Written Statement of
Christofer Nelson, President and CEO, Association of Science and Technology Centers;
Laura Lott, President and CEO, American Alliance of Museums;
Arthur G. Affleck, III, Executive Director, Association of Children's Museums; and
Bonnie Styles, Executive Director, Association of Science Museum Directors

to the

United States House of Representatives Appropriations Subcommittee on Commerce, Justice, Science, and Related Agencies

regarding

Federal Science Funding and the National Science Foundation, National Aeronautics and Space Administration, and National Oceanic and Atmospheric Administration

May 13, 2022

Chairman Cartwright, Ranking Member Aderholt, and Members of the Subcommittee:

Thank you for accepting this statement submitted by the Association of Science and Technology Centers (ASTC), the American Alliance of Museums (AAM), the Association of Children's Museums (ACM), and the Association of Science Museum Directors (ASMD).

We appreciate the opportunity to present the views of our associations to the Subcommittee for its consideration as it prepares to write the Fiscal Year 2023 Commerce, Justice, Science, and Related Agencies Appropriations bill, particularly regarding the National Science Foundation (NSF), the National Aeronautics and Space Administration (NASA), and the National Oceanic and Atmospheric Administration (NOAA).

Our associations represent more than 5,000 member organizations in every state and district in America, including science centers, museums of all types, nature centers, aquariums, zoos, planetariums, botanical gardens, and natural history and children's museums, as well as companies, consultants, and other organizations that share an interest in science education and public engagement in science.

Taken together, our national reach is a vital resource for fostering rich public engagement in the importance of science and many other subjects and disciplines towards building a bright future and opportunity for all. Our place-based organizations are leading institutions in the efforts to promote education in science, technology, engineering, arts, and mathematics (STEAM), developing rich, innovative, and effective science-learning experiences. We are helping to create the future STEAM workforce and inspiring people of all ages about the wonders and the meaning of science in their lives. Our members are trusted and valued by their communities—a recent national public opinion poll, showed that 95% of voters would

approve of lawmakers who acted to support museums and 96% of voters want Federal funding for museums to be maintained or increased (*Museums and Public Opinion*, S. Wilkening and AAM, 2018).

These past two years have been especially challenging for our community as nearly all of our members, many of whom receive the majority of their operating income from revenue from people coming through their doors, experienced prolonged closure of their facilities. Even as they have reopened to the public, attendance and revenue may take several years to recover. While Federal relief programs have provided an essential lifeline, the impact on our members will long outlast COVID relief (*National Snapshot of COVID-19 Impact on United States Museums*, AAM and Wilkening Consulting, 2021). At the same time, our member institutions continued to serve their communities and their missions, engaging their regions with STEM and youth engagement, supporting science learning and serving their communities in myriad other ways. Indeed, one of the most inspiring aspects of the past two years is how our member organizations have shown up for their communities and worked closely with local residents and organizations to advance conversation and action on the most urgent local priorities.

For example, a year ago ASTC, AAM, and ACM joined with a coalition of other national organizations to launch *Communities for Immunity* (www.communitiesforimmunity.org), an initiative supported by the Centers for Disease Control and Prevention and the Institute of Museum and Library Services to activate museums, libraries, and tribal organizations to boost vaccine confidence in their communities. Building upon the high degree of trust that the public has in these cultural institutions, *Communities for Immunity* has been able to effectively engage vaccine hesitant members of their local communities.

As the nation hopefully emerges from the immediacy of the pandemic, this example of action by the museum and library community demonstrates how these trusted institutions embedded in their communities offer an opportunity to advance community conversation and action on national and international challenges in locally relevant ways.

Requests for Fiscal Year 2023 Appropriations

We appreciate the support that the Subcommittee has provided for the nation's science and education agencies, including support for programs of particular interest to ASTC, AAM, ACM, and ASMD.

In general, we stress the need for inclusive programs that include support for informal education as much STEAM learning—including but not limited to school-aged youth—happens outside of formal schooling. Research has consistently shown that learning experiences outside of the formal classroom are vitally important to youth's future interest and capacity in STEAM (National Academies, 2006, 2009, 2010, 2015, 2016).

National Science Foundation (NSF)

The National Science Foundation (NSF) is one of our nation's most important sources of support for STEM education, including many of the programs centered in the Directorate for Education and Human Resources (EHR). EHR supports STEAM education at all levels and for all

audiences to help develop a diverse and well-prepared workforce and a scientifically well-informed citizenry.

