

Acoustical Society of America



Report of Strategic Leadership for the Future Initiative

Approved by the Executive Council

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Important References:

1. Report of Data Collection in Preparation of Planning, Issued 1.6.2015
2. ASA Summit Report, Issued 2.24.2015

BACKGROUND

In the spring of 2014, ASA leadership initiated a “Strategic Leadership for the Future” process to address:

How will ASA need to change the way it does business, if at all, within a rapidly changing environment and uncertain publishing future, in order to maintain its position as the premier scientific society in acoustics?

By Fall 2015, the objective was to have answered these questions:

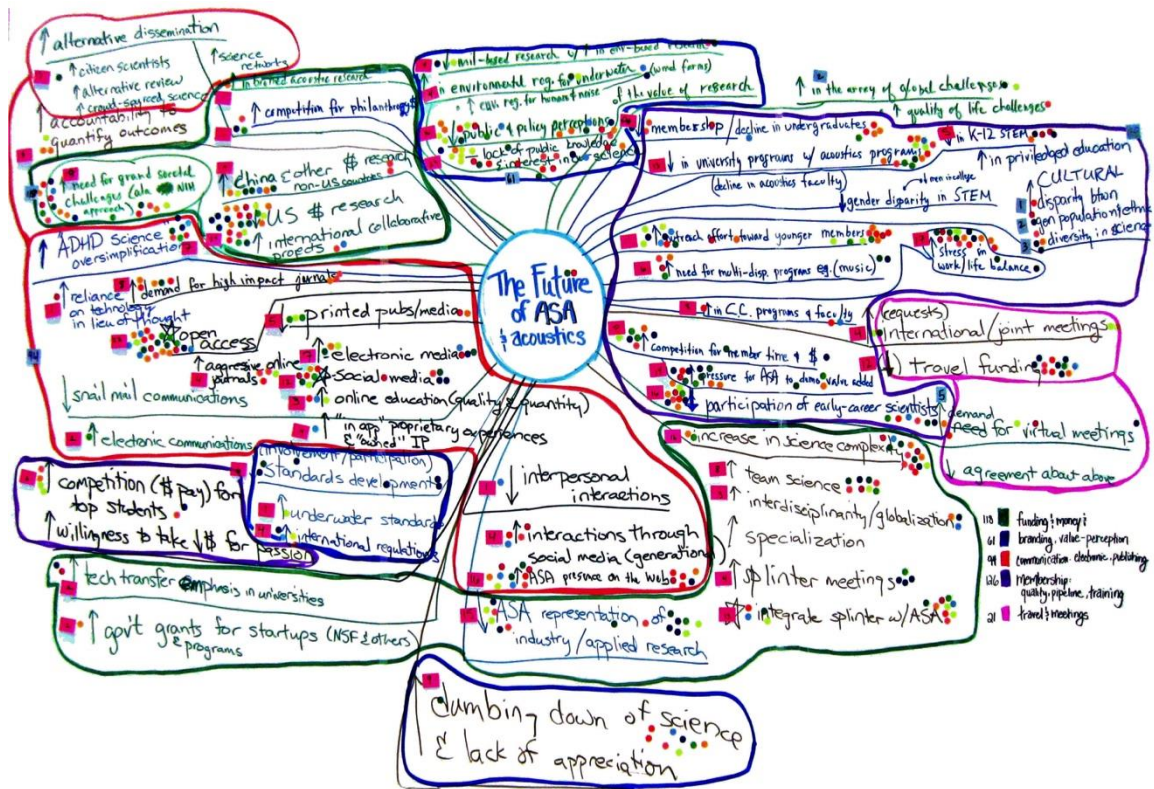
- How can ASA best prepare to meet future challenges in publishing and beyond, especially by building on and amplifying its past success?
- How can ASA best expand and maximize its value to its members and to the field of acoustics in the future?
- How can ASA best translate its wealth of good ideas, activities, and programs into the highest impact priorities for practical action, i.e., to “make them so?”
- How can ASA capitalize on its transition to a new senior staff team that includes the key additions of our new Executive Director, Editor-in-Chief, Editor of *Acoustics Today* and our new Web Developer?
- What organizational structures and processes will be needed to execute well in these areas in the future?¹

From May through early December, Cygnet Strategy, LLC, collected data to inform the initiative. A series of one-on-one telephone interviews, supplemented by guided group discussions with the Executive Council (EC) and Technical Council (TC) at both the Providence and Indianapolis meetings, and validated by a statistically projectable member survey, formed the basis of the Report of Findings circulated to the all participants prior to the ASA Strategic Leadership Summit held in Austin, TX January 12-14, 2015. During the Summit participants:

- Created a shared understanding across multiple stakeholder groups of the environment in which ASA will be operating;
- Identified priority trends to form the basis for developing strategic direction and goals;
- Identified ways to focus ASA’s energy towards those opportunities that will deliver the greatest value to members and the science in the future;
- Described a shared vision for ASA’s future;
- Created a strategic framework for practical action over the next 3-5 years to achieve ASA’s vision for the future; and
- Began to establish a planning culture that is both transparent and inclusive.

¹ Top leaders prefer to defer this objective, believing there is no need to evaluate or change the organizational structures used to get things done.

- Created a visual 'mind map' of the emerging trends and issues that might have an impact on ASA and those it serves from 2015-2020:



- Priority Trends Identified by Summit Participants (number of votes received)
 - Membership: quality, pipeline, and training (126)
 - Funding and Money (118)
 - Communication: Electronic and publishing (99)
 - Branding: Value and perception (61)
 - Travel and Meetings (21)

A Summit Report included key elements developed by participants plus an Appendix detailing all group work during the Summit. Following the distribution of the Summit Report, 93 individuals, including Summit participants and those asked to attend the Summit or be interviewed during the data gathering phase, were asked to comment on the key report elements via survey. Eighty-three (83) people responded.

The results were used to inform the report writing session held March 30-31, 2015 at which the final draft of ASA's Strategic Direction was developed.

PLANNING PROCESS

Below is a list of the previously executed steps in the planning process:

- | | | |
|-----|---|---------------------|
| 1. | Launch Strategic Leadership for the Future Initiative | April 2014 |
| 2. | Briefing with and input from Executive and Technical Councils | May 2014 |
| 3. | 31 one-on-one telephone interviews conducted | Fall 2014 |
| 4. | Briefing with and input from Executive and Technical Councils | October 2014 |
| 5. | Member-wide web based survey to vet data collection findings produces 790 responses and yields a \pm 95% projectable response | December 2014 |
| 6. | Final Report of Data Collection | January 2015 |
| 7. | Strategic Leadership for the Future Summit | January 12-14, 2015 |
| 8. | 83 individuals give feedback into key element of Summit Report | February 2015 |
| 9. | Executive Council plus a few additional Summit participants meet to write the final report of the initiative | March 30-31, 2015 |
| 10. | Final Report of Strategic Leadership for the Future Initiative drafted by Cygnet for discussion at spring ASA Meeting | May 2015 |
| 11. | Editing of report incorporating EC discussion points | June 2015 |
| 12. | Discussion and Executive Council approval of Final Report at fall ASA meeting | November 2015 |

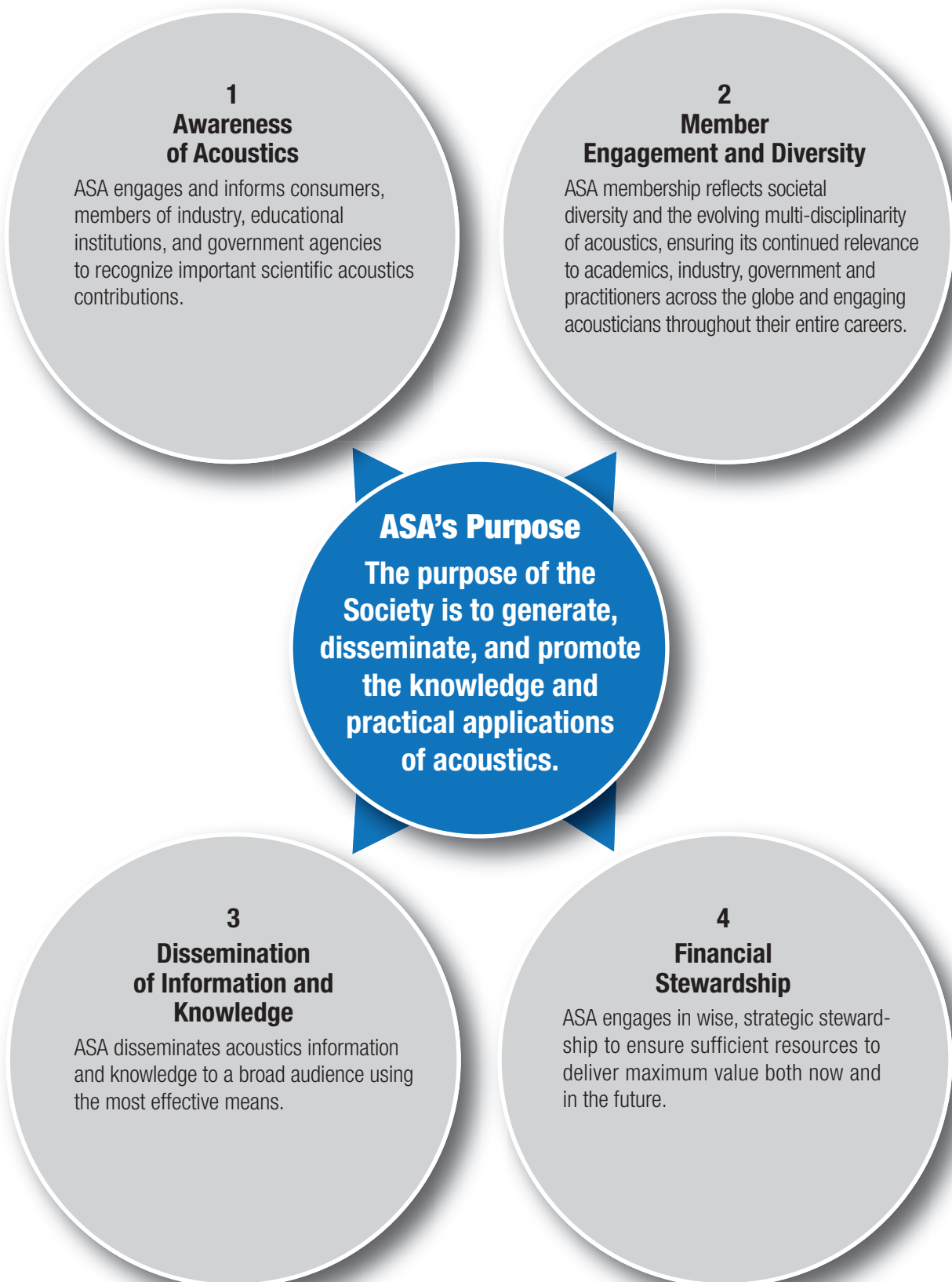
PLANNING PARTICIPANTS

* Indicates participation in both Summit and Post Summit Meeting

** Indicates attendance at Post Summit Meeting only

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PURPOSE AND GOALS AT A GLANCE



2015-2020

OUTCOME-FOCUSED GOALS & OBJECTIVES

Goals are outcome-oriented statements that represent what will constitute ASA’s future success. The achievement of each goal will move the Society towards the realization of its Envisioned Future described on page 13.

Objectives describe what needs to happen to achieve the goals. What would constitute success in observable terms? Objectives have a three-to-five year timeframe reviewed each year by the Executive Council. **Bold type** indicates priority objectives to be focused on in 12-18 months.

Strategies describe how resources and actions will be focused to maximize effectiveness and efficiency in achieving objectives. They focus on program organizational structure and processes, and operational initiatives. Strategies set strategic priorities for staff, committees and others by linking the long term direction to annual operation plans.

Metrics describe how ASA will know it is making progress on accomplishing the objectives and moving toward completion of the goal. They can be quantitative or qualitative. Metrics should do more than measure “activity.” They must measure “movement.”

Below is a set of strategies and possible (metrics) ways to measure progress – developed for each of the priority objectives.

ASA GOALS AND OBJECTIVES

GOAL 1. Awareness of Acoustics

ASA engages and informs members of industry, educational institutions, government agencies, and consumers to recognize important scientific acoustics contributions.

Objectives

- 1.1 **Expand the promotion of ASA activities and resources through emerging media and online content**
- 1.2 Increase awareness and dissemination of ASA Standards
- 1.3 Improve the image of the ASA through a strategic branding initiative
- 1.4 Advance cyber presence via ASA portal, web, and social media development

Potential Strategies for Objective 1.1: Expand the promotion of ASA activities...

- 1. Hire staff or contract out to manage and oversee online presence
- 2. Track and promote social media and internet presence
- 3. On line portal – My ASA – individualized for each member

- a. Develop job description for web master that includes portal development with timeline
- 4. Utilize methods of outreach, webinars and Continuing Education Units
 - a. Pilot Go To Webinar at Jacksonville 2015 ASA meeting
- 5. Leverage awareness of acoustics to recruit authors
- 6. Develop new fundraising mechanisms, such as DONATE NOW button, or Facebook Button to raise \$\$
- 7. Broadcast ASA deadlines using a digital calendar subscription

Metrics for GOAL 1. Awareness of Acoustics

- Dashboard measuring:
 - # of Twitter feeds, Facebook posts, Google hits, # of media hits/stories
 - Monitor dates and accuracy of last updates to Wikipedia page
 - # of technical sessions, tutorials, short courses, etc. offered via web technologies
 - # of downloads of standards
 - Participation in various activities by both members and non-members, as well as satisfaction, complaints, and effectiveness of content
 - # of new K-12 education resources

GOAL 2. Member Engagement and Diversity

ASA membership reflects societal diversity and the evolving multi-disciplinarity of acoustics, ensuring its continued relevance to academics, industry, government, and practitioners across the globe and engaging acousticians throughout their entire careers.

