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Watch the video of the speech https://youtu.be/bsbGDaIKVdA

This will be an exciting year for ASHRAE, both for you and for me. This also will be a busy year with many challenges; but it is important that we have fun with what we are doing along the way.

Bjarne W. Olesen, Ph.D., ASHRAE President, 2017–18

Extending Our Community

BY BJARNE W. OLESEN, PH.D., FELLOW/LIFE MEMBER ASHRAE

It is a great pleasure for me to stand in front of you and share my vision for ASHRAE during the coming year(s). This is not just my vision, but it is also yours. It has been shaped over the years as we developed our strategic plan. During the next half hour I hope to:

- Share with you key elements of our strategic plan, and the specific aspects I want to focus on during my presidential year;
- Motivate you and embolden you to renew your efforts and commitment to our plan; and
- Make you optimistic and enthusiastic about the future of ASHRAE.

My name is Olesen, Bjarne W. Olesen. Yes, pronouncing my name may not be the easiest task for you. Let us hear some examples: video https://youtu.be/9jCxRvd1ahU

The ASHRAE president is often called many names during his or her term, and as you can see, that will clearly be the case again this year! It really doesn't matter what you call me. What does matter is that you know it is a great honor for me to serve as your Society president, and that I will continue to work hard on your behalf!

I come from Denmark, which is a small country in Scandinavia. Denmark has changed a lot since Shakespeare wrote "something is rotten in the state of Denmark." Now we are regarded as the happiest people in the world.

How Did I Get Here?

My first contact with ASHRAE was through the *Handbooks* and *Transactions*, which were regarded as high-level scientific publications among researchers.

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During my Masters and Ph.D. studies, I met several important "ASHRAE" people. Ralph Nevins, leader of the ASHRAE research lab at Kansas State University, and Pharo Gagge from the John B. Pierce Lab at Yale University who, for many years, were both regarded as the leading researchers in thermal comfort. So, it was no surprise my mentor Professor Ole Fanger asked me to attend the ASHRAE Annual Meeting in Halifax in the summer of 1977 to present a paper based on my Ph.D. study. Since then, I have been to every meeting, and I am sure Professor Fanger is watching from his place in the ASHRAE Hall of Fame.

I had another important mentor during my time in the industry, Dr. Per Brüel. He was competing with Professor Fanger to see who would receive the most Honorable Doctorates. He was also a member of the U.S. Academy of Science. Dr. Brüel was the founder of a very successful company that manufactured high-level measuring instruments for the indoor environment. I remember speaking with him once about travelling and said I was not sure if I really would like it very much. He said, "Just wait, you will like it." Well, I have now travelled to more than 70 countries and visited all 50 states during my work for the industry, university, and ASHRAE.

Strategic Plan

We have a strategic plan. It was published in 2014. This plan gives the direction of the Society. Therefore, this plan must also guide the presidents in developing their focus during their presidential year.

Like the two presidents before me, I plan to focus on specific aspects of our strategic plan. President Underwood focused on "Connect," and President Wentz focused on "Adapt." We need to do both of these to be successful. We must CONNECT with other societies or individually with other people. We must ADAPT to new technologies and different ways of doing things. Only then can we EXTEND, which brings me to my theme.

My overall presidential theme will be "EXTEND"—focusing on three directives:

- EXTEND our global community;
- EXTEND our technological horizons; and
- EXTEND our value to members.

EXTENDING our Global Community

Although ASHRAE's global presence has grown, we as a Society need to be more strategic as a leader, in some cases as a partner, and in other cases as both. Why should we be more global? How do members here in the U.S. and around the world benefit from a more global Society? The answers to these questions should serve as the foundation of a new global strategy that addresses challenges facing the global building industry today.

Is it possible to be global without speaking the same language and without using the same units of measure?

The answer is YES! The world is getting smaller, and ASHRAE is getting bigger. Remember the work of ASHRAE members is not constrained by borders. We are a global, inclusive community united by a common passion to optimize the design and performance of buildings. All major companies have an international presence and reach many countries. Consultants, engineers, and architects have worldwide projects. So, ASHRAE needs to have a stronger global presence to better serve our members. As President Tim Wentz said, "We need to be in the room." Now is the time to make the room bigger.

