

PRESIDENTIAL ADDRESS



WILLIAM P. BAHNFLETH, PH.D., P.E.
ASHRAE PRESIDENT, 2013 -14

Our goals should address, first of all, our world—using our talents and resources for the benefit of the general public, as our governing documents charge us with doing. This is primary. In order to achieve these goals, we must also set goals for ourselves—developing a workforce that is capable of meeting the challenges of the future, and for our work—what we do, how we do it, and with whom.

Shaping the Next

BY WILLIAM P. BAHNFLETH, PH.D., P.E., ASHRAE PRESIDENT, 2013-14

How can we reach the future we desire for ASHRAE, for our industry, and for our world?

The future begins with vision – an understanding of what we want to become or accomplish. Since its inception, ASHRAE’s vision has been the right one and, over many decades, has needed little modification.

Progress should mean that we are always changing the world to suit the vision. ~G.K. Chesterton

The certificate of consolidation, the document that created ASHRAE from its predecessor organizations in 1959, states that the purpose of this organization is to advance the arts and sciences of heating, refrigerating, air conditioning and ventilation, and the allied arts and sciences for the benefit of the general public.

Over the years, we have embellished that statement of purpose by adding “related human factors” to our scope and “to promote a sustainable world” to our objectives, but our fundamental reason for existing has not changed. We need to focus not on a new vision, but on fully realizing the one we have.

The future is a convenient place for dreams. ~Anatole France

Visions of the future too often remain dreams that never materialize. Is this the result of aiming too high, or is there some other reason? I believe that we can have bold vision and make it real if we understand what is required.

The future is always beginning now. ~Mark Strand

There’s no place where we can act, except in the present. Everything we do, every next action, is either taking us toward our vision or it’s taking us somewhere else. We can’t actually dictate the future, but we can shape it. That is the challenge of my theme *Shaping the Next*—to connect our aspirations for the future with the

SHAPING THE NEXT...



OUR WORLD



OURSELVES



OUR WORK

present so we are always moving intentionally toward making them real.

A goal without a plan is just a wish. ~Antoine de Saint-Exupery

The will to win is nothing without the will to prepare. ~Juma Ikangaa

Unless commitment is made, there are only promises and hopes; but no plans. ~Peter Drucker

Visions become reality where there are *goals*, *planning*, and *commitment*. Successful people in all walks of life understand and live by this formula—artists, athletes, and management gurus alike. I learned it as a consulting engineer working on chilled water master plans. The purpose was to give the client a workable roadmap from the present to the system they would need in 15 or 20 years. Setting goals was the easiest part of the process. Constructing the plan to achieve them, phase by phase, cost-effectively, was more challenging. The hardest part was commitment—getting the owner's buy-in to do things now that were more costly and difficult because they were essential to the longer term goal.

Let's consider how these ideas apply to ASHRAE, this year and afterward.

Our goals should address, first of all, *our world*—using our talents and resources for the benefit of the general public, as our governing documents charge us with doing. This is primary. In order to achieve these goals, we must also set goals for *ourselves*—developing a workforce that is capable of meeting the challenges of the future, and for *our work*—what we do, how we do it, and with whom.

Our World: Basic Needs and Quality of Life, Environmental Stewardship, Serving All Communities

Goals for our world reflect our mission to serve the public good. To do that, we must address three key areas: providing for *basic needs and quality of life*, *environmental stewardship*, and, because ASHRAE is a global organization, *servicing all communities*.

In the realm of indoor environmental control systems for buildings and transportation systems where we work, we provide for basic needs and quality of life

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Bahnfleth is the son of ASHRAE Presidential Member Donald R. Bahnfleth, Fellow ASHRAE, Life Member, who served as president in 1985-86. This marks the first father/son presidency in ASHRAE's history. In his ASHRAE service, Bahnfleth is faculty advisor to the Pennsylvania State University, University Park Student Branch, and is an ASHRAE Distinguished Lecturer. He has chaired ASHRAE's Technology Council, Members Council, Technical Activities Committee and Technical Committee 6.9, Thermal Storage, among others. He has served as a member of numerous committees, including recent appointments to the CLIMA 2013 Advisory Committee, the Building Performance Alliance Ad Hoc Committee, and the Building Safety and Security Position Document Committee.

by making those who use those systems safe, healthy, productive, and comfortable. ASHRAE has contributed significantly to this mission in the past and continues to do so today; however, our focus for some time has shifted strongly toward energy conservation and protection of the atmosphere. Thirty years ago, when ASHRAE's Environmental Health Committee was formed and we initiated our IAQ conference series, we were the leader, but that is not how ASHRAE is perceived today.