Objectives

- 2.1 **Increase remote connectivity to meetings** (committee meetings, courses, lectures, content)
- 2.2 **Expand promotion and participation of early career members²**
- 2.3 Maintain or expand international leadership in acoustics research and standards
- 2.4 Improve marketing to and recruitment of acoustics technical areas and a more diverse membership

Potential Strategies for Objective 2.1: Increase remote connectivity to meetings

- 1. Set up virtual tools such as WebEx or Blue Jeans Network
- 2. Use for Technical Committee and other committee meetings, as well as town halls and business of ASA
- 3. Create opportunities for people to connect and observe meetings

² For now, we are defining “Early Career” as prior to tenure, principal, or senior status

Potential Strategies for Objective 2.2: Expand promotion and participation of early career members

1. Define what is meant by “early career” and what is being accomplished
2. Establish increased transparency in paths to participation and paths to leadership, including self nomination and leadership development opportunities
3. Ensure early career representation across committees (TC, Standards, Administrative, Publishing)
4. Target messages of post grad member benefits to students of Principal Investigators and institute a lapsed member survey
5. Offer pilot grant to early career scientists not limited to academics (\$25-30K annually)
6. Other financial opportunities: travel grants, meeting registration discounts, and member dues discounts (date will be needed to make decisions on these topics)

Metrics for GOAL 2. Member Engagement and Diversity

- Dashboard measuring:
 - Member involvement: meeting attendance and committee membership by age
 - Progress toward lowering the average age of membership and of leadership
 - Set goals for each age group for participation and training to fill gaps
 - % retention of students
 - # of names in early career volunteer pool
 - How long it takes to get My ASA online (1 year)
 - Revenues from online content sales

GOAL 3. Dissemination of Information and Knowledge

ASA disseminates acoustics information and knowledge to a broad audience using the most effective means.

Objective

3.1 Streamline and upgrade author, reader, editor and reviewer experience in all publications processes

Potential Strategies for Objective 3.1: Streamline and upgrade

1. Quality control processes: simplify, clarify, check list development
 - a. Implement continuous improvement process for all journals
 - b. Reviewer/AE track and chase system
 - c. Upgrade communication letters
 - d. Improve copy editing
 - e. Maintain and create templates and style sheets
2. Associate Editors

- a. 3-month trial period
 - b. Incentives up to \$600/year
 - c. Collect and utilize performance statistics
 - d. Analyze and adjust overall # of AE's
 - e. More open call for AE's
3. Reviewers
 - a. Incentives different from AE's
 - b. Alternate review assignments
 - c. More open call for reviewers
 - d. Increase opportunities for early career members
4. Web presence – editors corner for JASA and JASA Express Letters
5. Review scope of publication for sufficiency

Metrics for GOAL 3. Dissemination of Information and Knowledge

- Dashboard measuring:
 - Author satisfaction, time to decision, time to publication
 - Impact factor, # of citations, # of downloads, multimedia available
 - Associate editor performance (and reviewers)
 - Perceptions: Are we perceived as modern?

GOAL 4. Financial Stewardship

ASA engages in wise, strategic stewardship to ensure sufficient resources to deliver maximum value both now and in the future.

Objectives

- 4.1 **Develop and implement a new business model, including the ASA Foundation Fund**
- 4.2 Change the administrative structure to implement the business plan

Potential Strategies for Objective 4.1: Develop and implement a new business model

1. Accountability: Executive Council subcommittee appointed by the President
2. Explore options for diversification of revenue streams
3. Institute strategic budgeting and financial modeling
 - a. Hire staff to provide financial modeling support
 - b. Provide sufficient financial data to decision makers
 - c. Ensure clear financial guidance in place for committees
 - d. Provide financial orientation and handbook to build understanding on EC
4. Articulate financial principles
 - a. Philosophy of underwriting
 - b. Surplus sufficiency and how much we can/want to utilize for future – explore alternatives and create a policy/philosophy

5. Codify the guidelines for future Executive Councils to make decisions on meetings/instruct meeting committees
 - a. Compile data analysis of meeting costs (or costs of other programs)
6. Explore “Pilot Grant for Early Career Scientists” (all, not just academic/research) as a robust opportunity to spend surplus

Metrics for GOAL 4. Financial Stewardship

- Dashboard measuring:
 - Meeting revenue: neutral within an established budget
 - Revenues and expenditures report card to enable fiscal decision making
 - Increases in diversification of revenue streams, gifts to ASA Foundation Fund
 - Track excess reserve reinvestment and track Foundation Fund growth

Executive Council Discussion of Business Model Objectives:

Here is an overview of the Executive Council discussion on March 31, 2015:

What do people mean when they say “business model?”

- JASA brings in substantial revenue, which balances the underwritten portions of meetings, standards, outreach, and other areas
- It is uncertain if this income level will continue in the future due to changes in publishing
- This business model is common among scientific societies and others are facing this problem; what can we learn from them?

What business model is needed to be successful?

- We need a solid financial position
- We are concerned about making credible projections for the future
- There are many alternative approaches to reallocating and reprioritizing resources
- Should we:
 - Set a limit for administrative spending, then adjust based on performance?
 - Take the budget apart and put back together?
 - Come to an agreement on how much in reserve is enough?
 - Manage closer to breakeven?
 - Seek opportunities to create new income?

Emerging thinking to consider as we explore this challenge

- ASA membership is deeply varied with varied resources (expensive vs. economy)
- Consider a continuum of services to respond to broad expectations of value
- Leadership behaviors such as 1) undercapitalizing or failure to invest in new ventures or 2) micromanaging committees or staff can undermine effectiveness
- There is no overall strategic thinking or continuity in the management of meetings. Budget planning is an open loop that needs to be closed. And we want to explore virtual meeting options that create revenue streams
- Financial U could help us understand strategic long-term impact
- Two meetings a year? Cuts in government funding threaten meeting attendance

ASA'S ENVISIONED FUTURE: 2015-2025

Envisioned future conveys a concrete, but as yet unrealized, vision for the organization. It is a vibrant and engaging description of what it will be like to achieve the vision.

Strategic Planning participants articulated the following vision of success:

1. Awareness of Acoustics

- Scientists, practitioners, and the general public understand the importance and contributions of acoustics and ASA
- ASA is the face of acoustics with a modern brand – clear identity, mission, and values
- ASA is considered the gold standard for acoustical science
- There is increased awareness and dissemination of ASA Standards
- The number of Standards downloads is increasing rapidly
- ASA is competent and compelling in its external roles
- ASA is a globally oriented scientific society
- By increasing ASA's visibility it has grown internationally
- ASA has fostered relationships with other societies worldwide, lessening the competitive tensions among acoustics organizations

2. Member Engagement and Diversity

- ASA has expanded to a larger, more welcoming and inclusive membership model
- ASA retains its "family" feeling where each member is valued and respected
- Two way communication means members are having a "voice" in the organization
- By bridging a variety of disciplines with ASA's Technical Committees, ASA has broadened its reach and is more global
- Members embrace ASA Standards
- Bright young faces fill the meeting rooms and there are fresh and current ideas being exchanged
- ASA's membership has grown thanks to the simplification of our application process and the optimization of added value to our members
- ASA is much more diverse in many senses (gender, ethnicity, age, global geography)
- Members consider ASA to be their intellectual home thanks to the feeling of community that is fostered amongst its membership
- ASA is proactively attracting and developing future leaders

- There are greater numbers of young and early career members represented in society leadership
- A 24/7 “always on” portal services members and subscribers worldwide
- ASA has the modern infrastructure it needs to stay relevant in a changing world
- Products and services retain ASA’s unique personal culture and connections
- Cumbersome policies and procedures have been streamlined for a modern world and younger membership

3. Dissemination of Information and Knowledge

- ASA disseminates science, information AND practical applications of acoustics, i.e., dissemination from bench to practical application
- JASA has achieved bold goals to keep the journal (and new emerging journals) high-quality, attractive, relevant, and cutting-edge
- These goals include higher impact, rapid publication with incentives, assimilation of open access, and the addition of multimedia
- Dissemination has broadened to include packaging content, such as meeting content, in multiple ways, i.e., live virtual meetings that are archived and accessed later
- ASA Standards are disseminated globally
- ASA programs and services have an up-to-date, modern look and feel
- Programs and services are agile, dynamic, and transparent
- Meeting structures and programs are reformatted and up-to-date
- ASA has moved into the digital age, using effective technology to deliver the greatest value to members
- ASA Standards are regularly developed to reflect the highest level of up-to-date thinking
- Virtual meetings, live streaming, and digital archives are examples of technology used well to serve members

4. Financial Stewardship

- A new financial model has been implemented that provides ASA with the resources needed to modernize and deliver maximum value to members
- A plan for spending priorities is followed
- ASA is financially stable
- ASA has attracted sponsors, donors, and exhibitors to build financial resources
- Old patterns of risk aversion and inflexibility have been transformed to risk tolerance and adaptability
- ASA has sufficient dedicated staff to meet its bold goals

ACOUSTICAL SOCIETY OF AMERICA



Report of Data Collection In Preparation for Strategic Planning

Prepared By
Cygnet Strategy, LLC
January 2015

Confidential

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Background on Data Collection

In preparation for the ASA Strategic Leadership for the Future Forum a series of data collection steps have been taken:

- Cygnet Strategy, LLC (Cygnet) founders Cate Bower and Marybeth Fidler and Joint Venture Associate Julie Stuart conducted thirty-one (31) qualitative telephone interviews during the last quarter of 2014.
- Leadership briefings and input discussions were facilitated by Marybeth Fidler with the Executive Council and the Technical Council at both the Providence and Indianapolis meetings in 2014. Commentary from these meetings has been incorporated into the overall findings.
- A member wide web based survey was conducted in December, producing 790 responses and yielding a $\pm 95\%$ projectable response.

WHO WE TALKED WITH

A number of specific stakeholder viewpoints were sought in the 31 interviews conducted.

Stakeholder Viewpoint	#
Students/Early Career	5
Non-US (*2 also counted in other categories)	4
Leader/TC Member	4
Past President	3
Other Past Leaders (EC, TC, Standards)	3
Publishing	4
Donors/Sponsors	3
ASA Staff	3
Related Organizations	4

Other Demographics Include:

Age	At least:
30-39	6
40-49	3
50-59	5
60-75	5
76+	3

Gender	#
Female	9
Male	22

Scheduling interviews in this process was reasonably easy as people were very willing to schedule an interview and appreciated the invitation.

HOW WE GATHERED AND REPORT THE INFORMATION

A core set of questions was asked of all interviewees. Interviewees were provided with the questions prior to the telephone calls.

The interviews ran between 60-75 minutes and questions were divided between strategic direction and governance. In the strategy portion, participants commented on:

- Perceptions and expectations of ASA
- Current and emerging challenges facing acoustics and acousticians, as well as challenges facing ASA as a scientific society
- Possible roles ASA might fill in helping to address these challenges

In the governance portion participants commented on:

- ASA's overall system of governance – what works and what could be improved
- The relationships and effectiveness of the various parts of ASA governance, i.e. Executive Council, Technical Council, technical committees, and how they interact or complement each other
- Qualities desired in future governance
- Leadership development and selection

The interviews resulted in a rich data set, which was used to identify the patterns and observations reported here. In general, the data was synthesized to present an inclusive and convergent description of the views of interviewees, rather than a divergent one. Indication of shared opinion is noted in cases where many people express similar ideas or approaches.

Direct quotes from interviewees, indicated by *italics*, are used to provide examples of thinking. The quotes are reported by stakeholder group. Because we found views to differ generationally, we have also indicated the age demographic for most quotes. Inclusion of a quote in this report does not necessarily imply consensus on the point of view expressed.

Executive Summary

This section is intended to provide a brief overview of the highlights of the phone interviews and the member survey. Full details of each follow including a rich set of direct quotes. It will not provide sufficient understanding in and of itself. Further details and interview quotes are provided in the full report to demonstrate the basis for the statements below. *Italics* indicate direct quotes from interviewees.

Highlights From Thirty-one Telephone Interviews

PERCEPTIONS

- Perceptions of ASA are generally quite favorable.
- Some see ASA as “the premier” acoustics organization globally and others express concern that a comparative way of expressing market position may be off-putting to non-US acoustics organizations.
- There are a wide range of perceptions about the focus of the organization, i.e. research, scholarly, technical, practical application, and so on.
- ASA’s primary value is the broad scope of its *scientifically diverse community and the platform created for interpersonal relationships to develop*.
- ASA is described as:
 - *A gigantic resource* for seeking collaborators and for problem solving, as well as for staying current and acquiring information.
 - A well-run, personable and collegial organization; some even say small and intimate.
 - Dominated by an aging membership and leadership with 50% of ASA’s members being 50 or older.
- Many worry about the organization’s ability to appeal to and retain those younger scientists who will be essential to its future.
- There are some noteworthy dualities or contradictions:
 - Welcoming to students but difficulty engaging early career professionals.
 - High value placed on JASA by members but low impact factor in the marketplace and worry about declining appeal for the best science as a result.
 - High rating for becoming more international but some alienation expressed about globalization.

