

The Importance of Preserving Our Institutional Expertise

By Pete Jahrling, PMI Board of Directors President, Sloan Valve Company



Pete Jahrling

After 44 years, one of our engineers decided to retire. It was amazing to know, not only how he progressed and contributed during his career, but how much knowledge he had as he walked out the door. At a time when the average tenure of a Millennial or a Gen Xer is three to five years, 44 years will soon be unheard of, perhaps as unheard of as pensions.

Changing workforce dynamics certainly require manufacturers to have systems and processes in place to capture the knowledge of employees as they come and go. We guard our intellectual property with patents, protect our proprietary information, and have devised House of Quality, cause-effect analyses, varying configurators, mentoring, job sharing, cross training, and other best practices to document and share crucial information and processes among team members.

Certainly, no one person is bigger than any manufacturing company. However, if you choose to ignore an aging work force, it's not just routine activities that walk out the door; it's the knowledge of those things that you can't anticipate by process or procedure.

It's a great testament to plumbing industry manufacturers that we have been successful in being able to hand these things down, arguably seamlessly, and leverage off of them to be effective in pleasing our customers. Many of the PMI member companies have been around for 75, even 100 years. We look at our successes and say, "Yeah, okay. Not a big deal," but it is a big deal. We are proud of our industry and our collective accomplishments. We've been doing it all along – passing our successes from one generation to another.

With all of the advancements in manufacturing, and I don't mean only cutting metal and finishing it, but also in the logistics of distribution and just-in-time best practices, we've been doing a good job, but you can never do enough. Some tricks of the trade walk out the door. Every day, somebody of "long tenure" retires. The art of that person being able to multitask and do many different things is being replaced by specialists.

Logistics specialists, for example, play an important role given today's business realities. Manufacturers have to physi-

cally package in a box and deliver that package to a customer within a committed timeframe. Customers don't want it two weeks early; they want it on a specific date and, in some instances, between specific hours. That's when you will deliver.

Customers are more demanding. Everybody is running on slim margins. And no one wants to hang on to inventory. As a matter of fact, we know that at some construction sites, space is at such a premium, they will require you to deliver it as needed. You can't store it on the construction site. Plumbing manufacturers, with our products often at the tail end of a construction project, often can't have a trailer on site. You literally have to anticipate, in those extreme situations, logistically how you will get it there per the customer's delivery schedule – some distributors don't have the local storage to accommodate inventory.

Savvy logistics teams within our manufacturing crews are invaluable team members, especially those that have routinely evolved over their tenure to just-in-time customer deliveries.

This reality has forced us all in the workplace – Baby Boomers, Gen Xers and Millennials – to come to a common understanding about what is valuable and what should be preserved and acquired with easy access. Knowledge management is no longer just a nice concept; it's an essential part of managing transitions in ways that capture the unanticipated, innate understanding and savvy insight of those heading out the door. This article (bit.ly/2I3fgtS) expands upon my thoughts by going into detail about the importance of institutional knowledge and the challenges and opportunities that lie ahead as up to five generations work side by side. Feel free to share your thoughts on this important issue with me and with others in the PMI family.

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Plumbing Manufacturing is a Business of Numbers That Matter

By Kerry Stackpole, FASAE/CAE, PMI CEO/Executive Director



Kerry Stackpole

Plumbing fixture and fitting manufacturing is a business of numbers. If Arizona, Colorado, Georgia, Texas and California replaced non-efficient toilets in residential

properties with water-efficient ones, consumers would save between 90 and 170 billion gallons of water annually, according to a PMI/Alliance for Water Efficiency study. The average family can save 13,000 gallons of water and \$130 in water costs per year by having all its toilets be WaterSense models.

Over the past decade, WaterSense has helped Americans save 2.1 trillion gallons of water and more than \$46.3 billion on water and energy bills. The use of WaterSense products also saved 284 billion kilowatt-hours of electricity.