Let us first look at what our global presence is today. We have approximately 57,000 members, with 20% located outside of North America, representing more than 130 countries. We have more than 180 chapters and 269 student branches. Our membership growth is steady in both North America and Europe; but we also have solid growth in Asia and the Middle East. Forty-two of ASHRAE's 44 Chapters chartered since 1990 have been formed outside of North America.

We have had two regions that are entirely outside North America: Region XIII that encompasses East and Southern Asia and Region at Large (RAL) which encompasses Europe, the Middle East and parts of Asia (India,

Bjarne W. Olesen, Ph.D., Fellow/Life Member ASHRAE, has served on the Board of Directors as Treasurer, Vice President and Director-at-Large. Olesen is the Director of the International Center for Indoor Environment and Energy and a Professor at Danish Technical University. In addition to his time served on the Board of Directors, he has been a part of many technical committees and has been a Coordinating Officer of various committees, most recently: Conferences and Expositions Committee, Chapter Technology Transfer Committee, Honors and Awards Committee, Grassroots Government Advocacy Committee, Membership Promotion Committee, Research Promotion Committee, Student Activities Committee and Young Engineers in ASHRAE Committee. For his efforts and dedication to ASHRAE, Olesen is the recipient of the Lou Flagg Historical Award, Fellow Award, Exceptional Service Award and Distinguished Service Award. Olesen earned his Ph.D. in Heating and Air Conditioning in 1975 and Master of Science in Civil Engineering in 1972—both degrees obtained from the Technical University of Denmark.

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ALTHOUGH ASHRAE'S GLOBAL PRESENCE HAS GROWN, we as a Society need to be more strategic as a leader, in some cases as a partner, and in other cases as both. Why should we be more global? How do members here in the U.S. and around the world benefit from a more global Society? The answers to these questions should serve as the foundation of a new global strategy that addresses challenges facing the global building industry today.

Pakistan, etc.). Europe is challenged, as most of the 1,800 members do not enjoy the benefits of a local Chapter. The roles of national societies in RAL and Region XIII countries often overlap the role of traditional Chapters. In Europe, for example, national HVAC&R societies have about 100,000 members compared to our 1,800 members.

To better serve ASHRAE European members and to improve the influence of ASHRAE members in Europe, the Board has created a new European region from the RAL. The new European Region will strengthen the grassroots Chapter and Regional infrastructure, a strategy that has proven successful around the globe. It will also provide a dedicated Board representative from Europe. A new Region will also encourage the board to think more globally. With this new region will come new chapters in Ireland and the U.K., which will be vitally important for collaboration throughout the new region.

Collaborating with the individual national HVAC&R Societies throughout Europe is critically important. To help drive those relationships, the Board has approved strategic partnership agreements with CIBSE (the Chartered Institute of Building Services Engineers), which is based in the UK, AiCARR (Italian Association of Air-Conditioning, Heating and Refrigeration), which is based in Italy, and REHVA (the Federation of European Heating, Ventilation and Air-Conditioning associations). REHVA is a federation of 26 European HVAC&R Societies with more than 100,000 members. These agreements will increase the knowledge transfer both ways between North America and Europe.

ASHRAE history has proven that the impact of creating a new region can be very significant. Take Region XIII, for example, which covers Eastern and Southern Asia. When it started, there were only four chapters. Now, there are ten.

There are also HVAC engineers in parts of the world where ASHRAE does not have a strong presence. Creating a European Region will allow the RAL to focus on growth in areas that may now be underserved by ASHRAE, such as in Africa. There is great potential here. ASHRAE's expanding relationship with the United Nations Environmental Program (UNEP) will support that growth. Flexibility is the key to our global expansion. We cannot force North American Chapter practices on members in other parts of the world. As Tim Wentz has told us, we need to adapt. One size will not fit all. We must be flexible and concurrently honor the traditions and values that have made ASHRAE so successful and influential for more than a century.