EXPECTATIONS

We reminded participants of ASA’s stated purpose:

ASA is dedicated to increasing and diffusing the knowledge of acoustics and its practical application.

We asked, “What are your expectations of an organization dedicated to this purpose?”

- People expect all who are involved in acoustics to be involved in ASA.
- Several distinct program areas are expected:
 - Education
 - Information

- Global relevance
 - Opportunities for scientific presentation and dialogue
 - Life long career support
- ASA currently lives up to these expectations in many ways.
- Ways ASA could meet expectations more effectively are:
 - Involving more young people
 - Keeping up with the times
 - Improving the balance between theoretical and practical
 - Taking advocacy to the next level

CRITICAL CHALLENGES FOR THE FUTURE OF ACOUSTICS

The top three identified by those interviewed and surveyed alike:

1. Lack of sustainable funding for research in acoustics
2. Lack of understanding among policymakers of the value of acoustics
3. New ideas/discoveries are happening at the intersection of disciplines, not directly in acoustics

CRITICAL CHALLENGES FACING ASA AS A SOCIETY

The top challenges identified in both interviews and the member survey were:

- Changing business model for publications, i.e. *uncertainty in publications and open access and how we stay on top*
- Aging demographic of those active in acoustics
- Critical nature of inclusion of younger members for future success
- Competition for members' time and resources from other societies, meetings, and employment
- Increasing difficulty attending two meetings a year, from both time and financial perspectives
- Declining funding for travel to meetings in general

POSSIBLE ASA ROLES TO MEET FUTURE CHALLENGES

In addition to comments on ASA's ongoing roles in the areas of publishing, meetings and standards, people envision:

- Focus on young people
- Expand advocacy and influence
- Promote other national societies
- Collaborate – shed “loner reputation” and seek partnerships
- Focus on globalization

LEADERSHIP AND GOVERNANCE

- There is a general satisfaction with governance overall.
- There is a high level of satisfaction with the headquarters staff.
- There are many ideas for evolving and strengthening governance including:

- Expanding terms (one year seen as insufficient to make real change)
 - A clearer vision of what ASA is trying to accomplish
 - A system that is more nimble and more easily able to embrace new ideas
- The most frequent complaint is a lack of understanding and transparency about what decisions are made, when and how they were reached.
- The bottom up approach to decision-making seems to be well respected.
- People recommend increased transparency with members. For example, gathering member input before a decision is made and then explaining to people what decision has been made and why.
- For many the design and work of the Executive Council (EC) is clear, but for others the work occurring in the EC isn't at a sufficiently strategic level (too routine) and the perception is that EC is making decisions that could more appropriately be delegated either to the TC or the staff.
- There is some question as to whether or not the current delineation of technical committees reflects acoustics and the needs of acousticians and if it is sufficient for emerging areas.
- A number of people want greater use of virtual meetings and a reduction from two to one annual meeting.
- People already in leadership describe it as easily accessible and people not in leadership more often describe it as less accessible and/or dependent on connections.
- Non-US leaders and potential leaders want leadership positions to become more accessible to those outside the US, i.e. to find different ways to connect global leaders than the current system of meetings.

Highlights from Member Survey

A full membership survey of 6,807 members was conducted in December, yielding a $\pm 95\%$ projectable response with 790 responses.

ASA members were asked to rate their level of agreement with statements related to the challenges for the future of the field of acoustics and of ASA, potential roles for the Society in meeting those challenges, and a variety of statements relating to members' overall perceptions of ASA. Additionally, they were asked to rate the importance vs. ASA's performance of several activities related to ASA's governance, communications and decision-making.

The results generally support the highlights and themes that emerged during the interviews. However, it should be noted that there were no findings where more than 49% of the respondents agreed on key challenges for the field, key challenges for the Society or roles for ASA. These disparate responses may, in part, be a function of the diversity of the ASA membership and what is clearly a wide range of expectations for the organization. Following are the survey highlights.

- The membership survey confirms the following as top perceptions of ASA:
 - ASA is the premier acoustical society in the world
 - ASA will benefit from more international members
 - ASA is a student-friendly organization and does a good job of involving students
- The membership survey confirms the following as top challenges for the future of acoustics:
 1. Lack of sustainable funding for research in acoustics

2. Lack of understanding among policymakers of the value of acoustics
 3. New ideas/discoveries are happening at the intersection of disciplines, not directly in acoustics
- The membership survey confirms the following as top challenges for ASA in the future:
 - Competition for members' time and resources from other societies, meetings, and employment
 - Increasing difficulty attending two meetings a year
 - Aging demographic of those active in acoustics
 - Declining funding for travel to meetings
 - Nearly a third (31%) of the under 30 age group identified "Small number of early career acousticians involved in ASA" as a significant challenge for ASA, while less than 21% of all other age groups viewed it as a challenge.
 - The top three future roles for ASA identified in the survey were:
 1. Be an advocate for the field, the scientists, and communities involved in acoustics
 2. Advocate for more funds for acoustics research
 3. Educate the public about acoustics
 - Regarding Member Engagement and Leadership, the three attributes rated highest in importance are:
 1. ASA attracts the best, most qualified people to leadership positions
 2. ASA is transparent in its selection of leaders
 3. ASA leadership reflects the broad diversity of membership
 - The areas with the widest gap between level of importance and ASA performance are:
 - ASA has a clear pathway for members to get involved in leadership
 - It is easy for those outside the US to engage with ASA leaders and to serve in ASA leadership positions
 - ASA effectively involves early career acousticians in leadership
 - Regarding Communication and Decision-making, the statement "JASA has a transparent and timely decision process of paper submission, review and publication" was rated most important. When looking at performance ratings, there was a surprising difference between the views of those under and over 50 years of age. Those under 50 rate performance significantly lower than those over 50, with those over 75 rating performance the highest.
 - Two additional levers for change or improvement are in the areas of:
 - Making leadership structure and processes more nimble, modern, strategic and risk tolerant
 - Increasing leadership effectiveness in communicating with members about the rationale for decisions made

CONSULTANTS NOTE: It is unusual that no single topic or challenge rises to more than the level of a simple majority. We attribute this in part to the diversity and multi-disciplinarity of the ASA membership. This lack of majority focus suggests that it will be important as leaders make choices to be informed by this data and by other data leaders possess. It will be equally critical that leaders share with members the rationale for why they made their choices.

Report of Interview Findings

Here are headlines of what we learned, along with highlights of interview responses. *Italics*, wherever they appear, indicate *quotes from interviewees*.

Perceptions about ASA

Perceptions are generally quite favorable. ASA is seen as a welcoming, friendly, intimate place where all people interested in acoustics come together. It gets high marks for its multidisciplinary coverage, its great treatment of students, growth occurring outside the US, the excellent technical information provided via JASA and its standards program. Some see ASA as “the premier” acoustics organization in the world, some see that as an aspiration and a few express concern over the disrespect that comparative way of expressing market position may seem to other acoustics organizations around the globe.

A surprising finding is the wide range of perception about the focus of the organization. For example, many describe a “*place where educators, practitioners, researchers and students all come together to share ideas*,” while others see it as a research organization, scholarly organization or highly technical group, emphasizing mathematics and the physics of acoustics. At the same time, still others say that engineering and applied acoustics are not sufficiently present in the organization.

ASA efforts to engage students are acknowledged but there is frequently mentioned concern about the need to better engage early career members. ASA is viewed by many as a society dominated by an aging membership and leadership. Reference was made to roughly 50% of ASA’s members being 50 or older. This limits opportunity for engagement in leadership roles for the next generations of acousticians. Many worry about the organization’s ability to appeal to and retain those scientists who will be essential to its future.

HOW INTERVIEWEES WOULD DESCRIBE ASA TO SOMEONE UNFAMILIAR WITH ASA

- *Leading professional organization in a highly multidisciplinary field.* (Leader/TC Member, 60-75)
- *ASA is a society that brings together all the researchers around the world who are top of the field in various aspects of the science of sound.* (Leader/TC Member, 30-39)
- *Place where educators, practitioners, researchers and students all come together to share ideas.* (Early Career/Student, 30-39)
- *Place where university folks, government, military, consultants and business come together.* (Leader/Other, 60-75)
- *ASA is a scholarly and very academic organization that serves as a forum of excellence for the techniques underpinning acoustics in a variety of disciplines – mathematically driven and less application based society.* (Early Career/Student, 30-39)
- *ASA is an organization concerned about every aspect of acoustics and especially the human experience of acoustics, i.e. airborne to underwater to acoustics of the earth.* (Leader/Other, 76+)
- *ASA is a highly technical group interested in hard science and the technical aspects of acoustics – emphasis on mathematical and computational modeling and the physics of acoustics.* (Early Career/Student, 30-39)

- *ASA is the best organization on acoustics in the world.* (Publishing, 40-49)
- *ASA aspires to be the premier acoustical society in the world.* (Donors/Sponsors, 76+)
- *ASA is a society of scholars not technologists.* (Leader/Other, 50-59)

The membership survey confirms the following as top perceptions of ASA:

- ASA is the premier acoustical society in the world.
- ASA will benefit from more international members.
- ASA is a student-friendly organization and does a good job of involving students.

ASA'S PRIMARY VALUE

People especially value the broad scope of ASA's *scientifically diverse community and the platform created for interpersonal relationships to develop*. ASA is described as a *gigantic resource* for seeking collaborators and for problem solving, as well as for staying current and acquiring information.

JASA is viewed as a high value resource, especially because it is a *true archival journal*. At the same time, this feature impedes JASA's impact factor, as does the multidisciplinary nature of its content. There is significant concern that JASA's systems and the time needed to review and publish articles are significant barriers to both its reputation and its ability to attract the best authors and research.

One non-US interviewee points out that outside the US, academics value similar things to those mentioned above, but industry values standards more than many other things.

- *ASA is my family and professional home. It supported me through three career phases. Being part of community that knows me well is a real strength of the organization.* (Early Career/Student, 30-39)
- *ASA is the personal relationships people make – members feel very comfortable. It is almost like a second home for many.* (Staff)
- *ASA provides a platform for interpersonal relationship to develop, people to meet, mentoring with and publications.* (Early Career/Student, 30-39)
- *Opportunity to stay current, acquire information – may be a bit more academic than applied, but providing a basis for people to collaborate and share ideas and understandings about acoustics.* (Leader/TC Member, 60-75)
- *ASA covers everything connected with acoustics. There is remarkable breadth and depth of the field – 13 technical areas.* (Non-US, 50-59)
- *ASA is the organization you must join to maintain awareness of acoustical activities, gain info and network.* (Related Organization)
- *Sound makes up our world. ASA works hard to build standards to measure and regulate sound in our environment.* (Related Organization, 60-75)
- *JASA is a great reference for technical information. It is a strange journal, truly archival. You can go back into the literature 30-40-50 years. This is great, though it hurts the impact factor.* (Related Organization)
- *One of the reasons ASA is so useful is being able to get together with smaller group of like-minded professionals and talk things over. There is synergy with the different parts of the organization.* (Publishing)

ASA QUALITIES

Among the most appreciated qualities of ASA, people mention that it is well run, personable and collegial, even described as small and intimate by some. Seen as welcoming and encouraging participation, it is recognized for showing great interest in young folks. It keeps up with changes in science, and it brings people together rather than creating conflict. One exception is this quote from a past president: *ASA has done well in all areas except engineering and applied acoustics. It would improve ASA's scope if more were here.*

INHERENT CONTRADICTIONS

Embedded in this report are a series of apparently inherent contradictions: on one hand, ASA is praised for being welcoming to students and on the other, criticized for feeling closed off to early career scientists. The value of becoming more international is highly rated on the survey, yet some of those interviewed feel alienated by the move toward greater globalism. JASA is highly valued and yet there is worry that its low impact factor affects its overall value in the marketplace. It will be important that the reader take note of these dualities and their implications for where on the continuum of strategic choices ASA will need to land.

Expectations of ASA

We reminded participants of ASA's stated purpose:

ASA is dedicated to increasing and diffusing the knowledge of acoustics and its practical application.

We asked, "What are your expectations of an organization dedicated to this purpose?" For example:

- Who do you expect to be involved?
- What sort of programs do you expect to see pursued?
- In what ways does ASA live up to these expectations?

WHO DO YOU EXPECT TO BE INVOLVED?

People expect all who are involved in acoustics to be involved in ASA. This means all of the leading experts in the field, all of the entry-level young people considering the field, and everyone in between. Several people mention the dearth of program attention and involvement of early career folks – they expect this gap to be filled effectively. Both implied and directly stated is the notion that ASA must be for all types -- *researchers, academics, doctoral students and consultants, government, industry and so on* –not to the exclusion of any, and that it must be global. Several people specifically mention the importance of facilitating the crossover or connection between industry and academia.