Forty out of 50 state water managers in the U.S. expect water shortages under average conditions in some portion of their states over the next decade. While each American uses an average of 88 gallons of water a day at home, this level of water consumption may not be sustainable into the future.

Globally, 2.1 billion people lack access to safe, readily available water at home, and 4.5 billion people lack safely managed sanitation, according to a new report by the World Health Organization and UNICEF. According to the Bill and Melinda Gates Foundation, “Poor sanitation contributes to about 700,000 child deaths from diarrhea each year. Chronic diarrhea can hinder child development by impeding the absorption of essential nutrients and reducing the effectiveness of life-saving vaccines.” Poor sanitation and contaminated water are also linked to the transmission of diseases such

as cholera, dysentery, hepatitis A, and typhoid.

Of the 2.1 billion people who do not have safely managed water, 844 million do not have even a basic drinking water service. This includes 263 million people who have to spend over 30 minutes per trip collecting water from sources outside the home, and 159 million who still drink untreated water from surface water sources, such as streams or lakes.

In 2011, the Gates Foundation, under its Water, Sanitation & Hygiene program, launched the Reinvent the Toilet Challenge to bring sustainable sanitation solutions to the 2.5 billion people worldwide who don’t have access to safe, affordable sanitation.

Reinvent the Toilet Challenge grants have been awarded to 16 researchers around the world who are using innovative approaches—based on fundamental engineering processes—for the safe and sustainable management of human waste. In addition to awarding these grants, the Gates Foundation has made other investments aligned with reinventing the toilet and continuously seek to expand partnerships.

In 2012, the California Institute of Technology (CalTech) working in partnership with Kohler Co.’s Sustainability Initiative took home the first prize in the Reinvent the Toilet Challenge by creating a self-contained wastewater treatment plant powered by sunlight that drives an electro-chemical process allowing wastewater and solids to be disinfected. It’s a zero-energy solution not reliant on traditional infrastructure. In 2015, CalTech won the Vodafone Wireless Innovation Award, a program designed to promote mobile and wireless technology solutions to address critical global issues. Using award funds from Vodafone, the CalTech team found a clever way to monitor and

maintain the self-contained toilets created in 2012 and now in use in India.

American Standard’s Flush for Good campaign inspired the company’s engineers to take up the Reinvent the Toilet Challenge. They developed several affordable prototypes, including several clever sanitary toilet pans, that were tested in Rajshahi, Bangladesh. This testing led to the solution: the SaTo Hygienic Toilet Pan, a low-cost pan with simple mechanical and water seals that close off pit latrines from the open air. The seals reduce disease transmission from flying insects that would otherwise come into contact with human waste. The pan eliminates the unsightly appearance and odors from open pit latrines. With more than 1.2 million pans in distribution globally, the SaTo pan has won several awards for its innovative design and contribution to improving the human condition.

And there’s a third leg of the triad to prevent disease and death resulting from poor sanitation. At a recent gathering in Washington, D.C., **Bill Gates** recounted the first trip he and his wife **Melinda** made to Africa in 1993. They were profoundly impacted by the poverty and had read that millions of poor children in Africa were dying every year from disease. This led to their work to ensure that children in poor countries get the same vaccines as children in rich countries. It turns out that for about \$6 per child, vaccines for measles, meningitis, measles, rotavirus, hepatitis, yellow fever, tuberculosis, and diphtheria—diseases that almost no one dies from in the developed world—can be delivered effectively. If all children were immunized with vaccines, 25 million lives would be saved.

Reinvented toilets. Clean water. Vaccines. The plumbing fixture and fittings industry is a business of numbers, but more importantly it’s a business about making people’s lives better. Those are the numbers that matter.

C.J. Lagan Embraces Discovery and Growth at PMI

By Judy Wohlt, PMI Communications Team, Valek and Co.