We must restore a proper emphasis on indoor environmental quality and become leaders again for the good of humanity. We can be a leader again by doing what ASHRAE does best: connecting science to practice. We can take the results of research and use them to create real change applications. We can educate and equip the industry in the principles and practice of indoor environmental quality as we have done in others.

This year, ASHRAE will hold its 17th IAQ conference in Vancouver. The theme is *Environmental Health in Low Energy Buildings*. The theme of the first conference was *Managing Indoor Air for Health and Energy Conservation*. After three decades we have come back to the point where we began, recognizing the need to deal with indoor environmental impacts and energy in an integrated way. It's an important step in the right direction.

Another next step is the free distribution by download of ASHRAE's *Indoor Air Quality Guide*. It is a practical guide now available as a resource to anyone who wants to put into practice what we've learned about IAQ.

Let us also not forget the "R" in ASHRAE in our efforts to shape our world for the better. For some time, it's been my impression that our focus has been skewed toward lessening the environmental impact of refrigeration rather than increasing its effectiveness. We should also keep in mind the essential role refrigeration plays in our world by preventing food borne disease and waste, as 2004–05 ASHRAE President Ron Vallort pointed out in his theme. Enhancing the capabilities of refrigeration and making it possible for them to be as widely available as possible should be as important to us as controlling the adverse effects of refrigerant use.

Environmental Stewardship

ASHRAE is most recognized for its contributions to environmental stewardship. ASHRAE/IES Standard 90.1, *Energy Standard for Buildings Except Low-Rise Residential Buildings*; ASHRAE/USGBC/IES Standard 189.1, *Standard for the Design of High-Performance, Green Buildings*; ASHRAE/USGBC/ASPE/AWWA Standard 191P, *Standard for the Efficient Use of Water in Building, Site, and Mechanical Systems*; and ASHRAE Standard 15, *Safety Standard for Refrigeration Systems*, promote conservation of natural resources and protection of the environment. Our commitment here must not lag as a result of making efforts to grow stronger in other areas.

Serving All Communities

ASHRAE's governing documents set no boundaries on the extent of the general public whose good we are to promote. We are not charged with serving only the commercial/institutional markets of developed economies. However, if we honestly evaluate where ASHRAE has been most active and effective, it is in precisely those areas and much less so in others. If we put residential construction outside our scope, that's half of the energy use and environmental impact of buildings that we are not addressing. If we don't support the developing world, we're ignoring the place where most of the growth in the building stock will occur in the foreseeable future. As an organization with members around the world who all return at the end of the work day to someplace they call home, this is not the right path for us to follow.

ASHRAE has not been inactive in addressing residential construction. We have invested much effort in Standard 90.2, *Energy Efficient Design of Low-Rise Residential Buildings*, which today is working toward very ambitious goals, and also Standard 62.2, *Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings*, but we have a long way to go before we have the same level of effectiveness that we do where non-residential construction is concerned. In order to find the path to better support of residential buildings, we will be seeking engagement with other organizations that already are leaders in the residential field to understand how we can contribute more effectively.

We are in a similar status where developing economies are concerned—involved, but not nearly as

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engaged as we could be. ASHRAE's chapters and members in developing nations are contributing their skills every day, but as a society, we have not made this important area of global development the priority it should be. This year, we will continue and expand an initiative started by 2012–13 ASHRAE President Tom Watson to consider how ASHRAE can better support sustainable built environment in developing economies. The workshop that he organized in Dallas at the Winter Conference will be followed by a specialty conference on developing economies in Manila, Philippines in 2014, and I am appointing a taskforce to evaluate ASHRAE's current ability to contribute now and recommend future activities to strengthen our programs targeting developing economies in the future.

Ourselves: Members, Colleagues, the Next Generation

Our goals for improving the world will be realized only through the efforts of the members of the built environment professions, and by no other means. So, we must also set goals for ASHRAE members, for other members of our community, and especially for the next generation of professionals, to ensure that in both numbers and abilities, the workforce will exist to shape the future we envision.