- *I like ASA and how it is run -- the longevity of people who have been involved for 75 years or so.* (Leader/TC Member, 60-75)
- *I want our community to be the one community that does it – i.e. anyone in the world interested in (musical acoustics) to turn to us; I don't want to come across an important person in the field who I have never heard of and who is not involved in ASA.* (Leader/TC Member, 30-39)

WHAT SORT OF PROGRAMS DO YOU EXPECT TO SEE PURSUED?

Several distinct program areas are expected:

- Education, which is seen as challenging because there are fewer acoustics programs in schools.

- *Education programs and this is a problem because schools like Harvard, MIT and UC no longer offer programs in acoustics because it is no longer a new thing...but getting the world quieter is important in our world today. (Leader/Other, 76+)*
- Information, both scholarly and practical application
 - *The two tier publications do a good job of that – a lower level magazine that presents a summary of topics at less scholarly level; then the journal itself. (Leader/TC Member, 60-75)*
 - *I expect to be able to go online and see what is going on in the field in general and specifically about my field. (Leader/Other, 50-59)*
- Global relevance
- Opportunities for scientific presentation and dialogue
 - *First step is referee abstracts so that only stuff that worth discussing makes it to oral sessions – fewer talks and longer discussion sessions built in. (Early Career/Student, 30-39)*
 - *ASA meetings are well done but funding to attend them is drying up.*
 - *We live in a different funding world of academic research than 15 years ago. Continue to have 2 meetings a year? It is hard to maintain community of this size – young people have hard time attending. Session structure is a problem –there is no longer any spare time – subcommittees now taking full 5 days for specialized sessions so opportunities to circulate across subcommittees is less than used to be. I would favor a situation where not all talks submitted are accepted for presentation – one of distinguishing factors now – anyone gets a presentation slot. That creates situations where sessions are filled with talks some of which are only moderated evolutions of past talks 6 months ago. You need to use what ASA is about. If it is a subject specific conference, ASA is not my first choice. If technique specific, ASA is my first choice. (Early Career/Student, 30-39)*
- Life long career support
 - *Great programs for people starting out; must also focus on middle portion of career. (Staff)*

IN WHAT WAYS DOES ASA LIVE UP TO THESE EXPECTATIONS?

- *Lives up to my expectations as a mixture of academic research and market oriented. Can be in one meeting and hear something about the brain, go in another room and hear a musical demonstration. It's a real haven. (Non-US, 50-59)*
- *Publishing and maintaining standards is what is most important. (Publishing)*
- *JASA most respected acoustical journal in the world. (Leader/TC Member, 60-75)*
- *Doing good job encouraging and disseminating information. (Donors/Sponsors, 76+)*
- *No shortage of articles being published. (Staff)*

IN WHAT WAYS IS ASA NOT LIVING UP TO EXPECTATIONS:

Several areas rise to the top of the list as opportunities to “do more:”

BRING MORE YOUNG PEOPLE INTO INVOLVEMENT

- *I would like to see more representation from post docs and early career investigators. (EC/Student, 30-39)*
- *Executive Council is mainly older people of the Society. I understand but ASA needs to bring early career into it. This is where the new science is. (EC/Student, 30-39)*

KEEP UP WITH THE TIMES

- *Acoustics Today, the primary journal, is the most boring looking thing and there is no effort to integrate any multi media. It is not up with the times. Why are there not tons of acoustics files on line? ASA is out of sync with most societies trying to integrate current media. (Leader/Other, 60-75)*
- *I expect ASA to look more up and coming than it does. Use all the resources available to update ASA! (Staff)*
- *Need to be seen as dynamic – to have profile in all aspects of social media to engage young people. (Related Organization)*

IMPROVE THE BALANCE BETWEEN THEORETICAL AND PRACTICAL

- *Falls short on the practical aspects – most articles fairly theoretically based on research – little information for the practical world. (Donors/Sponsors, 76+)*
- *I would like to see ASA sponsor research projects, to raise more funding from industry and to try to move the field further with the purpose of establishing some of the guideline (Non-US, 40-49)*
- *Need to attract more industry. (Early Career/Student, 30-39)*

TAKE ADVOCACY TO THE NEXT LEVEL

- *I would like to see ASA in DC advocating for funding and acoustics; need a presence in DC when decisions are made. (Leader/TC Member, 40-49)*
- *Take outreach seriously and build bridges with other organizations. (Leader/Other, 50-59)*
- *Several years ago ASA was the organization most auditory physiologists participated in – now they are in neuroscience societies and that is a real loss to ASA. (Publishing, 40-49)*
- *Create an identified brand for acoustics. (Leader/Other, 50-59)*

Critical Challenges for the Future

It is always important to scan the horizon for changes, challenges and opportunities likely to be relevant to ASA in the coming 3-5 years. Here are the challenges perceived as most critical by those interviewed or responding to the survey.

CHALLENGES FACING ACOUSTICS AND ACOUSTICIANS

The top three identified by those interviewed and surveyed alike:

1. LACK OF SUSTAINABLE FUNDING FOR RESEARCH IN ACOUSTICS

Like most societies serving scientific disciplines, ASA and the field of acoustics are beset by the declining availability of funding:

- *The way and the amount science is being funded is changing in ways that are incredibly damaging to the future of science in this country. (Leader/TC Member, 30-39)*
- *Major challenge and threat is that big nationally funded programs that were bread and butter of ASA are a thing of the past – a generation of acousticians who were supported in research and meetings by large program grants from NASA, Dept. of Naval Research, etc. – that model is gone. (Early Career/Student, 30-39)*
- *There is always funding problem in terms of research – nothing new. (Donors/Sponsors, 76+)*

2. LACK OF UNDERSTANDING AMONG POLICYMAKERS OF THE VALUE OF ACOUSTICS

Repeatedly of late, policymakers have demonstrated their lack of understanding of the contributions of science to the modern world and the science of acoustics and acousticians have not been spared. Increasingly this confluence of circumstances is leading to a call for organizations to take on a more active voice in trying to both educate regulators and policymakers and to lobby for restoration of funds for scientific research. We found both sentiments prevalent among those we interviewed.

3. NEW IDEAS/DISCOVERIES ARE HAPPENING AT THE INTERSECTION OF DISCIPLINES, NOT DIRECTLY IN ACOUSTICS

There is increased movement of acoustical science into cross-disciplinary or multidisciplinary approaches, yet acoustics as a science tends to be segmented or siloed by disciplines. That means it is even more important for ASA to find ways to create cross-disciplinary synergy.

- *One of the difficulties facing us is how to maintain that inspiring model of cross disciplinarity in an area where people being siloed by discipline. (Non-Us, 30-39)*
- *Capitalize on the unique aspects of ASA – cross-disciplinary synergy – fact that people should be allowed to realize that equally good science is being done in parallel fields – don't reinvent wheel. (Non-Us, 30-39)*

ASA SPECIFIC ORGANIZATIONAL CHALLENGES

We spent a good portion of our discussions focused on governance issues to be used in the second half of this project. To prepare for that governance assessment, we asked people to comment on challenges facing ASA as an organization:

- Changing business model for publications, i.e. *uncertainty in publications and open access and how we stay on top*
- Aging demographic of those active in acoustics
- More active inclusion of younger members is critical to future success
- Competition for members' time and resources from other societies, meetings, and employment
- Increasing difficulty attending two meetings a year, from both time and financial perspectives
- Declining funding for travel to meetings in general

Possible ASA Roles To Meet Future Challenges

Perceptions, expectations and a scan of future challenges led interviewees to identify important roles for ASA in the future:

FOCUS ON YOUNG PEOPLE

There is universal agreement that ASA must ramp up its effort to engage early career professionals more. ASA has had great success engaging students and they are encouraged to extend that beyond students to early career scientists.

- *Ways to engage young professionals that are no longer students; esp. programs targeting those just after undergrad and start working in acoustics or don't continue study – good opportunities for students/grad students – well integrated by time finish grad school – interim ok for grad students but nothing for those in age range not still in school. Leadership development programs for the same age range – not just for ASA but how to become leaders in a broader sense in acoustics. (Early Career/Student, 30-39)*
- *Gen X interaction style – email to parents and professors only – need to text or use other social media to reach them. (Related Organization)*
- *Need more incentives for younger people to be involved, especially in governance.*

EXPAND ADVOCACY AND INFLUENCE EFFORTS

- *I would like to see more involvement at the funding level with ASA in DC advocating for acoustics, and an ASA presence in DC when decisions are being made. (Leader/TC Member, 40-49)*

PROMOTE OTHER NATIONAL SOCIETIES

- *Some of the faculty members outside the US are drawn to ASA. Industry is not attracted and industry members typically join local groups like in Hong Kong Institution of Acoustics; they may not join the ASA. No local chapter of ASA in China or UK, so JASA is prime contact. (Non-US, 40-49)*
- *Provide a well designed front face website that is easy to work with to allow others to connect with the work. (Leader/TC Member, 60-75)*
 - *Generate more public friendly documents that bring this to attention of laypeople. Improve dissemination to schools—high and elementary to engender interest in acoustics. (Leader/Other, 76+)*
 - *I hate their website, ridiculously difficult to find anything. I go direct to Google instead. (Leader/TC Member, 40-49)*
- *Get the childcare thing done. (Leader/TC Member, 30-39)*
- *Step out of role of being primarily academic. Make people more excited about sound in general. In the language of new media: push and pull.... could be more push. Feed out information about exciting things about sound. (Non-US, 50-59)*

COLLABORATE: ASA NOW CONSIDERED A LONER

Perhaps because of the breadth of its scope, ASA is viewed as aloof from other scientific societies, as opposed to being a collaborator or partner. ASA leadership may wish to consider whether this is a position that was strategically adopted or simply a function of happenstance.

- *ASA stands alone, in some cases in the dinosaur class. Always been interdisciplinary. ASA rejected the discipline of signal processing because importance wasn't understood, became part of IEEE because of speech research. ASA needs to broaden its vision. Become more people friendly—a*

layperson would have no idea. Value is enormous. (Leader/Other, 76+)

- *Engineering acoustics is one area that I feel does not include all of the aspects of acoustics. Argument against expanding is that we're not applied. But is an area we need to pay more attention to. (Leader/Other, 76+)*
- *Leadership focused in own back yard, haven't reached out to other societies that have been more successful. Reached out to neuroscience society to find out how they were going to deal with open source. Being a loner these days is not a good way to go. (Related Organization, 60-75)*
- *Acoustics viewed as mature field while people want the new most novel thing – maturity can lead to false impression there is not whiz bang; but the maturity allows it to get its fingers into a lot of other fields. (Early Career/Student, 30-39)*

PUBLISHING

Publishing is clearly a key area of interest to those we interviewed. Many were only passingly familiar with ASA's move into open access saying the equivalent of "I've heard about it but don't know the details". Most recognize the value of open access – both for themselves as authors and to the field of acoustics and the exchange of information.

There is significant worry that JASA's system for publishing is too slow to stay relevant and that its impact factor, while understood, is making it less and less appealing to the best authors in the field. In addition, the systems and structures for operating JASA in the past were called into question and great hope was expressed that the new editor will implement a more open, interactive and better-managed system for producing ASA's flagship journal.

- *JASA Express is a positive step forward – people like Christie need to spend more time thinking about how to raise the impact factor of journals – don't want them to become last port of call for things not publishable elsewhere. (Early Career/Student, 30-39)*
- *Pubs are good but don't reach students, at many libraries you don't find JASA. (Donors/Sponsors, 76+)*
- *Open access is really important – I take the option of paying a little extra to make the article open access – don't have to do it but in the end the times I've paid extra for Open Access receives more citations – so it has been beneficial -- the extra couple thousand not regretted. (Leader/Other, 40-49)*
- *One of big issue is turnaround time – from submission to publication is extensive and problematic – in changing research environment where open access more prominent and respected, JASA has to compete with that – had a paper submitted that took 8 months to reject; Frontiers has same article in 2-3 months from submission to publication – will be trending more and more. (Early Career/Student, 30-39)*
- *Talked about a new pub geared more towards practitioners in the field rather than academics Or engineering – people who do practical things; those people often so busy they don't have time to write an article – limited incentive if not in academia. (Publishing)*
- *Main concerns – JASA is not an open source journal and impact factor is low compared to competitors -- visibility and importance could improve by being open and improving impact factor. (Publishing, 40-49)*
- *Online interface with journal is very lame – can't browse, search is difficult; not intuitive friendly interface at all. (Non-US & Leader/Other, 50-59)*

- *I like peer review — if publish get that and then can frame paper to make it better.* (Leader/Other, 76+)
- *Editorship—should rotate more often. JASA is so important, would be nice to rotate.* (Publishing)
- *JASA needs to be more democratically organized. JASA is too important not to have reasonable governance structure.* (Publishing)
- *Need to reevaluate the relationships – need to see we are supporting publications every step of process – cooperation from all parties to produce best pubs possible – need a real evaluation with a supportive cooperative outcome.* (Leader/Other, 60-75)
- *Funny that there is so much structure for organization and so little for journal. Why no editorial board for JASA?* (Publishing)
- *Publications – problematic of late; hope new editor will move things; publications process was being more awkward and poorly managed – there are 106 sub editors, all singly reporting to the Editor in Chief -- span of control issues are absurd – way of controlling process – most important thing to work on, the job is to get new editor to get more efficient and friendly operation.* (Leader/Other, 60-75)

STANDARDS

- *Too much attention is given to standards. Dissemination of scientific material about acoustics.* (Donors/Sponsors, 76+)
- *ASA standards to cover areas not covered in country I do research so happy to review general paper for my work. For me, I am very active – involved in committee in ASA The Healthcare Committee, so I have first hand info for the field in the world I bring the ideas I learn at ASA in US to China and promote the ideas here Now in Shanghai, go to meeting once per year – Spring meeting – no special reason other than that connect by conference call Committee chair distributes some of the news periodically.* (Non-US, 40-49)

MEETINGS

The most frequent refrain is that two meetings a year is one too many for many people. That concern is driven by a number of factors, chief among them the difficulty of getting funding for two weeklong meetings. Added to that, since most ASA work occurs at meetings (as opposed to more virtual exchanges), the inability to participate in two meetings limits the pool of potential committee participants domestically and dramatically limits the pool internationally. There were a number of suggestions for adjusting scheduling, including limiting or rotating which technical committees would participate in a second meeting if the current two meeting cycle is retained. Many reiterated the desire for increased virtual engagement – both in meeting participation and the exchange of scientific information.