ASHRAE Associate Society Alliance

As we energize our global presence, we need to build on the relationships established through the ASHRAE Associate Society Alliance (AASA). Although AASA successfully brings more than 60 HVAC&R Societies from around the world together, it has tremendous untapped potential to unite the global built environment. AASA was formed many years ago when we did not have chapters outside North America, and today many ASHRAE chapters coexist with AASA Societies. We need to make AASA stronger. We need to "upgrade" it to a Global HVAC&R Alliance that unites the global built environment—one that creates a powerful force addressing global issues such as climate change and indoor air quality. One that allows us to speak with a larger, more influential voice on the global stage. I am pleased to announce we are planning to have the first meeting of AASA outside North America specifically to discuss the creation of the Global HVAC&R Alliance. That meeting will be held in Brussels in April 2018 parallel to the general assembly of REHVA. Again, this is to emphasize and

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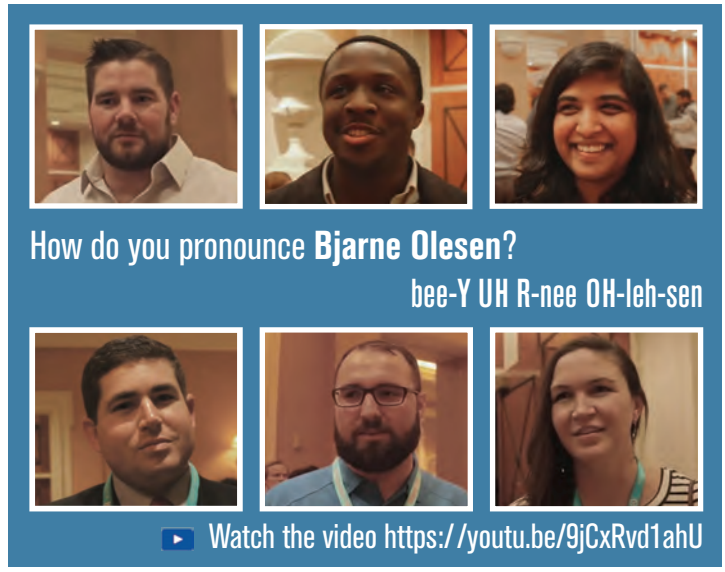
EXTEND our global presence and our willingness to collaborate.

Developing Economies

ASHRAE's mission statement says we will advance the arts and sciences of HVAC&R to serve humanity and create a more sustainable world. Working in developing economies is one of our Society's greatest opportunities to serve humanity—to make lives better.

More than 3.565 billion people live in low income and lower middle income countries with developing economies, according to The World Bank. We have about 3,500 members in those areas. There are many serious problems in some of these countries. Additionally, according to the World Health Organization, more than 5,000 people die every day in developing economies due to exposure to bad indoor air quality. This is mainly women and children exposed to particles and chemicals from unvented cooking and fireplaces.



What can ASHRAE do? Energy efficiency is an ASHRAE mantra, but is there a more noble goal than saving lives or reducing the negative health effects of poor indoor air quality? We need to build upon the strong relationship we have with UNEP and help people in developing economies. We have just signed a new work plan with UNEP that focuses on education related to conventional and low-GWP refrigerants. We need to see if there are technologies and educational opportunities we can provide to improve the living conditions for people in an energy-efficient and affordable way.

A couple of years ago, we had a Presidential Ad Hoc Committee that was tasked to develop strategies for supporting developing economies. As a result of that work, we now have people from developing economies on several ASHRAE committees. To strengthen that further, I have assigned a consultant with experience in developing economies to our three councils and board planning committee.

EXTENDING our global community does not mean we are changing course. It means we are building on our strategic plan, acknowledging our interconnectedness worldwide and embracing our shared needs and objectives. This is something that will benefit all of us. Globalization is not just about serving members outside North America. The technical guidance we produce for all members—including members here in North America—is made stronger by global diversity. Examples of technologies that have flowed into North America from ASHRAE members around the world include water-based radiant heating and cooling, chilled beams displacement ventilation, and variable refrigerant flow. European countries in particular are focusing on energy labeling and indoor environments, and we can learn from their experiences.

We will never forget the fact that 80% of ASHRAE members are based here in North America, However, a more global and diverse membership makes for a stronger Society. Everyone brings a different view to the table from which we all can learn.

