest effort is for the Document Tracking System (DOTS), which will launch in early 2017.

- **International Center with Meeting Locator**

The International Center with Meeting Locator project provided an opportunity for ACS to combine two separate applications that have similar uses, workflows and data into one. We created an automatic workflow process and streamlined the Content Management System (CMS) approval process to allow for better visibility into International Activities, as well as the ACS meetings being held globally. This application and CMS allows authorized users the ability to publish changes to the website with a single approval process. Meeting Locator now has map view of all upcoming meetings and robust targeted search capabilities.

- **GCS OMR/CSR Project**

The Global Constituent System (GCS) Online Member Renewal (OMR)/Customer Service Representative (CSR) project allows ACS to move forward in a global environment. The Global Constituent System was created in 2015 to allow India residents who wanted to join the ACS the ability to pay in their local currency, Rupees. In 2016 we included needed functionality to the application that would allow those members that joined in 2015 to renew using Rupees, while still giving them the option to pay in US Dollars, apply for an ACS Gift Card, to choose to auto-renew for future years, and to pay membership dues for multiple years. Other enhancements included automation of the data feed on the Rupees payment process to netForum; and to add a Customer Service Administrative feature to the application that allows customer service representatives to assist members and make changes as required to the user record that adheres to the ACS policies, including the financial requirements.