- *Should consider going to annual meeting format. For many of us the only reason we go to second meeting is for committee work.* (Related Organizations, 60-75)
- *2x a year is probably the best – general meeting 1x /year and more specialized 1x a year-- like 1.5. Expense problems in terms of travel are an issue.* (Donors/Sponsors, 76+)
- *Most young people think two meetings a year too much; but must supplement with electronic meetings; would also reduce workload on volunteers, which would open candidate pool for TC chairs (best people too busy to accept).* (Non-US & Leader/Other, 50-59)

From the perspective of educational content, ASA is encouraged to fill education and service niches not filled by others, i.e. symposia, and to create discussion venues at meetings and online for

looking ahead and the exchange of ideas. The concept put forth by one respondent was to add topical keynotes to the conference that has broad reach followed by a series of opportunities to facilitate the exchange of ideas across disciplines.

- *ASA doesn't have a mechanism at meetings for discussing something like new opportunities for improving hearing aids for vets – there should be invited speakers who come to address major issues. Seems that if people are really concerned about opportunities /threats – we need to have a way to invite speakers from outside ASA to address key issues -- a special session where most participants address particular issue. A 5-year initiative to have keynote presentations on things to advance the science of acoustics to try and see if we can do things as a whole society.* (Leader/Other, 60-75)

GLOBALIZATION

There were few responses directly to the question of becoming more global, but the topic of global inclusivity surfaced in many of the interviews. That said, there appear to be pockets of resistance to globalization. This is not unusual in situations where members do not understand the intrinsic value of swimming in a bigger pool and rather worry that the benefits focused on US members will end up being diminished by the expansion of organizational focus.

- *Seems to be resistance to become as globally important as it should be.* (Leader/Other & Publishing, 60-75)
- *Globally inclusive: there are acoustical societies all around the world, ASA is clearly largest, probably more offshore members, join for particular purposes.* (Related Organization)

Responses Related to ASA Leadership and Governance

OVERALL GOVERNANCE IMPRESSION

There is a general satisfaction with governance overall. That said, there were many ideas about how to strengthen the current system including, expanding terms (one year seen as insufficient to make real change), the need for a clearer vision of what ASA is trying to accomplish, and a system that is able to be more nimble and to more easily embrace new ideas. There is a high level of satisfaction with the headquarters staff.

- *ASA conveys a high standard of ethics, very close attn. to due process; generally well considered and mature governance system that illustrated it is an old and established society...Conveys inertia. It changes with difficulty and isn't always quick to respond to feedback or keep up with the times. Perhaps there is not enough change over in people making the decisions.* (Non-US, 30-39)
- *Elasticity to embrace new concepts.* (Leader/Other, 76+)
- *Office very efficient.* (Donors/Sponsors, 76+)
- *Good representation and not overly large.* (Leader/TC Member, 40-49)
- *The natural turnover every year or so is good thing (don't want dominators) but can be loss of institutional memory so some are reinventing the wheel.* (Early Career/Student, 30-39)
- *New leadership every year so a binding strategic plan is hard to accomplish – could extended terms to 2-3 years help this situation.* (Non-US & Leader/Other, 50-59)

- *Like it – volunteer based and not that hard to work up the ranks – logical progression. There is a ruling class but not really old boy. (Non-US & Leader/Other, 50-59)*
- *Impressed with the leaders and interaction with other committees – very professional. (Donors/Sponsors, 50-59)*
- *Formal structure – know what the expectations and requirements are. (Donors/Sponsors, 50-59)*
- *The Leadership needs a clear vision of what ASA stands for and what trying to achieve – to date this is personality driven; changes each time leadership changes. (Non-US & Early Career/Student, 30-39)*

DECISION-MAKING

The most frequent complaint is a lack of understanding and transparency about what decisions are made, when and how they were reached. That said, the bottom up approach to decision-making seems to be well respected.

- *Sometimes it is not clear to me what decisions have been made and set in stone at the top level. Probably a lot that EC decides that is not confidential – but I won't find out about it – would be good to report decisions and their rationale... (Leader/TC Member, 30-39)*
- *Bottoms up system where committees feed to Technical Council who feed to Executive Council – all decisions made from bottom up -- Tech Committee not concerned with governance – might be good to encourage them to make suggestions re how things might be done. (Donors/Sponsors, 76+)*
- *From general members perspective – seems a little non transparent – vague about how it happens behind the scene; decisions seems random. (Early Career/Student, 30-39)*
- *The decision process is very lengthy. Not based on factual information. People say things and they run with it. This approach seems to work well. (Staff)*

MEMBER OUTREACH

A call for increased transparency with members surfaced as well.

- *Not sure how much governance reaches out to individual members. As a regular member I don't feel that connected. When I sit in on the big meetings I hear what's happening but if I didn't, I wouldn't know. Might want to consider reaching out in more friendly and frequent member. (Non-US/Non-Member, 50-59)*
- *This survey is step in right direction. Suddenly I feel involved. People want to feel they have a voice or platform. (Non-US/Non-Member, 50-59)*
- *Not clear general membership really understand governance of ASA – seems good if communicated better. In NCAC, the officers and Board are encouraged (arms twisted) to write for newsletter and think that's a great idea – gives people an idea of who these people are and what they are doing and why. Lack of that within ASA – ASA kind of runs on its own kind of behind the curtain feeling of what's going on. General membership may feel it is kind of clubby within the organization – a little more transparency – not hidden but could be better communicated. (Leader/TC Member, 50-59)*

EXECUTIVE COUNCIL / TECHNICAL COUNCIL / TECHNICAL COMMITTEES

Here again there are split opinions about the effectiveness and relationship between the Executive Council, the Technical Council and the technical committees. For many the design and work of the Executive Council is clear, but for others the work occurring in the EC isn't at a sufficiently strategic level (too routine) and the perception is that EC is making decisions that could more appropriately be delegated either to the TC or the staff. There are also questions about where in the hierarchy decisions should be appropriately made.

Some interviewees expressed concern that the current delineation of technical committees needs to be revisited to determine whether current technical committees accurately reflect acoustics and the needs of acousticians, and whether or not there are sufficient opportunities for emerging areas of the field.

In the context of the need for all governing bodies to do more work virtually (especially in light of increasing calls to move to a single meeting each year) an interesting idea around the timing of the respective meeting arose. The suggestion is that the EC could do more of its discussion virtually in advance of the face-to-face meetings, and hold briefer sessions at the meetings, allowing more time for the work of the Technical Council, which requires interaction from a larger population to be effective. It was suggested that the current time distribution between Executive Council and Technical Council at meetings should be reversed.

- *For the member who comes to every few meetings, it works very well because don't have to see or be involved in the EC or TCs; took a long time to figure out how it worked beyond a TC.* (Leader/TC Member, 30-39)
- *I like the ground up kind of approach provided through the technical committees because it makes access to governance accessible through these smaller groups.* (Early Career/Student, 30-39)
- *EC is small and pretty nimble – real strength -- not too many layers before you have a voice.* (Leader/Other, 40-49)
- *EC meets and TC meet separately at the beginning and then at the end. Sometimes I think it is good for EC and TC to meet together. There is some overlap through VP but if weak VP, not a strong liaison between the two. Overlap at least through communications.* (Leader/Other, 40-49)
- *Executive Council meets for 6 hours and Technical Council barely meets for 2-3 hours – not enough time to do meaningful work. Reduce the face-to-face time for EC on Mondays and Fridays and give more time to TC – TC members don't get involved enough in the real work of the science. EC needs lots of time but less at meetings and more in advance.* (Leader/Other & Publishing, 60-75)
- *Smaller committees make a lot of the decisions and report to the TC – smaller groups that are expert in own area making decisions. Decisions tend to be pretty good.* (Publishing)
- *Big weakness is Executive Council – seems like a huge waste of time – meet for 2 days of 5 day meeting and 90% of time was on trivial things – problem getting them together and can't find a subject that someone doesn't wax on forever. Careful agenda setting – management of topics that should go to the executive director – straightforward things she can handle. Decisions of future strategy of the organization are what should be discussed.* (Leader/Other, 60-75)
- *In principal ok for EC to run the organization but shouldn't be dealing with trivial things. Most things shouldn't be routinely up for discussion. President role, if you think they can do something, have to be there longer than 1 year.* (Leader/Other, 60-75)
- *From sitting in on Technical Council meetings, they seem long and the work seems unnecessary – not really making decisions.* (Early Career/Student, 30-39)

- Relationships:
 - *Technical stovepipes very effective; Lateral connections that could be explored involve the co-sponsored sessions (idea behind it: if co sponsor then sponsors should not schedule session at the same time – some people get that and others don't). (Leader/TC Member, 30-39)*
 - *Always a need for dialogue between disciplines. Could be a forum where everything comes together. Promote that. (Non-US/Non-Member, 50-59)*
 - *Seems to be a core group of active members, need to reach out past core group for new ideas and innovations. (Staff)*
 - *Might review the # of technical committees – may be too many – structure often based on personalities in the past and form separate entities because leaders don't get along; over the years may tend to not be a dynamic. Should be able to have committees that die off however years ago split oceanography committee into two groups and everybody belonged to both – may no longer be best reason to exist. (Leader/Other, 60-75)*
 - *Get the sense that every time we want to do something must be approved by EC; half of it is minutiae – restructure authority – move from EC to TCs or staff (why does TC approve award winners?) – lots of that going on – too top down – pick a few areas important for EC to be involved. (Non-US/Non-Member & Leader/Other, 50-59)*

LEADERSHIP/DEVELOPMENT

The input on leadership development is quite varied. Some think it is easy to get involved and that the opportunities are clearly spelled out. This opinion appears to be held most frequently by those who have already penetrated the leadership system. Those not yet in the system don't seem to think it is as accessible or as transparent as they would like and believe it is dependent on connections. There is also a relatively loud call to make leadership positions more accessible to scientists outside the US and to find different ways to connect global leaders than the current systems of meetings. Here again, the refrain was expressed of two meetings a year becoming increasingly problematic.

- *Mentorship program is good for the students, but not sure how to train the young people for the leadership for the ASA. (Non-US/Non-Member, 40-49)*
- *Know people who have wanted to run and considered it and haven't had that opportunity within my Technical Committee – may be based on how they are run and who ever shows up can vote. (Early Career/Student, 30-39)*
- *Good mix of genders, disciplines, broad spectrum of leadership. (Non-US/Non-Member, 50-59)*
- *Society luncheon and take a student to lunch – connects us well to the student. (Leader/TC Member, 60-75)*
- *A lot of talk at ASA that doing good stuff with students but not so much with early career professionals; I think that is true; what role can society play in what young professionals can do? If serious about wanting to develop leadership, then growing leaders is really important. (Leader/TC Member, 30-39)*
- *Don't know what current system is for identifying so don't know how to strengthen. Seem to be lining up younger people with opportunities, seems to be pretty international. (Non-US/Non-Member, 50-59)*

- *Should take every opportunity to make that a global role. Don't see this being embraced or made an initiative to better incorporate people from other areas of the world especially incorporating into leadership positions or publications as associate editors, ASA has a role that will be reduced if don't take steps to be more assertive globally. (Leader/Other, 60-75)*
- *Global aspects – double edged sword – want global outreach and encourage participation from members and leaders from overseas – good thing – at NCAC have international members as well – become difficult for people to travel overseas for meetings. Good to have the occasional overseas meeting; wouldn't want it to be occurring more than once a year or every other year – might be a sweet spot – international meeting overseas every 3 years. (Leader/TC Member & Related Organization, 50-59)*
- *We need to be globally inclusive. (Leader/Other, 76+)*
- *Don't think there are any programs that nurture or help people become leaders (maybe we should have panels on this topic); scientific leaders and governance leaders and those are different – how to become leader in society and nationally. (Leader/TC Member, 40-49)*
- *Don't know there are real formal processes in place; if you want to get involved, opportunity to do so is great. (Early Career/Student, 30-39)*
- *International involvement is different – not usually at every meeting – more like once a year or every other year – ought to be some way /structure as important as TC which people could serve on without being at all the meetings. They have their own organizations and their own commitments there. Competes for their time. Don't get on ballot for EC without serving on TC. (Leader/TC Member, 60-75)*
- *From my limited exposure, very informal and highly dependent on who you know; this means “did you do your education in lab where there was an ASA leader?” (Early Career/Student, 30-39)*
- *Issue of exclusivity because of multiple meetings a year and the cost makes exclusionary. One meeting will be solution to cut across most problems here. (Leader/Other, 50-59)*
- *A little bit of high and mighty attitude that you have a certain level of appointment to be useful to governing. It's not easy to adapt. (Related Organization, 60-75)*