EXTENDING our Technological Horizons

We also need to EXTEND our Society's scope beyond traditional commercial buildings. We need to extend our standards, research, and outreach to broader communities and needs. We need to focus on building performance beyond commercial buildings. We need to EXTEND our technological tools and knowledge to address needs in residential buildings and in developing economies.

Residential

Many believe ASHRAE only looks at issues related to commercial buildings. But, in fact, ASHRAE has long been a participant in critical aspects of residential building performance, from fundamentals on heat transfer and equipment sizing to human comfort. We have

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technological offerings like Standard 62.2 addressing the indoor air quality needs in homes. We have a renewed effort on Standard 90.2 addressing residential building energy use.

As we spend more than 50% of our time in our homes, and as energy use in residential buildings is greater than in commercial buildings, we need to increase our activities to serve the residential marketplace.

The first step was forming a committee under the Technology Council, the Residential Buildings Committee, which will be in charge of EXTENDING our presence. Several initiatives are already under way. We are in the process of establishing an ASHRAE conference with a strong residential focus, which will be held every third year. Our *GreenGuide* publication has been revised to include specific content on residential buildings. Additionally, the development of the first residential building design guide focusing on multifamily buildings has begun.

While commercial buildings may look quite similar around the world, there are huge differences in residential buildings in both design and building technologies. Therefore, it is impossible to make guidelines that cover the breadth of residential buildings worldwide. One way we might EXTEND our residential building efforts is by enabling regions or chapters to develop locally specific guides with support from our Technical Committees, Standard Committees and headquarters.

Another important issue with residential buildings is the significant influence of the user. Occupant behavior in homes will significantly influence both the indoor environment and energy use. We need to obtain a much better understanding of occupant behavior so we can address it in design, control, and user feedback in residential buildings.

Developing Economies

Rapid development in very large urban environments has placed many developing countries at a critical junction in infrastructure development. ASHRAE's influence during this critical phase can have a significant impact on the health and welfare of people in these countries for centuries to come. Additionally, ASHRAE needs to be responsive to the unique needs of members in these developing-economy countries.

As mentioned earlier, we have recently signed a new work plan with UNEP, which will result in new technical programs from ASHRAE. Together with UNEP, we have launched the first course on refrigerants in developing economies. This course will be used by UNEP worldwide, and will also be offered by ASHRAE.

A few years ago we introduced a much more favorable membership fee for students and other members from developing economy countries. A couple of months ago, we partnered with UNEP to organize a conference on refrigeration technologies in the fisheries market. In fact, conferences are becoming an important vehicle for ASHRAE to disseminate knowledge and connect with nontraditional audiences that have a big impact on HVAC&R technologies. In the coming year, we will hold the second conference on HVAC for hot and humid climates as well as a second conference on developing economy building design.

International Standardization

The world of prescriptive- and performance-based standards for the building industry is changing. ASHRAE will work with other standards developing organizations to map a course through this changing environment. The biggest market for our standards is of course North America. Several of our standards are also being used outside North America, either directly or as a guiding document for other standards developers. It is difficult, however, for ASHRAE to have influence in large international standard writing organizations like ISO (International Organization for Standardization) and CEN (European Committee for Standardization). As a Society, we are involved in ISO standardization through our collaboration with ANSI. Are we doing the right thing here? Can we gain more influence and involvement in international standardization? Is there a business opportunity for ASHRAE? Can we extend the influence of ASHRAE member expertise? Some of these questions have been discussed in a Presidential Ad Hoc Committee that will report at this meeting. ASHRAE members are best served by standards that reflect regional weather and construction practices but are otherwise harmonized.

Under the umbrella of IEQ-GA (Indoor Environmental Quality-Global Alliance), which was started by ASHRAE a couple of years ago, we are gathering information on existing global standards related to indoor environments. That data will enable ASHRAE to explore the possibility of

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developing a global, unified standard for indoor environmental quality.

EXTENDING our Value to Members

It is extremely important that our efforts increase ASHRAE's value to members throughout the world. Innovation must flow in all directions across continental boundaries if the Society is going to achieve its mission of advancing the arts and science of HVAC&R to serve humanity and create a more sustainable world.