Like many similar organizations, ASHRAE has struggled during recent difficult economic times to maintain the support of employers for their employees' involvement. When our leaders—Society, Regional, and Chapter—meet with the businesses that employ ASHRAE members, they find that some have come to question the value of participation. Making sure employers understand the benefits of membership for them as well as their employees must be one of our top priorities.

We also must strive to improve the ability of our Society to serve every member, wherever they may live. Creating opportunities to participate through electronic technology, including web meetings for committees, virtual access to conferences, and online availability of educational programs, is having an impact, but we must keep developing that capability. We will have succeeded when we can truly say that a member is a member, wherever they live, in terms of their ability to receive the benefits of membership and opportunity to contribute to the work of the Society.

For our colleagues, all of the technology products that ASHRAE produces—the courses, the books, the certifications, the professional development opportunities—are intended to benefit you as well as ASHRAE members. Our goal must be to provide the products and services that the industry, not only ASHRAE members, need—and hopefully persuade some who are not members now that they should join us as a result.

Last, but far from least, is the *Next* generation. ASHRAE has had great student activities programs for decades. I know that from personal experience, since I joined ASHRAE as a student member in the 1970s and have advised a student branch for almost 20 years. Young Engineers in ASHRAE (YEA) has added to that success story, building a bridge between student membership and active involvement as a full member across an age bracket in which too many young members are lost. Many in this age group are eager to serve—in Chapters, in Regional positions, and on Society committees. We must be proactive in providing opportunities for them to develop the understanding of the organization and the skills that will help them do that.

The “Leadership U” program that was started by 2011–12 ASHRAE President Ron Jarnagin brings four YEA members to each Society winter and annual conference where they shadow our four Vice-Presidents. It has been a tremendous success. To build on that foundation, I have initiated, with support from the YEA Committee and our Members Council, a parallel ASHRAE Regional LeADRS (Leadership Development through Regional Support) program. Regions choosing to participate will identify and support developing leaders to shadow their Director and Regional Chair at ASHRAE Conferences, potentially giving an experience as educational and motivating as Leadership U to 28 more rising stars every year. Three Regions have already opted into the LeADRS program at their spring conferences, and I hope the other eleven will follow this fall.

ASHRAE is doing well in supporting the development of our young members. Unfortunately, educational systems in many parts of the world are not doing a good job of meeting the needs of society for a high quality technical workforce. We must do all that we can to change this unacceptable situation.

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For many years ASHRAE has been supporting Science, Technology, Engineering and Mathematics (STEM) education by putting our dedicated volunteers into local schools to promote interest in technical fields. That effort continues, but in my opinion it is not the solution to a problem with deep roots. Occasional guest appearances by ASHRAE members cannot make up for deficiencies in curriculum that can only be addressed at the source. To our volunteer support in the classroom, we must add efforts to influence policy, which we are beginning to do through our Government Affairs staff and Grassroots Government Activities Committee.

As a professor, I'm also disappointed with the university level support for education of future professionals. Our industry influences roughly 40% of the world's energy use and is responsible for a commensurate part of the environmental impact. It also affects our everyday lives and the products we produce. Too many universities have little or no HVAC&R curriculum at

all, or only a token one—in some cases a single course that is taught in alternate years by an adjunct professor. That is not a commitment proportional to the significance of what we do. From Chapters reaching out to local universities to action by Society leaders to raise awareness and garner support for building science and technology programs, we must do more.

Our Work: Global Vision, Broad Horizons, Partnerships

Now, to Our Work. Here, I believe that the most important things for us to emphasize are working toward our vision of ASHRAE as a truly global organization, broadening our horizons in a number of ways, as Tom Watson asked us to do in his theme last year, and partnerships that are synergistic—that produce more collectively than individual organizations can accomplish separately.

One could argue that ASHRAE set itself on the path to globalization decades ago and that the question now is only how successfully and when we will reach that

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goal. Let's look at a few numbers. The first ASHRAE chapters outside of North America were chartered in 1984. At that time, ASHRAE had 139 chapters. Today, we have 175 chapters, of which 36 are outside of North America. From 1984 to today, we've added 34 chapters outside of North America and one chapter in North America. Twenty percent of our members live outside of North America as do 40% of our student members, and that is where we have the most potential for growth. We must not reduce the value of membership to any member, but at the same time we must acknowledge the importance of this constituency and strive to provide the full benefits and opportunities of membership to it. This will very likely require that we return to some of the challenging ideas put forward in Bill Goodman's 1999–2000 theme *ASHRAE in the Millenium's Global Community*. He saw the future coming more than a decade ago and we need to consider his ideas about how ASHRAE may need to change with an open mind.