IF PEOPLE COULD CHANGE ONE THING ABOUT ASA GOVERNANCE, THEY WOULD:

- *Increase role of treasurer to include proactive means of how we continue to be a society – reviewing costs of publications and influence of open access. (Leader/Other & Publishing, 60-75)*
- *Involving new generation, making it easier for them to learn how it works. (Related Organization, 60-75)*
- *JASA be more democratically organized. Publication meetings, associate editors lob questions at editor, takes consideration. JASA is too important not to have reasonable governance structure. (This quote appears in report twice.)(Publishing)*
- *Take action in a quicker manner. Takes long to implement things. (Staff)*
- *If you talk to students, they have no idea who is on Executive Council –I think that's a real barrier. Perception of being old school comes from stodgy and stiff way we operate at meetings – refresh the way this unfolds. (Leader/Other, 40-49)*
- *More representation for post docs/early career investigators. (Early Career/Student, 30-39)*
- *We need to draw the lines more clearly – so we know who does what. (Publishing)*

- *If have a long term project, need someone in charge for a long time – like the electronic access to meetings – put someone in charge for the duration. Because the president and president elect each serve one-year terms, governance structure will work but when do something new, someone needs longer term authority. (Publishing)*
- *Make it more transparent to everyone – at least with those involved with decision affecting them. (Early Career/Student, 30-39)*
- *How technology is being used to facilitate the mission of the organization is very important because people can't be involved because don't have time – too much travel, time and paper – that is what needs to change to allow people to participate meaningfully. (Non-US/Non-Member & Leader/Other, 50-59)*
- *Move to one in-person meeting a year crucial to attract the best and level field for inclusive pool. (Non-US/Non-Member & Leader/Other, 50-59)*
- *Must be sensitive to needs – old guys can attend but young up and coming can not; must adjust to this. (Non-US/Non-Member & Leader/Other, 50-59)*
- *Not faulting but it is the communication with the members – EC and final decisions going to the membership – let us know what the thinking was in making the decision. Complete the feedback loop – no need for anything long and formal. (Donors/Sponsors, 50-59)*
- *Have some but not many foreigners in leadership structure – hard to attend 2 meetings a year in US... If we don't do meetings by phone or teleconferences, it is hard to participate. In future if electronic meeting idea works, then certainly possible to have more international participation (except for language barrier). (Donors/Sponsors, 50-59)*

One person speaks clearly for no change; a small group of others did as well:

- *Large organization with many years of history. Would have to be really good reason to change way things should be done (Publishing)*

THE IDEAL ASA

We asked interviewees to describe the ideal ASA – what kinds of characteristics and attributes their ideal scientific society would possess.

- *Real time remote attendance at meetings with the tools and bandwidth to do it well*
- *Quality of the meetings and the journal make it stand out*
- *Promotion of acoustics to students, the public*
- *Reputation as premier*
- *Flagship journal and standards*
- *Organization structure that supports rather than gets in the way of science*
- *Remain well governed without increasing burden on volunteers*
- *Mutual respect among the parts*
- *Frequent outreach to members to learn their wants*
- *Allow for scientific debate and advancement of science thru philosophical and scientific debate*
- *Global reach through electronic conferencing*
- *Allows for encouraging all people in field to join*
- *The Leadership has a clear vision of what ASA stands for and what trying to achieve and there is continuity across multiple leadership years*
- *Positive relationships that underscore our best instincts are scientists*

- *Cross cutting portfolio of interdisciplinary (Lindsay's Wheel of Acoustics – shows how fits into all classical areas of science – road map for the society)*
- *High quality archival journal value – JASA – not worried about low impact factor because high archival value*
- *True to scientific research*
- *Subject continues to be taught in the university - professors and students who are the backbone to good papers*
- *Need to be very open. Openness appeals to me. If it became political or commercial would lose its charm. Needs to be apolitical, very open--in every way--to talent coming in any direction*

FUTURE LEADERSHIP COMPETENCIES NEEDED

Here are the leadership competencies people believe will be important in the future:

- *Communications*
- *Knows how to communicate science*
- *Knowledge of acoustics*
- *Openness to inclusivity*
- *Understands what it means to be a scientist today*
- *Courage to take risks to do novel things*
- *Open – not political or commercial*
- *Looks at issues in progressive manner*
- *Enthusiasm, commitment, and vision*
- *Willing to seek out opinions of broad sample of perspectives*
- *Brings good ideas*
- *International focus and collaboration*
- *Ability to galvanize the people around you to do what the vision says – to get people to act*
- *Fearless in the face of technology and change*
- *Willing to pursue relationships at the margins*
- *Willing to learn from what other societies are doing*

One Piece of Advice

At the end of each interview we asked, “What one piece of advice do you wish to offer the planning team as they consider the future?” What follows is each person’s response, organized into topic areas:

PUBLISHING/PUBLICATIONS

- *Many people think the journal should publish only scientific papers and the engineers want to talk with each other. Noise Control Engineering could be set up to be close to ASA. (Leader/Other)*
- *Don't lose sight that JASA is gold standard of research internationally and everything should be in service of that. (Publishing)*
- *The Journal is important – I want to see it come into modern age, i.e. not paying for color figures, faster review process, and uploading online as soon as proofs accepted would all be quite useful. Two meetings a year is silly – few can attend anymore, so it is splitting up your society. Select cities where expenses can be lower – reduce meeting costs in this funding environment. Continue to*

increase support and emphasis on students and early career, particularly for financial aspect. (Early Career/Student, 30-39)

GENERATIONAL ISSUES AND/OR NEEDS FOR/OF YOUNG MEMBERS

- *Focus on gaining younger membership and encouraging the experience of leadership at younger age. It's more than keeping numbers up, it's keeping your ear to the pavement about what's coming up. This is not easy to do and you have to nurture it. (Related Organization, 60-75)*
- *Make sure they continue to seek out opinions of their young investigators – they will be the ones carrying on the role and if disillusioned, they will not renew or publish. It would be wise to talk with up and comers to help regenerate it and make sure their needs are being met. (Early Career/Student, 30-39)*
- *Demographics of early career really need to be heard – they agree that they are the ones who can make it work and keep it going. (Staff)*
- *Develop more programs for young acousticians (who are not necessarily students). The Student Council is well developed; it would be nice to have something like that for young professionals. It would be a way to voice opinions and come together as a leadership group of young acousticians. This could be similar to how the student council is organized but for a different demographic with representatives, committees and its own council. (Early Career/Student, 30-39)*

ADVOCACY AND INFLUENCE

- *Increase transparency of governance to general membership. Education of the general public about acoustics to increase the visibility and appreciation of acoustics by the general public is vital. Also, do a better job planning for staff transitions. (TC Chair, 50-59)*
- *Increase interaction with peripheral societies – audio society, society of audiologists, audio engineering society, hearing professionals, music groups – more overlapping or joint meetings – or contiguous in time and place. (Donors/Sponsors, 76+)*
- *What we find (Deaf Architects and Blind Acousticians) –is that to get the messages out you must have collaboration of the two to make it successful – need a bridge between ASA and AIA. We need to build friendships and interactions. You need to sustain the youth membership. (Donors/Sponsors, 50-59)*

LEADERSHIP AND DECISION-MAKING

- *Whatever comes out of this process, there will be 4-7 really clear goals for ED to implement and accomplish over the next 3-5 years; these 10-year initiatives are just too long and cause stagnation. Defining clear, realistic goals about what we've asked questions on –should be part of what the ED does and some clear goals are emerging from Austin. Identify areas people agree are important, have a small list. (Publishing, 60-75)*
- *Be aware of issues that need to be changed and taking steps in that direction, actions are required. (Publishing, 40-49)*
- *We communicate well but more communication across the board would be good. Needs to be a greater exchanging of ideas about new things, reach out to the members and see what they think and want. (Staff)*
- *The Editor in Chief must be part of the senior team. (Leader/Other, 60-75)*

MEETINGS

- *We should hold more joint meetings with scientific societies that overlap with ASA. Keep in contact with fellows. (Donors/Sponsors, 76+)*

- *One meeting a year – start with that. In order to make that work, will pay benefits in other ways as well increasing interest in people. Make better use of the Internet, maybe to ease the physical participation at a meeting. AIP portal is too antiseptic. (Leader/Other, 50-59)*

DIVERSITY

- *Think about which are the areas – academic, research and applications – that are going to be important in the future and ensure that provisions are made for them in the future. Ways to provide for the students, it's best to do research there; if that means restructuring tech committees, so be it. (Early Career/Student, 30-39)*
- *Go for a better combination/balance of industry and academia. (Non-US/Non-Member, 40-49)*

GLOBAL PRESENCE AND NON-US MEMBERS

- *Try to do things that broaden the reach beyond the border of NA, produce an organization truly global in reach and because acoustics is so broad it means so many different things. There are people in nearly every country interested in these things; it could become a society of the world. There is a world federation of ultrasound; we need something like this for acoustics. ASA could morph into that or spin it off and be a part. (Publishing)*

PERCEPTIONS OF ASA

- *Be open to the ideas that bubble up in Austin and be willing to be flexible. (Leader/Other)*
- *Really think deeply about how the society supports the work and the life of the current and future members who are doing acoustics research; every thing we do to support that work is what we are really about. We are a platform for disseminating our work to each other and to the world. (TC Chair, 30-39)*
- *Keep in mind certain objectives, like those we are founded on. We need to excite people about sound and reach out to the youth. We need to be open to different thinking which will allow us to adapt to what's happening these days, while keeping with principles of founders. Being open to and having a balance between industry and academia is what's best about ASA. It also doesn't hurt to have good successors in the pipeline. (Non-US/Non-Member, 50-59)*
- *Think differently and don't be afraid to innovate or to try new things. (Non-US/Non-Member, 30-39)*
- *ASA is one of few organizations in acoustics that has the capacity to be involved in activities that may seem risky. ASA has the resources and manpower to try something a little different and should take opportunities to broaden their horizons. Look for other ways of giving people greater diversity of involvement. I find the meetings are very structured, and stable, which is excellent. (Related Organization)*
- *Don't forget the culture of the society; the personable aspect of it plays a big part. It's a win-win for all parties involved. (Staff)*
- *Not to discount any new ideas – approach this process with essentially a fresh blank sheet of paper. Forget tradition and the old ways of doing things and start to think of what can we do that's new? If we started an organization today, how would we do it? Having done that, consider how things have been done and compare it to traditions then examine what are the risks and benefits. Afterwards ID a set of key concepts to start implementing and select some reasonable number we can achieve. Also, define a time plan that allows people to get accustomed to new ideas. (Related Organization, 50-59)*
- *Understand your current state and be clear on a multifaceted vision – think big and resource it. Unify that disparate demographic and communicate where we are going and how we want to get*

there. Be flexible (VUCA – Volatile, Uncertain, Complex, Ambiguous – very asymmetric (economic, politics, etc.) Google, Amazon, Facebook, and Apple are driving all expectations. Figure out how do we live up to those expectations. (Publishing)

ASA STRUCTURES:

OFFICERS, EXECUTIVE COUNCIL, TECHNICAL COUNCIL, TECHNICAL AREAS AND HEADQUARTERS

- *Develop a process by which new technical areas identified –it is ok for Technical Committees to disappear and new ones to appear but be careful not to lose the remaining people interested in these areas by not giving them a home. Recognize how important that home is to people. Devise an effective way of doing conferences. The special sessions are restrictive and don't always generate enough people, so there needs to be more general sessions; having some TCs at some meetings and not at others would be a strength. This could be done by coming up with some kind of rotation. Now means 10-15 sessions going on simultaneously in different places. Still meet 2x a year; don't always have the same 6 TC to one conference and 6 to another – don't interrupt the interpersonal exchange. At least interaction once a year. (Leader/TC Member, 40-49)*
- *Talk to those who led AIP's governance reform process. Process started with tutorials with Executive Committee. The Board needs to want to reinvent itself and see the necessity that a board member has legal, fiduciary and programmatic duties and management duties to carry out. (Related Organization)*

Review of Member Survey Results

A full membership survey of 6,807 members was conducted in December, yielding a $\pm 95\%$ projectable response with 790 responses.

The results generally support the highlights and themes that emerged during the interviews. However, it should be noted that there were no findings where more than 49% of the respondents agreed on key challenges for the field, key challenges for the organization or roles for ASA. These disparate responses may, in part, be a function of the diversity of the ASA membership and what is clearly a wide range of expectations for the organization.

ASA members were asked to rate their level of agreement with statements related to the challenges for the future of the field of acoustics and of ASA, potential roles for the Society in meeting those challenges, and a variety of statements relating to members' overall perceptions of ASA. Additionally, they were asked to rate the importance vs. ASA's performance of several activities related to ASA's governance, communications and decision-making. Following are the survey highlights.

Overall Perception of ASA

All statements regarding the perception of ASA received a favorable rating average of 4 or above on a six-point scale, with 1 being no agreement and 6 being complete agreement.

- Overall, ASA is highly regarded by members – most view it as the premier acoustical society in the world, rated 5.2.
- Other top perceptions were that ASA will benefit from more international members and that it's a student-friendly organization.