C.J. Lagan follows the credo to “always have a goal.” He said that applies to both his work and personal life and is proven by his long to-do list – from learning all he can through his connections with PMI to enjoying travel adventures with his wife, **Trudy**.

His history with PMI runs more than a decade long and includes a seat on PMI’s Board of Directors for four years, as well as co-chairing the Fixtures Committee and Water Efficiency and Sustainability Issue Committee. In his current role as co-chair of PMI’s Technical Committee, C.J. said he has particularly enjoyed working with **Paul Sturman**, a research professor at Montana State University, and learning more about his experiments on the factors influencing biofilm growth that help feed Legionella.

“Not only does participating in PMI bring benefits to me and my company and make my job easier, I get to work on special projects and learn about interesting topics, like Legionella, that I wouldn’t otherwise study in-depth,” he said. C.J. added that PMI acts as a valuable voice for the industry, helping to maintain consistent water efficiency levels for plumbing products and,



C.J. on the beach in Puerto Rico

ultimately, helping manufacturers like his company – American Standard, LIXIL Water Technologies Americas (LWTA).

C.J. also recalled great memories during his time on PMI’s board, including organizing PMI volunteers to help rebuild a Habitat for Humanity home in New Orleans after Hurricane Katrina.

As for his professional goals, C.J. has achieved several during his more than 20-year career with American Standard/LWTA. A major achievement was earning his black belt in Six Sigma and a master of science degree in applied statistics. As senior manager for testing and compliance, fixtures, C.J. has applied his Six Sigma skills while running experiments and working on process improvements for plumbing fixtures in the company’s manufacturing plants. He said he assesses all the company’s water-receiving fixtures, including sinks, toilets and urinals, and tests for many factors, such as performance, strength and appearance.

C.J. said he can get some interesting results when he applies Six Sigma to his personal life, too. “It makes you view the world differently, trying to figure out the statistical patterns to your commute time, for example, or scores in the Olympics and home prices in your neighborhood,” he added.

Although he performs precise work every day, C.J. revealed that he has a more easygoing outlook overall. “There are very few mistakes in life; only turns,” he said. He attributed that view to his college days working in co-ops as a ceramic engineering student at Alfred (N.Y.) University. He recalled his time spent at



C.J. and Trudy Lagan

a fiberglass manufacturer, managing a small process line where he was allowed to make mistakes. “I learned some interesting things along the way,” he added.

Outside of the office, C.J. can be found working in his wood shop or traveling with Trudy, his high school sweetheart and wife of 23 years. They recently took a trip to New Mexico, visiting Carlsbad Caverns National Park, White Sands National Monument and the Very Large Array, a series of 27 radio telescopes used by astronomers.



C.J. in his woodworking shop

2018 PMI Conference to Feature Global Futurist Jack Uldrich

Those planning to attend the Nov. 5-8, 2018, PMI Conference can now look forward to hearing **Jack Uldrich** speak at the Wigwam Resort.

A renowned global futurist and author of 11 books, Jack will speak about technology, change management and leadership. His most recent book is “Foresight 20/20: A Futurist Explores the Trends Transforming Tomorrow” and his forthcoming book is “Business as Unusual: How to Future-Proof Yourself Against Tomorrow’s Transformational Trends, Today.”

His work is based upon the transformational principles of unlearning, or freeing yourself from obsolete knowledge and assumptions as a strategy to survive and thrive in an era of unparalleled change through creativity and action.

Jack is an ongoing contributor on emerging technologies and future trends for a number of publications, including the *Wall Street Journal*, *Forbes*, *Wired Magazine* and *BusinessWeek*. He regularly makes television appearances on the Science Channel, the Discovery Channel and is a frequent guest on major media outlets, including CNN, CNBC and National Public Radio.

A former naval intelligence officer and Department of Defense official, he served as the director of the Minnesota Office of Strategic and Long-Range Planning under Minnesota Gov. **Jesse Ventura**. He has addressed Fortune 100 corporations, venture capital firms, associations, not-for-profit organizations and state and regional governments on five continents.