To me, the broad horizons Tom Watson speaks of are, on the one hand, embracing an understanding of our scope that goes beyond HVAC&R and, on the other, becoming more involved in the parts of the building life-cycle downstream of design so that we are doing more to ensure that buildings and building systems actually function as intended.

For more than a year, ASHRAE has worked to bring together organizations involved in commissioning as part of a new emphasis on building performance. That effort will continue this year. Our energy-labeling program, Building Energy Quotient, with the benefit of a lot of

hard work by many of our members, is starting to get some traction. That's also a great contribution to building performance whose impact will continue to grow.

ASHRAE has engaged in many productive partnerships throughout its history. Our energy standard 90.1 has been developed in collaboration with Illuminating

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Engineering Society (IES). Our high performance sustainable building standard, 189.1, was developed in collaboration with IES and U.S. Green Building Council. The U.S. Department of Energy has strongly supported standards development and funded the Advanced Energy Design Guide series. I could give many more examples. All indications are that partnerships will become even more important in the future and that long-term alliances to work on big, long-term issues are needed. Our goal here must be to become better at forming and functioning in those relationships so that the best possible outcomes are achieved.

Also, the initiation of our new Grass Roots Government Activities Committee is a step toward partnership with government. Governments, undeniably and unavoidably, are among our main partners. So, I view what we do in the sphere of government activities as supporting this goal; not just in the U.S., but around the world.

Give me six hours to cut down a tree and I will spend the first four sharpening the ax. ~Abraham Lincoln

Goals reflect our vision and are critically important, so I have devoted a lot of words to laying them out. However, I said at the outset of this address that there are three essential elements of success: goals, planning and commitment. Now it is time to address the last two.

Planning provides our map from the present to the future. ASHRAE has had strategic plans since the 1980s that have served us well. Eventually, every plan becomes dated as conditions change and its objectives are accomplished. At that point, they have lost their ability to inspire and direct us and it's time to renew them. Our current plan has helped to drive profound, positive changes in our organization, but it is at the end of its life. On Sunday, June 23, your Board of Directors voted to authorize a significant ground-up strategic planning effort this year. It will certainly address all of the issues I have just outlined as well as others.

We want this to be a strategic plan that is not only challenging, but also realistic, and coordinated with a business plan that works. In laying the groundwork for a new plan that can guide us over the next ten to 15 years we must ask some key questions of

ourselves and others. Who are our members and what are their needs? How do we structure our Society to be truly global and financially sound? Our Planning Committee will be seeking input on these questions and others from our members, our committees, our leadership, and also from outside stakeholders.

That is what Society leadership is doing to plan globally for our organization. I also encourage our committees, Regions, and Chapters to consider the value of strategic planning and to take a longer view of what they seek to accomplish. If we all lift our gaze from the ground in front of us—what we will do this year—to our greater goals, I think we will be much more likely to achieve them.

ASHRAE knows how to put ideas into practice. ASHRAE is committed to serve. ~Don Bahnfleth, 1985-86 President

A goal and a plan without commitment will get us nowhere, because truly worthy goals are challenging and a plan simply tells us what we need to do. We can't write the will to succeed into a plan. If you look back at themes of previous ASHRAE presidents, the importance of commitment comes up frequently, because leaders know how important it is. It was at the core of my father, Don Bahnfleth's 1985–86 theme, *Committed to Serve*.

We will reach our goals if we are committed to following our plans; to working for the public good; to working together with other organizations, and to accepting occasional failures as the price of true success. I wish I could confer that kind of commitment on everyone who reads these words, but I cannot. That is what each of you brings to our organization. It is the renewable energy source that has powered ASHRAE throughout its long history, and it is the key to our future.

More than anything else, I hope that this "Presidential" theme will inspire your commitment. I will consider it successful if it does not remain my theme, but becomes the Society's theme and, ultimately, your theme this year.

The world needs our Society, our members, and our industry now as much as at any time. We will rise to the occasion and meet the challenges that we face if we connect dreams with plans to Shape the Next, starting today to create the better future we envision. ■