Perceptions of ASA	Rating Avg.
ASA is the premier acoustical society in the world.	5.20
ASA will benefit from more international members.	4.90
ASA is a student-friendly organization and does a good job of involving students.	4.87
ASA sets the industry standards for acoustics terminology, measurement procedures, and criteria.	4.80
ASA is a welcoming organization and encourages people to participate.	4.79
ASA is the organization you must join to maintain awareness of acoustical activities, access research and information, and network.	4.70
ASA is a "global home" for educators, scientists, practitioners, researchers and students.	4.69
ASA has kept up with changes in the field.	4.65
ASA needs more services geared to early and mid-career members.	4.48
ASA is the only organization that represents the diversity of disciplines related to sound.	4.45
ASA has done a good job of engaging younger scientists in the Society.	4.43
ASA needs more services geared to international members.	4.20

- As expected, younger age groups rated those statements directly related to students and early career scientists slightly higher than other cohorts. For example, the Under 30 group's ratings were as follows (compare to the average rating table below):
 - ASA is a student-friendly organization and does a good job of involving students. (5.16)
 - ASA needs more services geared to early and mid-career members. (5.03)
 - ASA has done a good job of engaging younger scientists in the Society. (4.73)

Key Challenges for Acoustics and ASA

Respondents were asked to identify the top three challenges facing the field of acoustics and ASA in the next 3-5 years from a list of challenges identified in the telephone interviews.

- No challenge for acoustics or ASA garnered a majority of responses; all received less than 50%.
- The three most frequently noted as top challenges by more than 40% of respondents were 1) "Lack of sustainable funding for research in the field of acoustics" (49%), 2) "Lack of understanding among policymakers of the value of acoustics" (43%), and 3) "New ideas/discoveries are happening at the intersection of disciplines, not directly in acoustics" (41%).
- The top three were consistently highly rated in importance among all age groups; however the under 30 and 75+ age groups included "Difficulty in explaining acoustics and its value to the uninformed in the media and the general public" in place of the third selection noted above
- The two lowest rated challenges were 1) "Rapidly changing interest areas in the field" (10%), and 2) "Dearth of recent new ideas/discoveries in acoustics leads to lack of excitement in the field" (12%).
- "Changes in the publishing business model as a result of changes in the distribution of information" was uniquely low for under 30 (11%) compared to other age groups (24%-36%). This may reflect lack of familiarity with the business model or lack of attachment to how information has been distributed in the past.

Key Challenges for Acoustics	% Respondents
Lack of sustainable funding for research in acoustics	49.44%
Lack of understanding among policymakers of the value of acoustics	43.31%
New ideas/discoveries are happening at the intersection of disciplines, not directly in acoustics	41.23%
Difficulty explaining acoustics and its value to the uninformed in the media and the general public	34.54%
Changes in the publishing business model as a result of changes in the distribution of information	27.30%
Difficulty attracting early career scientists to the field	24.51%
Diminishing number of career opportunities	23.96%
Mature field at a time when people are seeking more novel fields	23.40%

Too few graduate programs in acoustics	19.78%
Difficulty getting acoustics articles published in big science journals such as NATURE or SCIENCE	17.27%
Dearth of recent new ideas/discoveries in acoustics leads to lack of excitement in the field	11.84%
Rapidly changing interest areas in the field	10.13%

- The top challenges noted for ASA, specifically, were;
 - 1) “Competition for members’ time and resources from other societies, meetings, and employment” (44%)
 - 2) “Increasing difficulty attending two meetings a year” (38%)
 - 3) “Aging demographic of those active in acoustics” (37%)
 - 4) “Declining funding for travel to meetings” (34%)
- Nearly a third (31%) of the under 30 age group identified “Small number of early career acousticians involved in ASA” as a significant challenge for ASA, while less than 21% of all other age groups viewed it as a challenge. Open-ended comments supported the need for greater involvement of early career acousticians:
 - *ASA is the most student-friendly professional organization I am aware of. The big hurdle now to keep the lifeblood of ASA is to transition students into early-career members. This is a huge challenge as many members move into fields semi-related to acoustics, and they have trouble justifying meetings and membership costs with their employer and eventually with themselves. (TC, Under 30)*
 - *Working to find ways to involve early and mid-career members is vital at this stage for ASA! ASA is doing a great job involving students (funding and at conference events, so there is no problem at that stage. But, as has been said numerous times before, our membership is aging and this must be addressed for those in between. (Under 30)*
 - *The future of any organization depends on the strength of its youth. ASA seems to be top heavy in terms of age. (30-39)*
 - *ASA must engage the early career scientist, especially postdocs, as a core membership cohort. They are our future (if we can help them get a job!) (TC, 30-39)*

Key Challenges for ASA	% Of Respondents
Competition for members’ time and resources from other societies, meetings, and employment	43.98%
Increasing difficulty attending two meetings a year	38.10%
Aging demographic of those active in acoustics	37.25%
Declining funding for travel to meetings	34.03%
Changing business models for publishing (including open access)	29.41%

Lack of employer support and interest in ASA activities	22.13%
Small number of early career acousticians involved in ASA	17.37%
Demand for rapid cycle time in publishing	16.81%
Changing expectations of new generation of ASA member and volunteers	16.67%
Increasing importance of international membership growth	14.01%
Increasing demand for electronic delivery of publications	12.61%
ASA publications are slow to change	11.76%
Increasing demands for technology and virtual access to meetings and services	11.62%
Lack of excitement at meetings/in publications due to dearth of recent new discoveries	9.38%
Increasingly bimodal membership, i.e. the “missing middle”	9.38%
Increasing demand for virtual meetings	9.24%
Greater opportunities for ASA as a result of increasing diversity	6.02%
Limited access ASA programs and services	3.22%

- Several challenges were selected by fewer than 10% of respondents, the most notable being “Limited access ASA programs and services” at 3%.
- While comments primarily supported the challenge statements above, there was a common theme that ASA has become “too academic” and less concerned with the application/industry side of acoustics, as illustrated in the following comments:
- *ASA seems uninterested in applications (too much academic focus). (60-75)*
- *There’s a gap between what university/research folks are interested in presenting, and what practicing consultants want to hear/learn about. (40-49)*
- *I started as student in academia and felt welcome. Transitioned to industry and felt unwanted and without a home at meetings. (30-39)*
- *As a professional working in sound system design, I found the academic focus of ASA to be a serious weakness. (60-75)*
- *Due to funding and businesses’ unwillingness to share proprietary information, ASA is dominated by academics, rather than industrial acousticians. This is reflected in leadership, meetings and publications. (50-59)*

Roles for ASA

The survey responses were slightly different than those from the interviews regarding the most important roles for ASA.

- When asked what roles they see for ASA to address these future challenges, 38% said, “Be an advocate for the field, the scientists, and communities involved in acoustics.” Similarly, 36% said ASA should “Advocate for more funds for acoustics research” and “Educate the public about acoustics.” Comments reiterated the importance of these roles.

- Much like comments heard in interviews, some spoke to the importance of ASA serving as a facilitator of collaboration within and outside the field of acoustics. For example:
- *Facilitate the development of new intersections between disciplines within acoustics and also between acoustics and other fields such as behavioral sciences, arts, education, business, construction, economics, communications, etc.*
- The lowest rated roles for ASA included “Increase gender and ethnic diversity among scientists and among ASA members” (8%) and “Provide more funding for students to attend its meetings and engage in ASA activities” (11%).

Key Roles for ASA	% Of Respondents
Be an advocate for the field, the scientists, and communities involved in acoustics	38.26%
Advocate for more funds for acoustics research	36.85%
Educate the public about acoustics	36.43%
Raise the profile of acoustics	31.50%
Watch for new frontiers and opportunities at the intersection of disciplines	28.13%
Develop collaborative relationships with scientific societies around the globe	26.72%
Promote new and exciting discoveries	23.91%
Focus on interdisciplinary diversity	21.94%
Provide programming to meet the particular needs of early and mid-career acousticians	21.38%
Develop and maintain collaborative relationships with other scientific societies in the U.S	17.30%
Provide more funding for students to attend its meetings and engage in ASA activities	11.11%
Increase gender and ethnic diversity among scientists and among ASA members	8.30%

ASA Leadership

Members were asked to rate both the level of importance and ASA’s performance for several organizational attributes related to how ASA operates on a 1-6 scale with 1 being Never and 6 being Always.

REGARDING MEMBER ENGAGEMENT AND LEADERSHIP

- The three attributes rated highest in importance are:
 - 1) ASA attracts the best, most qualified people to leadership positions (4.9)
 - 2) ASA is transparent in its selection of leaders (4.8)
 - 3) ASA leadership reflects the broad diversity of membership (4.7)

- Members rate the importance of each of the attributes between 4 (Usually Important) and 5 (Almost Always Important), reflecting general overall agreement on importance.
- In each case, the gap between Importance and Performance is less than <1.
 - ASA effectively involves students in leadership has a minor gap of .33
- Three show a gap of >.80:
 - ASA has a clear pathway for members to get involved in leadership. (.83)
 - It is easy for those outside the US to engage with ASA leaders and to serve in ASA leadership positions. (.83)
 - ASA effectively involves early career acousticians in leadership. (.81)
- Of particular interest, the Under 30 group had a larger gap of 1.42 between importance (4.88) and performance (3.46) regarding the statement, “ASA effectively involves early career acousticians in leadership.”
- Most respondents (82%) have not served in any leadership position with ASA in the last 7 years. Several comments indicated that members don’t know much about ASA leadership and one suggested that it would be valuable for members to know more about it:
 - *ASA is the best society I belong to for offering service and leadership opportunities for early career academics, but this is barely known among its members.*

Member Engagement and Leadership	Importance	Gap	Performance
ASA attracts the best, most qualified people to leadership positions.	4.94	.67	4.27
ASA is transparent in its selection of leaders.	4.84	.64	4.20
ASA leadership reflects the broad diversity of membership.	4.69	.71	3.98
ASA’s leadership development, recruitment and selection result in sufficient diversity and breadth of perspectives in leadership.	4.60	.78	3.82
ASA effectively involves students in leadership.	4.54	.83	3.71
ASA effectively involves early career acousticians in leadership.	4.40	.81	3.59
It is easy for those outside the US to engage with ASA leaders and to serve in ASA leadership positions.	4.11	.83	3.28
ASA effectively involves students in leadership.	3.93	.33	3.60

REGARDING COMMUNICATION AND DECISION-MAKING

- “JASA has a transparent and timely decision process of paper submission, review and publication” (5.1) was rated most important among the attributes presented. There is a significant difference in opinion on Performance based on age, with the under 50 age groups rating Performance much lower compared to its Importance:

JASA has a transparent and timely decision process of paper submission, review and publication.	Importance	Gap	Performance
Under 30	5.36	1.18	4.18
30-39	5.26	1.84	3.42
40-49	5.16	1.23	3.93
50-59	5.31	1.06	4.25
60-75	4.97	.62	4.35
76+	4.60	.33	4.27
Overall Ratings	5.10	.99	4.11

- The widest gaps between Importance and Performance are listed here and may be ASA's biggest levers for change:
- "ASA leadership structure and processes are nimble, modern, strategic and risk tolerant." (1.13)
- "JASA has a transparent and timely decision process of paper submission, review and publication." (.99)
- ASA leadership communicates effectively with the membership about the rationale for decisions made. (.95)
- Communication was also noted by one member as a potential area for improvement related to ASA's decision-making:
- *I believe that members actually have significant opportunity to affect decisions, but that they do not know how to go about it.*

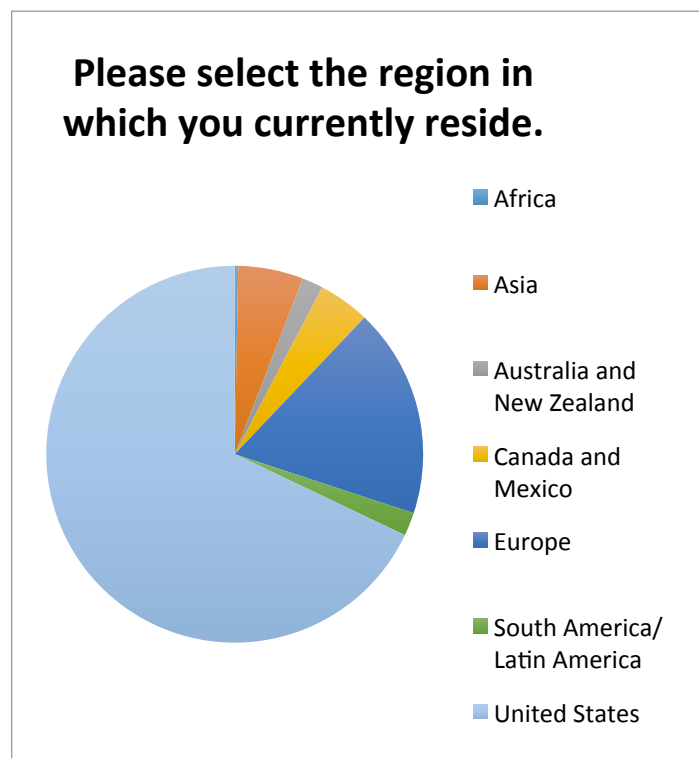
Communication and Decision-making	Importance	Gap	Performance
JASA has a transparent and timely decision process of paper submission, review and publication.	5.10	.99	4.11
ASA leaders communicate clearly, effectively and often with members.	4.86	.62	4.24
ASA is quick to respond to issues of importance to acoustics.	4.80	.79	4.01
ASA committees and work groups link decisions about their activities and priorities to ASA's overall strategic direction and priorities.	4.68	.85	3.83
ASA leadership communicates effectively with the membership about the rationale for decisions made.	4.61	.95	3.66
ASA leadership structure and processes are nimble, modern, strategic and risk tolerant.	4.60	1.13	3.47
Members have ample opportunities to provide input into decisions made by ASA leaders	4.51	.86	3.64