Of particular interest to the museum community is the Advancing Informal STEM Learning (AISL) program in the Division of Research on Learning in Formal and Informal Settings, which advances new approaches to and evidence-based understanding of learning in informal environments. However, current funding levels have limited the ability of the program to support the range of informal STEM education programs that have been ranked highly competitive. We ask you to provide **at least $74.5 million for the Advancing Informal STEM Learning (AISL) program**.

NSF also supports STEAM education and informal learning through its research directorates, and we urge the Subcommittee to provide increased funding for the NSF Directorates for Biological Sciences; Education and Human Resources; Geosciences; and Social, Behavioral and Economic Sciences to continue to support museum research, collections, and programs that are key to lifelong STEAM education. We also support the focus on the intersection of science and society in NSF's new Directorate for Technology, Innovation, and Partnerships.

Finally, we support continued analysis and refinement of the broader impacts criterion on which all NSF proposals are evaluated, including efforts to enhance training for merit review panelists and NSF program officers—and the development of tools for evaluating and documenting the societal impacts of research.

National Aeronautics and Space Administration (NASA)

The National Aeronautics and Space Administration (NASA) supports informal STEM education in a variety of ways. The Teams Engaging Affiliate Museums and Informal Institutions (TEAM II) program, within the Office of STEM Engagement, provides support for museums and planetariums to enhance programs related to space exploration, aeronautics, space and earth science, or microgravity.

We request **at least $130 million for NASA's Office of STEM Engagement**, including **at least $15 million for the Teams Engaging Affiliate Museums and Informal Institutions (TEAM II) program**.

In addition, NASA's Science Mission Directorate supports museums and museum networks through its Science Activation program, which connects competitively-selected teams across the country with NASA infrastructure teams. Last year, more than 50 teams supported by the program engaged more than 21 million learner interactions in all 50 states. To continue the program's evolution and strong reach nationwide, we request **at least $47 million for the SciAct Program**.

National Oceanic and Atmospheric Administration (NOAA)

NOAA's Office of Education offers two grant programs to advance education in areas relevant to NOAA's mission, including support for museums, zoos, aquariums, and science centers. These programs help enhance the understanding and use of environmental information to promote informed decision-making by educators, students, and the public.

- The Bay Watershed Education and Training (B-WET) program promotes place-based experiential learning for K-12 students and related professional development for educators.
- Environmental Literacy grants support activities that inspire people to use Earth system science to improve ecosystem stewardship and increase resilience to environmental hazards. For more than 15 years, these grants have supported museum exhibitions, K-12 curricula, online education resources, citizen science activities, out-of-school programs, and professional development for educators.

As the need for enhanced education about our changing climate and community resilience increases, there is a need for a concurrent increase in the budget for the Office of Education We request **at least $35 million for NOAAs Office of Education**.

We continue to thank the Subcommittee for all its support of a robust science and education budget. You have demonstrated your support for crucial programs that promote STEAM education for our nation's students. Like our organizations, you recognize these are vital investments in our future, and we thank you in advance for taking action accordingly.

Our organizations stand ready to be of service to your work. We are always happy to provide examples of the ways that museums are contributing to their communities and helping to advance local, regional, and national priorities. With our networks of hundreds of community-based institutions, these examples can be in or near each Congressional district.

Founded in 1973, the **Association of Science and Technology Centers** (ASTC) is a network of nearly 700 science and technology centers and museums, and allied organizations, engaging more than 110 million people annually across North America and in almost 50 countries. With its members and partners, ASTC works towards a vision of increased understanding of—and engagement with—science and technology among all people. *www.astc.org*

The **American Alliance of Museums (AAM)** has been bringing museums together since 1906, helping to develop standards and best practices, gathering and sharing knowledge, and providing advocacy on issues of concern to the entire museum community. Representing more than 35,000 individual museum professionals and volunteers, institutions, and corporate partners serving the museum field, the Alliance stands for the broad scope of the museum community. *www.aam-us.org*

The **Association of Children's Museums** (ACM) champions children's museums worldwide. With more than 460 members in 50 states and 19 countries, ACM leverages the collective knowledge of children's museums through convening, sharing, and dissemination. *www.childrensmuseums.org*

The **Association of Science Museum Directors** (ASMD) is a non-profit, professional association of natural history and other science museum directors. Our community of science museum leaders gathers to share experiences and discuss issues related to the advancement of our respective organizations to benefit society and the planet. *www.asmd-us.org*