Quotes from past ASME Presidents and Oregon Section Chairs based on the following questions;

1. **What do you envision for ASME in the year 2119?**
2. **What changes will happen to engineering, professional societies and culture?**

**Keith B. Thayer, P.E. (#116) Term 1997-1998**

A lot will happen in the next 100 years and I believe “HART” will shape ASME’s future.

H == humor
R == Respect
A == Action
T == Teamwork

1. ASME will be a model for professional societies by addressing the needs of young professionals with mentoring, networking, respect, motivation and recognition. Codes and Standards for new technologies will provide social service and financial support. Membership 300,000+/

2. Engineering will use AI, be computerized and robotic. BUT it will depend on creative, imaginative and practical leaders. Professional societies will be either formal and aristocratic or practical, people friendly and functioning on real time issues. The same for culture.

**William A. Weiblen, P.E. (#120) Term 2001-2002**

1. It will have to be a much different organization to meet the needs of its future stakeholders. Many new and different Technical Divisions will have to be formed and others, which exist today, will no longer be relevant to the engineer of 2119. ASME staff will be mostly decentralized in order to meet the ever-changing needs and be relevant to the stakeholders. Many of the past sources of operating revenue will no longer exist and new sources will have to be developed and nurtured. Rapid change as new technologies are developed will be the only constant for the ASME of the future. How well ASME can respond by transforming itself to be relevant in a dynamic and fluid technical environment will determine if it exists in 2119.

2. Engineers will be working with technologies not even envisioned today. Engineers will need to constantly refresh their technical knowledge to be relevant in a working environment where rapid change, resulting from the introduction of new
technologies, will be the only constant. Professional societies will have to radically change and quickly adapt to constantly change in needs of their stakeholders. Societies without being able to constantly reinvent and refresh their technical offerings and delivery mechanisms will probably not exist in the future.

Reginald I Vachon, Ph.D., P.E., EUR., ENG. (#122) – Term 2003-2004

1. Extensive involvement in world-wide education on “just-in-time” education on fast-paced new technology.

2. Engineering professional societies will merge internationally and ASME must set a path to be an international leader. The professional ethics of the societies will be used to promote better living and protect the environment.

Harry Armen (#123) – Term 2004-2005

1. As is currently the on-going situation, the engineering profession will de-emphasize the distinctions between the traditional disciplines, i.e., civil, mechanical, chemical, electrical, and will, instead, emphasize the multidisciplinary nature of the profession. Accordingly, ASME will incorporate a multitude of areas of the physical sciences, physics, medicine, etc., into their arena, by acquisition, merger or by strategic alliances, and become a broad-based professional engineering and science organization. There will be greater opportunities for standards-setting in areas not previously considered within the scope of ASME.

2. There will continue to be a need for professional societies to be organizations that are the focal points for researchers and practitioners to gather, acquire, synthesize and disseminate knowledge. The culture of many of the current organizations, especially ASME, is represented by a strong volunteer-staff partnership. Although, standards-setting will continue to be based on strong volunteer participation from outside organizations with vested interests, I believe that "voluntarism" into the other aspects of conducting the other activities of professional societies, i.e., professional development, conferences, publications, financial viability, etc., will be significantly diminished, thereby placing more obligations on professional staff.

Richard E. (Gene) Feigel, Ph.D. (#124) - 2005-2006

1. Flexibility and rapid response to change will need to be ASME’s hallmarks. This will entail “thinking the unthinkable”, e.g. radical changes in governance, different membership models and new alliances with other organizations. There has always been talk about these issues, but the urgency will increase, long before 2119.
2. Artificial intelligence and machine learning will play dominant roles in everything from project planning to design and operations optimization. The “Internet of Things” (IoT), currently in its infancy, will be taken for granted. This presents both challenges and opportunities for traditional engineering disciplines. Social media platforms will continue to evolve. It would be an interesting exercise for someone to study why Myspace has essentially disappeared. How professional technical societies respond to existential threats, e.g. climate change will be a defining issue.