Survey Demographics

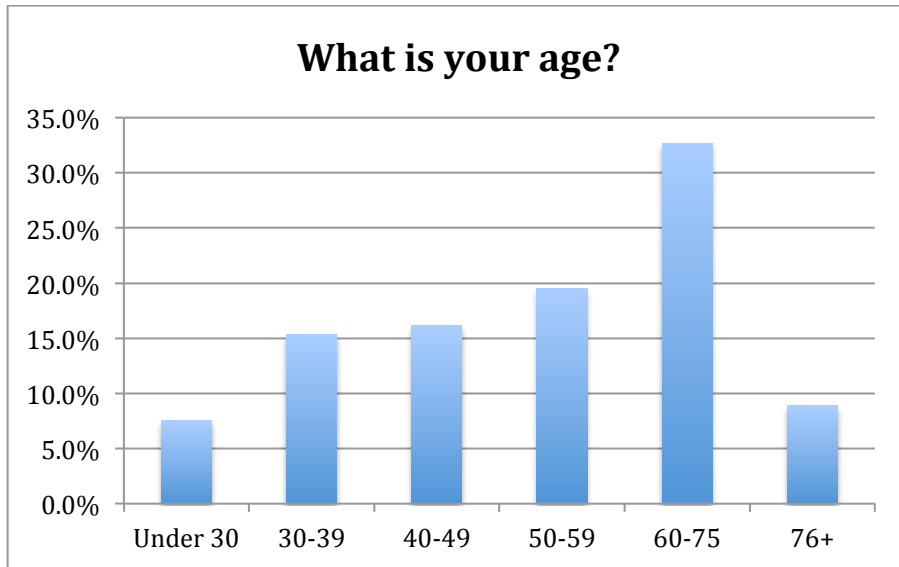
Following are demographics of survey respondents related to age, location, level of education, employment status, work area and primary interest in acoustics.

- Of the 790 respondents, 68% are from the U.S., with Europe being the next highest number of respondents at 18%. Geographic representation among survey respondents is closely aligned with the geographic distribution of membership, with 35% residing outside of the U.S.
- The age distribution of respondents closely parallels the age distribution of membership. The majority of respondents are over 50 (61%), and 16% are retired. The Under 30 cohort represents 7% of respondents and makes up 11% of ASA membership. Additionally, less than a quarter of respondents (22%) are under 40.

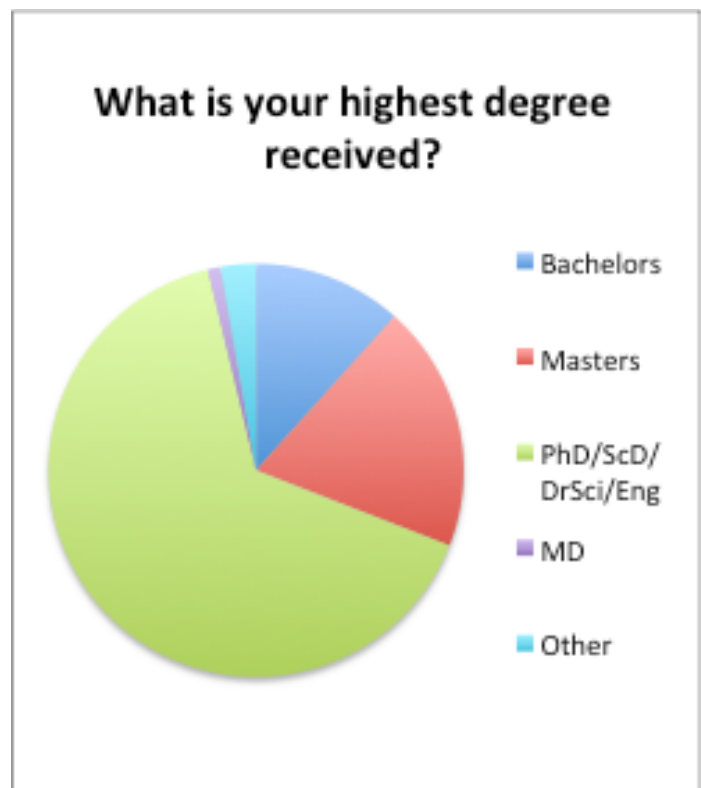
Answer Options	Response Percent
Africa	0.3%
Asia	5.6%
Australia and New Zealand	1.8%
Canada and Mexico	4.4%
Europe	18.0%
South America/Latin America	2.0%
United States	68.0%



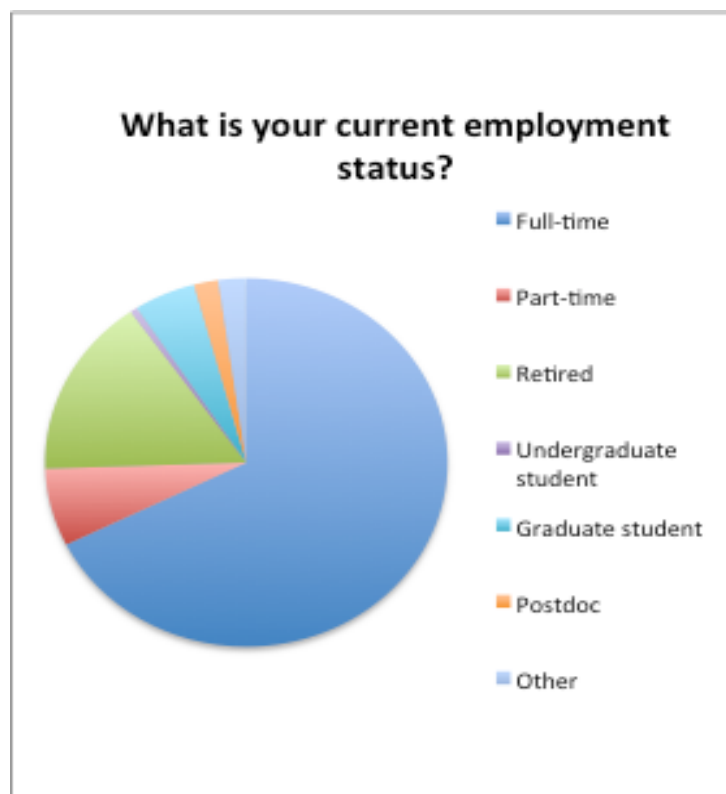
Answer Options	Response Percent
Under 30	7.5%
30-39	15.3%
40-49	16.2%
50-59	19.5%
60-75	32.7%
76+	8.9%



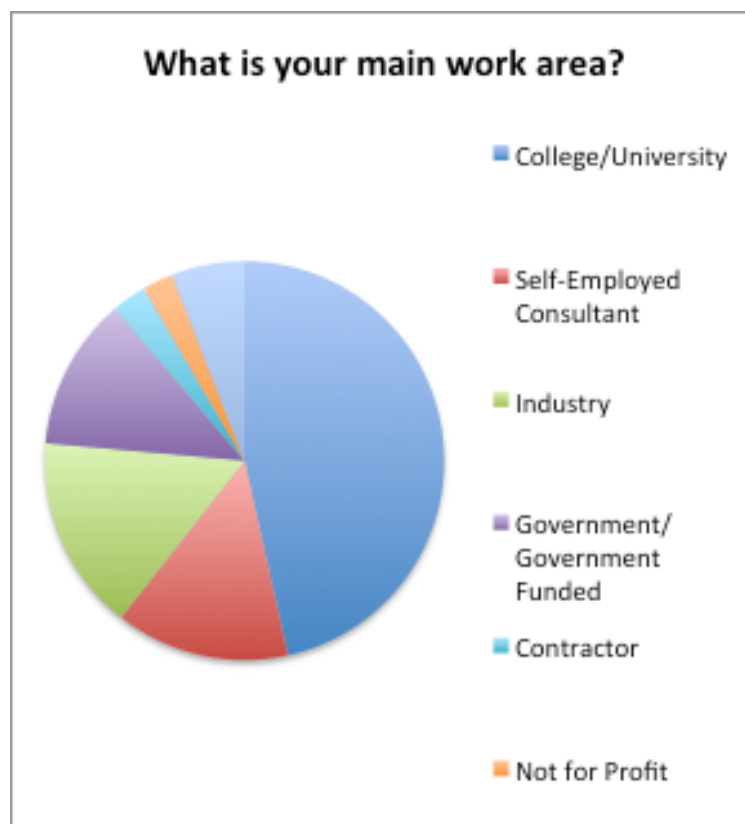
Answer Options	Response Percent
Bachelors	11.8%
Masters	19.6%
PhD/ScD/DrSci/DrEng	66.3%
MD	1.0%
Other	2.8%



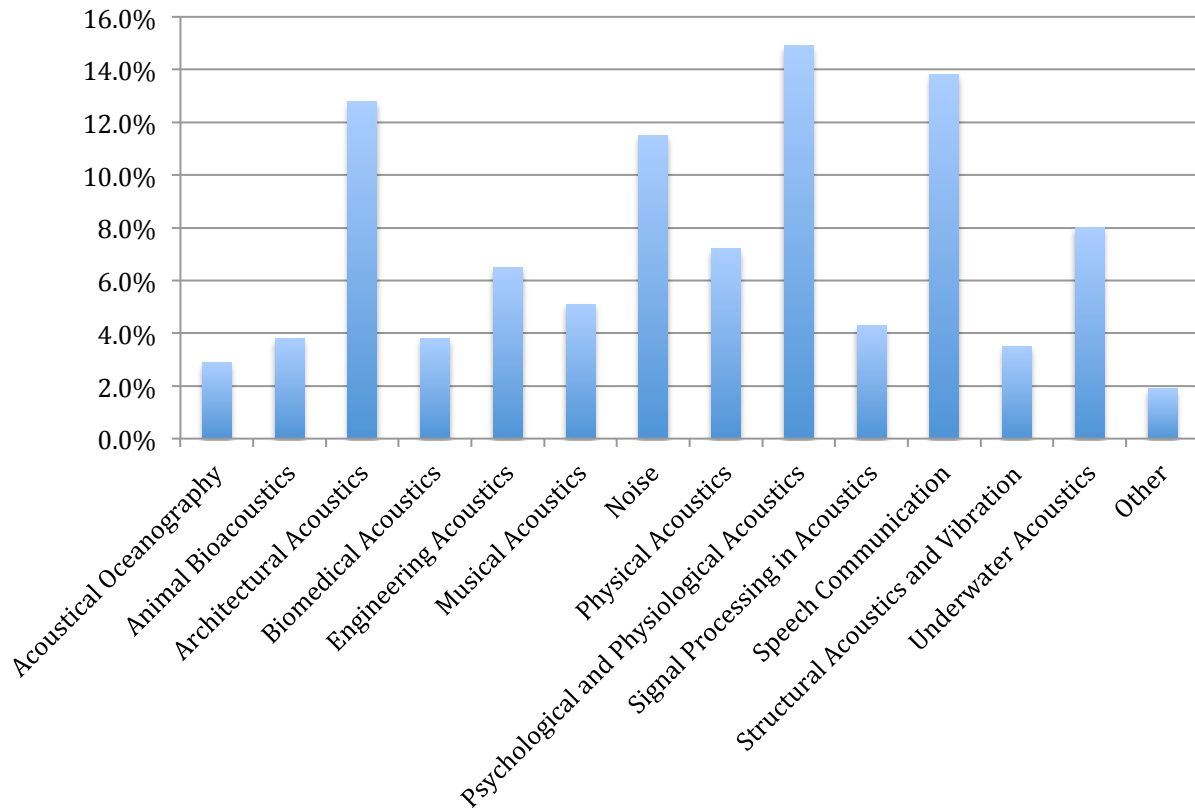
Answer Options	Response Percent
Full-time	69.4%
Part-time	7.0%
Retired	16.2%
Undergraduate student	0.6%
Graduate student	5.1%
Postdoc	2.0%
Other	2.3%



Answer Options	Response Percent
College/University	46.5%
Self-Employed Consultant	14.1%
Industry	15.8%
Government/Government Funded	12.4%
Contractor	2.8%
Not for Profit	2.5%
Other	5.9%



What is your primary interest in acoustics?



Answer Options	Response Percent
Acoustical Oceanography	2.9%
Animal Bioacoustics	3.8%
Architectural Acoustics	12.8%
Biomedical Acoustics	3.8%
Engineering Acoustics	6.5%
Musical Acoustics	5.1%
Noise	11.5%
Physical Acoustics	7.2%
Psychological and Physiological Acoustics	14.9%
Signal Processing in Acoustics	4.3%
Speech Communication	13.8%
Structural Acoustics and Vibration	3.5%
Underwater Acoustics	8.0%
Other	1.9%