2018 PMI Conference features Jack Uldrich



California Proposition 65: New Warning Requirement

By Judy Wohlt, PMI Communications Team, Valek and Co.

Businesses selling products in California, including many PMI manufacturing members, have been aware of California Proposition 65 for several years. It is part of California's Safe Drinking Water and Toxic Enforcement Act of 1986 that protects the state's drinking water sources from contamination with chemicals known to cause cancer or birth defects and other reproductive harm.

The proposition calls for businesses to post a "clear and reasonable" warning on any products, properties or sites that may expose Californians to one of the 950 chemicals included on the Proposition 65 list. With this new safe harbor warning language taking effect on August 30, 2018, affected businesses and manufacturers will need to prepare for potential changes to their product labeling and signage.

PMI has been helping educate members about the new language requirements, including training at PMI's 2017 Conference and a webinar in March on "California's Proposition 65: Regulation & Reality" available via the members-only section of the PMI website (bit.ly/2qm5Q1Q).

According to the law, businesses must provide a warning for listed chemicals unless exposure is low enough that it does not pose a significant risk of cancer or is considerably below levels observed to cause birth defects or other reproductive harm. To help companies determine if exposure to a chemical is low enough to not pose a significant danger, the state's Office of Environmental Health Hazard Assessment (OEHHA), which administers the program, has established a list of safe harbor levels on its website (bit.ly/2qllniD).

The warnings are changing for a couple of reasons. In 2013, Gov. Jerry Brown proposed reforms to strengthen Proposition 65, calling for more useful information to be provided to the public so

they can understand what they are being exposed to and how they can protect themselves. In addition, a 2015 University of California, Davis, study showed that consumers overwhelmingly said the new, more specific warnings would be more helpful than the current system.

Adopted by the OEHHA in 2016, the new warning language will require affected companies to specifically name at least one of the listed chemicals that triggered a warning in a warning post, which can be provided in several ways – from a label on a consumer product to a sign displayed in a place of business.

The new safe harbor warning will state: "WARNING: This product can expose

you to chemicals including [name of one or more chemicals], which is [are] known to the State of California to cause cancer, and [name of one or more chemicals], which is [are] known to the State of California to cause birth defects or other reproductive harm."

If a company does not provide a safe harbor warning and does include a chemical in a product on the Proposition 65 list, the company may receive a notice of violation.

For more information on Proposition 65, the new warning and list of chemicals, visit P65Warnings.ca.gov.

PMI Leaders Tour New Training Center

PMI CEO/Executive Director **Kerry Stackpole** and PMI Board of Directors President **Pete Jahrling** participated in a guided tour of the new Plumbers' Local 130 United Association Joint Apprenticeship Committee (JAC) Training Center in Chicago, arranged by the Plumbing Contractors Association (PCA) Midwest and the Plumbing Council.



From left: 130 JAC Training Director James Majerowicz; Sloan Valve Company CEO/President James Allen; American Society of Plumbing Engineers Executive Director/CEO Billy Smith; PCA Midwest Manager of Events & Education Barbara Bigelow; Construction Industry Service Corporation Executive Director Dan Allen; Fox Valley Labor News Publisher Jennifer Rice; Kerry Stackpole; Pete Jahrling; International Decorators, Inc., Safety Director Peter Graham; Construction Safety Council President/CEO Robert Lahay; CISCO Communications Director Gary Karafiat; Water Quality Association Executive Director Pauli Undesser; and PCA Midwest & Plumbing Council Executive Director S.J. Peters

Increasing the Value of Your Organization's Communications

By Ray Valek, PMI Communications Team, Valek & Co.

After several PMI members banded together to donate plumbing products toward the Flint relief effort a couple of years ago, our team was asked to estimate the value of the media coverage mentioning PMI's involvement.