WE HAVE APPROXIMATELY 57,000 MEMBERS with 20% located outside of North America, representing more than 130 countries. We have more than 180 chapters and 269 student branches. Our membership growth is steady in both North America and Europe; but we also have solid growth in Asia and the Middle East. Forty-two of ASHRAE's 44 Chapters chartered since 1990 have been formed outside of North America.

The coming year we will focus on a few membership initiatives:

- Increase joint CRCs;
- Expand student member opportunities for innovation; and
- Connect chapters and student branches with "sister" chapters and branches from other countries.

I grew up without a chapter. And, until I came on the Board, I was only active at the society level on the technical side. It took me some time to find out what grassroots truly meant. Most of our members are only active on one side—either the technical side, mainly at the society level, or the grassroots side at the local chapter level. However, one side cannot live without the other. Instead of an ASHRAE chapter, I was involved in our Danish HVAC society, DANVAK, which performs a lot of the same activities as an ASHRAE chapter.

Joint CRCs

Last year we had the biggest CRC ever when Region XIII and RAL organized a joint CRC in Bangkok. In connection with that historic event, we also had the first Board meeting outside of North America.

Even though some regions have differences regarding building codes, available technologies, languages, climate conditions, and others, it can be very beneficial to come together and share as we seek solutions to our shared goals. This sharing not only helps EXTEND our global presence, but, more importantly, it helps us all have a better understanding of critical global issues, our commonalities, and our differences. I strongly support having more joint CRCs, and Members Council is working on guidelines that will help drive more joint CRCs.

Student Members

Students are our future members. We all must continue the efforts we have under way to help develop, strengthen, and encourage students interested in our industry.

ASHRAE already has several different competitions for students. In the coming year, the Student Design/Application Competition will focus on developing economies. The challenge is to design a small building that can be used as shelter or temporary housing for a small family under hot-humid climate conditions. As an added incentive, extra points will be given to student branches for collaborating with teams from different countries.

The Solar Decathlon is another student competition that was started by the U.S. Department of Energy (DOE). Since its onset, ASHRAE has been involved by providing judges and sponsoring social events during the competition. Today, this is a worldwide activity with separate Solar Decathlon competitions in Europe, China, Africa, the Middle East, and the Caribbean. The students involved in these competitions are future ASHRAE members. ASHRAE is expanding its support of Solar Decathlons by engaging in the competitions outside of North America. We are also working to connect ASHRAE Chapters with local Solar Decathlon teams, so they can provide engineering guidance and potentially find new employees.

Sister Chapters and Student Branches

Establishing "sister" chapters and student branches is another way to increase the global exchange of knowledge and make our members feel like a part of the global society. With today's technology, you can easily have

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joint web conferences with presentations from different parts of the world. We simply need to be a little flexible in scheduling over several time zones. Members Council is looking at what is needed to promote and EXTEND this type of exchange.

New Training Center

As part of this commitment to extend the Society's global reach and better support our membership, I am excited to announce we are establishing the ASHRAE Global Training Center for Building Excellence in Dubai to serve ASHRAE members and other building system professionals in the Gulf Region and in surrounding areas.

The focus of the ASHRAE Global Training Center will be to make training conveniently available and on a regular schedule that is curricula based. Training offered in the center will be customized and scalable, accounting for climate, culture, suppliers, energy sources, prices, codes, and construction practices. The center's instructors will be engineers familiar with the intricacies of the Middle East.

Finish

So, this will be an exciting year for ASHRAE, both for you and for me. This also will be a busy year with many challenges; but it is important that we have fun with what we are doing along the way. Without fun, we would not have so many volunteers contributing to ASHRAE. The tremendous amount of volunteer work that occurs within ASHRAE is unique compared to other societies. The time ASHRAE volunteers dedicate to the Society is incredible. Our Society's work would not be possible without your support. So, thank you for all you are doing for ASHRAE. Your dedication to furthering our Society and industry is what has always made ASHRAE great.

Around the world there are many differences; but one thing in common is smiling and laughter. As a Danish-American comedian Victor Borge said, "The shortest distance between two people is a smile."

So, to EXTEND our community, go out there, make new connections, adapt to new technologies, and do not forget to smile.

Thank you. ■

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