Victoria A. Rockwell (#130) – Term 2011-2012

1. I expect that in its professionalism, technical expertise and culture of camaraderie. ASME will be the same. But how we interact and communicate will be much different. In 1919, ASME held local meetings and annual meetings. Most communication was done via mail and some by telephone. In 2019, we do the same - going to geographic locations. But a significant amount of work is done by teleconference, face-to-face meetings via computer and even just exchanges via working group boards on the computer using communication options that were not even envisioned in 1919. In 2119, I expect, that local and annual meetings will still occur but there will be more options for attendance besides in person. And that we have not seen the technology that will allow this yet. I am still waiting to be beamed aboard.

2. With regards to Professional Societies, history has shown that “like individuals tend to associate with like.” The change that I feel will happen is that there will be a merging of engineering organizations and that disciplines will converge. In 1919, there was a sharp delineation in the engineering disciplines. In 2019, we see the need for project teams and cross-discipline interactions for innovations and discoveries. 2120 will continue this trend.

Every year, Engineering and technology is moving forward at an exponential rate. Going from switchboard telephones in 1919, to the ubiquitous wireless cell phones in 2019, I cannot even think what could be next. When I was growing up in the 1950s and reading Dick Tracy who had a two-way wrist radio was “comical.” Yet here we are 50 years later. Movies were silent in 1919 now we have 3-D and all sorts of sound. The new inventions in 1919 were the toaster and the zipper. The first transatlantic flight was in 1919, 2019 we are preparing to go back to the moon and beyond. So, what can we possibly dream up in the next 100 years?
In 1919, only 30% of households had a phone, 20% stoves, almost no home had a phonograph (remember those), refrigerator or radio. Technology was meager. In 2019, we have multiple cell phones that can take the place of cameras, record players and TVs. 2119 – I believe that we will continue to have a consolidation of devices.

With regards to climate and weather, a hurricane in Key West in 1919 killed 600 people. In 2019, with the advent of weather satellites, we are better able to predict when and where major storms will hit. In 2119, the ability to “manage” storms will be available but only if we can agree that carbon management needs to be started today.

Marc Goldsmith (#131) – Term 2012 - 2013

1. ASME needs new agility to address safety in a rapidly technologically changing world. New safety standards in the race for deeper space, for AI and VR development and a dozen other technologies that will change the way we live, do business, recreate and serve humanity as engineers.

2. Relevance to the new engineer will be a key to the future of engineering societies. Could we engineer without professional societies? The answer is yes. Can we do it efficiently, cost effectively and safer, the answer is no. We need the collective thinking that is embodied in standards to make the world a safer place. We need each other to make professionalism a social standard (A norm).

Madiha El Mehelmy Kotb, Eng.

1. I envision ASME in 2119 as a Global Organization with young, diversified and agile membership that is rooted and working toward public safety, improving quality of life, promoting innovation and collaboration and promise to honor the legacy of a 200 years Organization.

2. Professional societies will become multidisciplinary, multinational and multicultural. Innovation, knowledge transfer and knowledge sharing will be instilled in its culture.

Working together for the greater good will become a reality not a cliché or a Slogan.
Bryan Archibald, Oregon Section Chair, 2011

We are now at the dawn of civilian space flight, and human exploration of Mars is on the horizon. By 2119 I imagine there will be much embellishment and refinement of pressure vessel and piping codes as they pertain to inhabited spaces (both commercial spacecraft and surface dwellings) in micro-atmospheric environments. In this way, ASME will play an important role as humankind begins to take infant steps off our home world.

I anticipate that political inertia and other human frailties will delay a meaningful response to climate change for several more decades, causing environmental conditions to get perilously worse.

At some point (I pray it is before 2119), the pendulum will swing the other way, and we will see a revolution, a planet-wide urge to break from the status quo and take meaningful steps to reverse course and correct past mistakes.

Practitioners of engineering and every other scientific field will be called on to create the solutions needed to meet these challenges. Popular culture, and eventually governments, will embrace the concept that humans can pursue our interests while still living in harmony with the Earth. It will be professional societies that marshal the forces and lead the charge to make this happen.

Scot MacEwan, Oregon Section Chair, 1985

Looking ahead 100 years, I see the World facing dire catastrophes which could destroy our comfortable lives.