There was interest in determining this estimate because of both the volume and quality of coverage. Not only were there stories in local Flint and Detroit media, major media outlets such as *People* magazine, National Public Radio, CBS News and the Huffington Post published articles. Our team estimated the advertising value equivalency of this coverage retroactively, and then decided to hire a media monitoring service to track and estimate the value of our news distribution going forward.

Depending on the size of your organization and what kind of news you are generating, you may or may not need a media monitoring service. But it's a good idea to determine baseline measures of the value of the four aspects of communications most organizations have: media outreach and news distribution, publications, website, and social media. Once you determine these initial measures, you can set your sights down the road and devise ways to continually improve upon your efforts.

Media outreach and news distribution

A good place to start is to monitor the media coverage your organization is getting and determine ways to increase your coverage. Local news outlets and trade media are the best places to begin. Local news, including TV news, will cover how your organization affects the local community by providing jobs, contributing to the tax base, or supporting local charities. Trade media will be interested in covering your new products and services and other initiatives of interest to your industry peers. Develop a media list and stay in touch with the media you prioritize.

Follow the conventions of how to work with the media by learning the difference between a story pitch, a media alert and a news release and which one should be used in a given situation. A story pitch is written to a specific reporter to entice him or her to cover a topic of mutual interest. A media alert encourages media to cover an upcoming event while a news release summarizes an event or accomplishment after it has occurred. News releases also provide the opportunity for your organization to provide comment or context on a local or industry issue. Whenever possible, inform the media before the news occurs, not after it becomes "old news."

With both local and trade media outlets, don't overlook letters to the editor and bylined articles or op-eds that you can generate on your own and submit to them. This approach may get your messages into the media faster because you won't have to wait for a reporter to be assigned to the story; you can work on your timetable rather than the media outlet's.

As you gain proficiency and if you have news of interest to larger consumer media outlets, broaden your program to include them, knowing that this aspect of media relations is much more competitive. You may also wish to distribute news releases via a distribution service, such as Business Wire or PR Newswire, to gain impressions and search optimization for your website and organization. If you begin to generate more coverage than you can track, hire a media monitoring service.

Publications

Publications are generally used to communicate with your highest priority audiences – customers, members, distributors and others with which your organization has close relationships. Many organizations publish more than one, with each targeted at different audiences.

With the move toward e-newsletters over printed newsletters, you can measure readers' engagement in these communications by tracking how many times your audience views an e-newsletter and how many times they click the links within these publications. Services such as Constant Contact make this easy to do.

Also, rather than creating, printing and sending a .pdf, you may choose to design and publish an e-newsletter containing brief summaries that link to longer content housed on your own or other websites. PMI does both – publishing *Ripple Effect* as a .pdf because many members prefer to receive and read a printed copy and *Inside My PMI* as an e-newsletter.

Depending on which audiences your publications reach, you can re-purpose news used for media outreach for your publications, and content generated for both of these purposes can be used for your website.

Website

Your website reflects what is new and special about your company and products while serving as storehouse of information about virtually everything you do and stand for. It serves as your face to the public – customers or members, industry allies, regulators and public officials, consumers and other external audiences.

Keep tabs on your website's traffic by monitoring Google Analytics. In addition to tracking your website's traffic volume, these data will help you keep your website's content consistent with your business and communication goals by letting you see if your most important content is being viewed.

For example, if you feature information about a new product or initiative on your home page, you will want to see a corresponding increase in page

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Building Codes Save Lives

—2018—



Building Safety Month is presented by the International Code Council (ICC), a member-focused association dedicated to helping the building safety community and construction industry provide safe, sustainable and resilient construction through the development of codes and standards used in the design, build and compliance process.

