

## Topic: Technology as it relates to Manufacturing

### General

- Adapting to a gap left from not having in-person conferences and tradeshow.
- Pandemic has forced us to continue to evolve and be creative.
- This pandemic is helping companies get rid of old habits and move towards new strategies which will continue post-COVID.
- Manufacturing operations and businesses expected to operate mostly in current COVID mode at least through 2021, with some practices more or less permanent.
- Next 6 months: Travel will come back, but regional and not likely international. Perhaps less of an issue for plant visits compared to international conferences.
- We must balance the demands of the customer (dealer/distributor) and the consumer. The dealer may be trying to reduce maintenance costs, for instance, while the consumer is concerned about water consumption.
- 100% community/household participation needed for SDWA compliance programs are difficult. Participation takes more of a backseat than the maintenance aspect. In one instance, allowed 75% participation upfront, and had approval to move forward. By the time the 75% was installed, the word got around that the water was improved, and most others in the community were on board with the POU/POE compliance strategy.
- Manufacturers that embraced innovation bounced back the quickest.
- Supply chain considerations also relevant, though companies have been staying ahead to best ensure finished products are available for the market.
- Expansion of maintenance communication tools in hardware for filters, salt settings, etc.
- Continuing drive for efficiency in products, environmentally advanced technologies, and smart products addressing health-related emerging contaminants, e.g. 1-2-3 TCP.
- WIFI lets monitoring be done remotely, but still challenging to demonstrate to regulators that the product is working overtime.

### Sales/Marketing

- Virtual sales appointments for everything except testing someone's water.
- When COVID first hit, there were lots of sales, but sales have decreased as time has gone on.
- Marketing strategy in a COVID world has changed drastically.
- COVID mentions/protective measures on web site to consumers was key for giving them comfort.
- Heavier reliance on eCommerce tools and selling including the use of communications platforms.
- Seeing a need to look at the consumer's changed needs over the pandemic and track it moving forward to help direct future initiatives.
- Still gap in product adaptation for different age groups – training homeowners being a large time drain for those not internet or connectivity data savvy. Some are simply not interested whereas others are very interested – generation transition.

### New technologies

- With Alexa now being the norm/expectation, consumers want that for their water treatment technologies as well.
- Focus on App development for sellers, supply chain and consumers.
- Crucial to have a goal to keep up with the latest business operations technologies. Instead of a delay due to needed training, we can reutilize technology we have.

- Disinfection technology is seeing more interest in response to COVID even knowing it is not a waterborne contaminant.
- In some ways, the pandemic has been beneficial for our industry by forcing people to get up-to-speed on technology and e-platforms. People were very patient with e-commerce and backlog issues to start with, but that patience is wearing thin as customers expect companies to have figured it out by now.

#### Safety

- More safety procedures in production areas for manufacturing; measuring temperatures, social distance.
- Ability to work without being in the office – doing fine despite being remote. Not as true of warehouse and manufacturing – not comfortable with a mask, so have adjusted work environment to make it safe and accommodating for staff.

#### Communications

- Added Zoom (and should have been using it all along, conference calls can and maybe should be Zoom or video chat).
- Flexibility in remote communication has increased amount of contact time with customers. This is a differentiator because we can develop a relationship faster than we ever have before.
- Rapid adoption and expansion of consumer accessible/supply chain friendly internet-based communication tools.

#### Security

- Security of online data – has not been a concern of regulators in EPA Region 9. Industry just needs to be truthful when a product is not performing properly.
- Whenever there is a conversation around technology, we need to address cybersecurity.

#### Sensing Technologies

- Sensing technologies are important but challenging in practical use. 1,2,3-TCP is hard to detect in lab, let alone in the field.
- Explosion of R&D for real time 24/7 sensing technologies for contaminants in POU/POE.
- Sensing contaminant levels in the field is going to become an essential demand, and we're just not there yet with a lot of the technology.

### **Topic: Regulatory Affairs**

#### Technology Needs: Real Time Data Collection/Sensors/Monitoring/Maintenance

- Enhanced expectation from regulators for POE/POU to demonstrate ongoing regulatory compliance.
- When approaching the final barrier concept, we have to approach it with data, and that means improved field sensor capabilities.
- Need to continue to work on showing products are effective, how we can meet the needs of a monitoring system.
- Develop industry best practices for monitoring.
- Contaminant break-through, need technology to ensure warnings (alarms).

- Auto-shut off not a great solution. Need to be able to flush toilets and what if it's midnight and it shuts off?
- WIFI lets monitoring be done remotely, but still challenging to demonstrate to regulators that the product is working overtime.
- WIFI connectivity, from a dealer's perspective, is becoming a very valuable tool. Having the WIFI monitoring capability bundled with the product is a great value-add for both the dealer and the end user, especially for the dealer when the equipment is being leased. Many dealers working in the commercial/industrial sphere are familiar with SCADA and recognize the value that brings.
- The difficulty with WIFI is sometimes getting the more senior techs comfortable with the WIFI technology. A recommendation was made that WQA author a training module that explains how to connect to WIFI in a customer's home.
- Any apps for connected products need to be as intuitive and user friendly as possible to assist with adoption by service techs.
- Start a training/certification program for techs so they can use the pro version of the app that comes with the product correctly. An app allows the dealer to see all their installed products on a map and get real time data on water usage.
- How can we convince customers that apps and monitoring are worth the cost? - It can be bundled in, a part of the base cost. That is how other smart technologies are sold, and it is what customers expect.
- Clean Water for All and California's SAFER requirements will accelerate compelled need for maintenance technologies and practices to demonstrate SDWA and related compliance post-installation.
- California drives a lot of regulatory requirements, but some of them challenge the ability to even measure the contaminants of concern. Some requirements are down to the parts-per-trillion level, raising questions about who has the capability to measure that and who is responsible for measuring it. Going back to certify and test for new regulations brings up ROI issues.

#### Licensing/Training

- To provide compliant ready products and services, professionals in the field are essential. Without education like the WQA's MEP program the final barrier message can fall apart.
- Struggling with regulatory issues with plumber licensing requirements for installations, as well as regulatory issues with backflow preventers.
- Requirements and demand for professional certification/education/competency/licensure of individuals is accelerating.

#### General

- Proposed 1,2,3 TCP as potential topic for the next manufacturer section meeting.
- Challenges with state to state and county by county regulatory differences— requires expertise at state or even local level to track and keep current, for example PFAS.
- Health is changing the conversation.
- Get the IT industry to see us as an open market for them to introduce innovations from other industries.
- Scientific data is king when it comes to convincing people to make a change.
- A cost benefit analysis is important to help understand and communicate at what point is it more cost effective to use POU/POE for compliance to the Safe Drinking Water Act (SDWA).

- Regarding using POU/POE for SDWA compliance, need to show we can get in the customer's door.
- While 100% community/household participation needed for SDWA compliance programs can be difficult, we also must focus on how to demonstrate in home maintenance technologies and programs if "Final Barrier" is meaningfully accepted.
- Working with regulators who want to raise the bar for the industry, with possibility to create greater opportunities, requires us to acknowledge the regulator and have manufacturers, dealers, and WQA all work together to meet the challenge.
- Sharing our industry's story has been critical to the success and opportunities we see now. This means supporting having DC representation through WQA and Gephardt Government Affairs.