It would be lovely to think of our Engineers and Scientists making wonderful advances in genetics and health, robotics, information management, and nanotechnology. We might find ourselves in a struggle for Life itself. due to:

- Loss of Freedom, either by gradualism or by wars of conquest over diminishing natural resources.
- Destructive atmospheric composition changes
- Destructive ocean chemistry changes
- Pollution of plastic waste in the ocean and from there into the food chain.
The EMP (Electromagnetic Pulse) danger is a Triple Whammy. Our household and commercial transistor-based equipment and infrastructure would be destroyed, which would destroy our ability to easily communicate, calculate, record, conduct commerce, and retain and share our accumulated knowledge. The equipment which makes these computer chips would no longer function, because their controls themselves are transistor-based. Destroyed chips would be irreplaceable.

George Kent, Oregon Section Chair, 1984

I expect emphasis will be on sustainable energy, more user-friendly and automatic home appliances, interurban and inner-city transportation with emphasis on safety, convenience and accessibility.

Self-driving trucks and cars will be the new normal. Much engineering will be needed to accomplish this.

The Oregon Section will continue well since the interaction of professionals is important.

Colleen Kennedy, Oregon Section Chair, 2017-2019

By 2119 ASME will be renamed, The Society of Engineers. This will reflect the globalization in professional organizations and the merging of tasks for a common job description. There will still be specialized committees based on specific skills, but one major world organization will emerge.

Education will transform to be done mostly through an online portal with general skills and hands-on classes done in decentralized facilities. Graduation will be done in a merit-based system based on course work, intern experience and personal interviews.

It is possible money will be converted to a credit type of accounting to more evenly recognize workers at all levels. Profit will be changed to profit the entire society, not the investors. Key focus would be agriculture, education, energy and swapping old equipment for new technologies.

David Taylor, Oregon Section Chair, 1979

When I became a member of the Student section of ASME in 1966, I was unsure of what ASME was in the industry. Over the next two years I realized that the society was a major factor in the recognition that ASME was an organization of professionals recognized for and practicing their engineering skills. I worked in Seattle out of school for an airplane manufacturer and performed structural design of an airplane that never flew. At that point ASME was not a major factor in career development although I attended some ASME sponsored technical sessions. Moving to Portland in 1970 I was
employed by an ardent ASME section member and joined the Oregon Section. A Year later I moved to another company and one of the interview questions was, was I a member. Registration was also a requirement and I took the exam my first week. Part of my department manager’s philosophy was that his employees should be active in their individual societies. We were encouraged to develop our customer skills among our engineering peers and as an active member of ASME himself he monitored our progress through the chairs and how we did with other people. He once said to me that “if you can successfully manage a volunteer organization as ASME, you can manage any group or department assigned to you.” I worked by that philosophy through my working career. While not only working in the local section, he encouraged my participation at the regional level. I became the Vice-President for region VIII and spent two terms as the Region VP. While maintaining my employment obligations, I was allowed a travel schedule that was needed in my ASME functions. While on the Committee on Member Affairs ICMA) I worked on several ASME current initiatives.

Since the early 90’s when I served as the Region VP, much has changed. This change has been good. I see more technical groups formed to disseminate information in more subjects and improve knowledge and applications that are available to the ASME Membership and their corporate sponsors.

Bill Robbins, Oregon Sec. Chair, 1991

ASME will still be a place where individuals of similar concerns will be able to write standards and codes and provide opportunities for them to grow professionally and technically.

a. A hundred years from now we will have traveled to Mars.
b. We will have moved past using fossil fuels and moved into a hydrogen-based energy culture.
c. People will live longer because of medical and genetic advancements.
d. There will be amazing advancements in interfacing the digital world with a human’s brain leading to all kinds of bio enhancements.
e. Humans will have figured out how to live with instant, global communication.
Pasquale Dell'Aquila, Oregon Sec. Chair, 2016-17

In 2119, ASME will not exist as a single entity but rather as a participant in a Global Engineering Consortium which unanimously adopted the Mission and Vision from the ASME Strategy of the early 21st century. This cross disciplinary consortium successfully collaborated to develop the technology for unlimited free clean energy.

This advancement initiated the collapse of capitalism in that wealth, was no longer needed for personal survival. The focus in 2119 will be humanity’s self-improvement through collaborative thinking, shared knowledge and common experiences ultimately benefitting the planet Earth, its ecosystems and all its inhabitants.