A Milestone Year

is highly anticipated for Building Safety Month 2018. The main theme **“Building Codes Save Lives”** is supported by five core themes that will be highlighted throughout May of 2018, including,

	<p>Week One // May 1–5, 2018 Partnering with Code Officials to Build Stronger, Safer Communities Building safety professionals are working to make your project a success and keep the public safe.</p>		<p>Week Three // May 13–19, 2018 Protecting Communities from Disasters Making sure families are prepared for any natural disaster is important.</p>
	<p>Week Two // May 6–12, 2018 Advancing Resilient Communities Through Science & Technology Science and technology based code requirements can help our communities be more resilient.</p>		<p>Week Four // May 20–26, 2018 Safeguarding Our Water Helping to make smart decisions about water safety and conservation.</p>
	<p>Week Five // May 27–31, 2018 Improving Education & Training Standards for a Safer Tomorrow Working with the building industry to train students about building safety and construction.</p>		

About Building Safety Month

For the last 38 years the 64,000 members of the ICC have celebrated advances in building safety and widespread interest in the campaign has grown significantly. The support from governors, city mayors, county executives and other officials demonstrated widespread interest and focus on the issue of building safety.

Why is Building Safety Month important today?

Building Safety Month provides education for the public about solutions that improve the safety, sustainability and resiliency of buildings, infrastructure and communities. Properly administered and up-to-date safety codes reduce loss of life and property damage. Contemporary planning, building materials, design and construction can make our communities more resilient to weatherization and natural disasters. Building Safety Month unites industries, associations, academia and government under a common goal to protect the public by creating a safe and resilient built environment.

Posters, brochures and resources are now available!

VISIT
www.buildingsafetymonth.org

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SPREAD THE WORD
 #ICCBM18   

Increasing the Value of Your Organization's Communications

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views and other website measures. Sometimes, you will find that older content is getting many views due to its relevancy and its search optimization. For example, after the Flint situation, PMI found that the lead in plumbing page on safeplumbing.org was receiving tens of thousands of page views per month. This spurred our team to write about other topics on which PMI could provide accurate and relevant content, such as Legionella.

Most websites today have links to the organization's social media, a blog, and an interface for purchasing products or services online. Think of your website as a living document that should be updated as often as possible to reflect a dynamic organization, as well as something that offers a two-way portal to facilitate communications between your company and your important audiences.

Social media

The primary purpose of social media is to reinforce and amplify prioritized content generated for your media outreach, publications and website. Social measurement media tools can help you monitor how your viewers engage with your posts by commenting, liking and sharing. These tools also track new followers, impressions, profile visits, and other data available from the various platforms.

The various social media platforms have different characteristics, strengths and weaknesses. YouTube is a video site that also serves as a powerful search engine. Post videos there, and make sure to add text describing your videos and company. Twitter will generate the most engagements (comments, likes and shares) but it's not as personal as Facebook. LinkedIn is the platform for business, and it's the best place to network with your industry peers. An often overlooked aspect of LinkedIn is its ability to serve as a blog of sorts through

its Groups feature. If you think your message can be effectively communicated primarily using images, Instagram is an up-and-coming platform that may be right for your company. Google Plus isn't the greatest social network but posting there can help your search optimization.

Adding photos, graphics and videos tend to attract more attention than posts using just text. It's smart to develop as many kinds of these messages as possible to improve your social media efforts.

Using an algorithm we developed for social media measures, PMI has begun assigning cost/value to social media engagements and outputs, such as impressions, likes, new followers, comments, shares and profile visits. Establishing these baseline measures will help us to track progress and improvement over time. There are many social media measurement resources that can get you started on doing this.

Summary

Tracking the performance of the various aspects of your communication programs is the first step to determining value. Once you begin tracking the outputs of your communication efforts, you can begin to set goals and then even begin to determine measures such as publicity or advertising equivalent values, cost/value per view or link click, and cost/value per social media engagement.

No matter where you are in developing your communication program, the goal should be gathering data and then improving on the performance your data represent. The true value of your communications will ultimately be determined by the impression it makes on your most important audiences. I welcome your comments and will be happy to answer your questions or discuss these topics in the future. Contact me at ray@valekco.com.

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