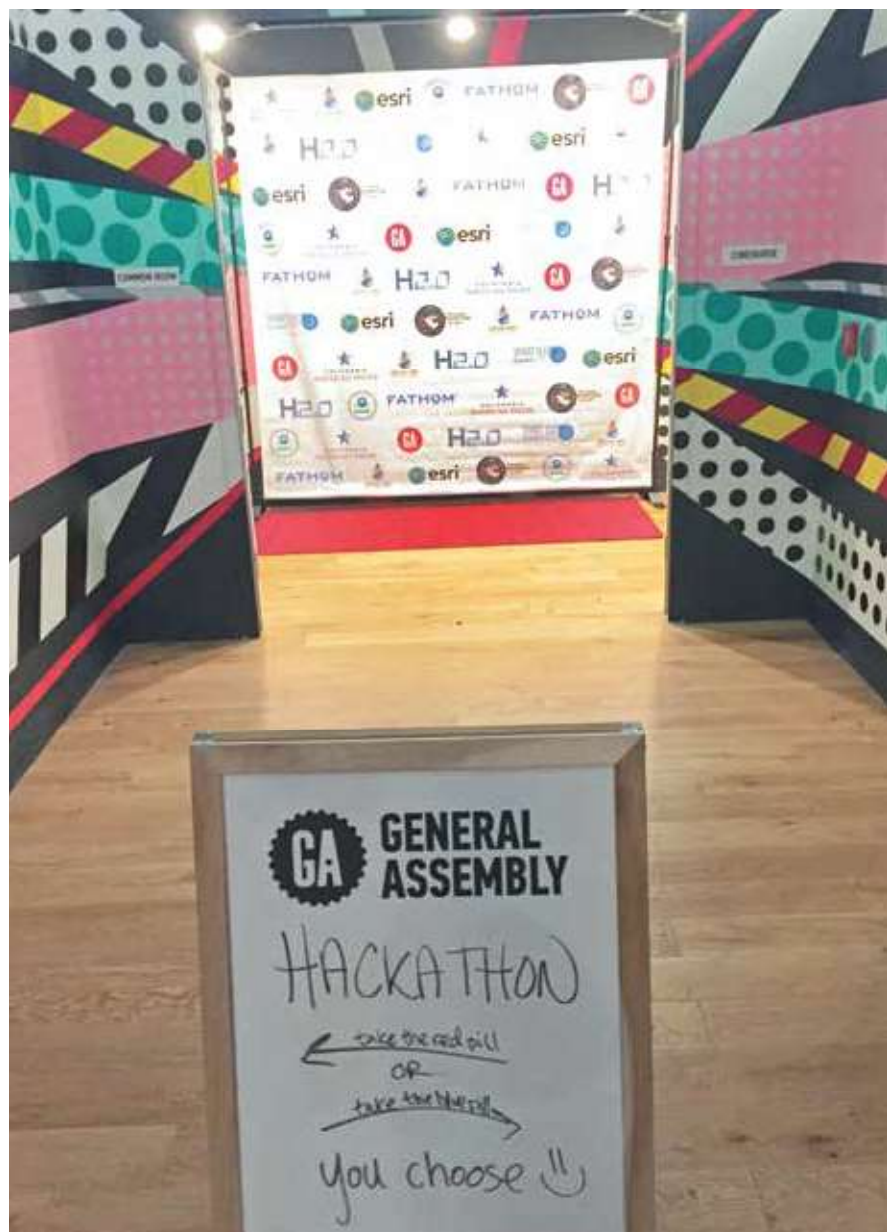


# Changing the Water World, One Digital Drop at a Time

Chris Peacock



How do you transform the way people value water? In 2013 I set out on a mission to find the answer and help society understand the water challenges we all face.

What originally started as finding an entry point to help water utilities understand how to best leverage their data quickly turned into a larger communication extravaganza, including a book and a number of events that would engage a much wider audience. This was an audience that leverages social networks, has data and coding skills, and wants to make a social impact. More importantly this audience has the skill to accelerate water's digital footprint.

Little did I know that for one such event, my team and I would agonize over how to feed 120 people; find enough power strips for all the devices they'd use, and verify we had enough caffeinated drinks to keep people going through the night. These were the just the basics of getting a hackathon off the ground. The result was spectacular. Our audience engaged to create solutions that addressed water consumption in times of drought, disaggregation of water and energy meters to discrete appliances, water as a social good, a physical remote water monitor for agriculture, engaging water games,

resources for vulnerable communities and a water conservation tool for utilities among other things.

At this point, some readers may be thinking, “Wait, what the heck is a hackathon anyway?”

A hackathon is an event where individual coders, graphic designers, entrepreneurs and subject matter experts gather for a short period of time, self-organize into teams and solve problems through technology (oftentimes software) that is created during an event. It is a way for coders to experiment with new systems, entrepreneurs to explore new business concepts and an amazing way to learn new skills. It is a temporary event, with temporary projects, and lasting impact.

With a primary focus on the digitization of water, we had launched the 2015 Water/Energy Nexus Hackathon in San Francisco as a social and technology experiment to engage digital natives and seasoned water professionals through innovation and collaboration. Over the course of three months, my team and I set out to discover how we could create an experience that brought meaning to all our participants and our partners. We spent hours on calls with our sponsors, California American Water, the EPA, FATHOM, ESRI, Presidio Graduate School, Verizon and General Assembly, to determine the right set of problems we wanted participants to solve over the course of 36 hours. But we knew we needed something more than just these questions. So, as we planned the event we developed these five goals to keep us focused on the right priorities.

- 1) Engage a variety of water industry stakeholders in a collaborative learning environment with one another.
- 2) Introduce individuals with a technology background to water issues and engage them in understanding the issues through competitive problem solving.
- 3) Provide a high level of awareness within the water industry to showcase the value of innovation and collaboration.
- 4) Develop software/hardware that may be commercially viable to encourage entrepreneurial endeavors.
- 5) Have fun, learn from one another and leave with a sense of accomplishment.

With these goals in mind, we focused our efforts and designed a two-day event that, while exhausting, proved successful beyond our wildest dreams.

For a hackathon to be successful you need a few key ingredients including great sponsors, great content and great food! (Ok, the food doesn’t need to be great, but the participants sure enjoy decent meals rather than just pizza.) We cannot say enough about the importance of the sponsors. These companies and organizations brought not only the financial or technical means to make the event possible, but significant ideas to help our teams.

Which brings us to content. We were acutely aware that while the event sold out, **less than 5% of those who registered actually came from the water sector.** We needed to spend the first few hours of the event sharing water specific knowledge with the teams. Along with our amazing sponsors, we brought in several resource guests to roam the event and provide our teams with expert water domain knowledge.

The participants self-organized into 14 distinct teams and projects. In 36 hours, they created solutions that addressed water consumption in times of drought, disaggregation of water and energy meters to discrete appliances, water as a social good, a physical remote water monitor for agriculture, engaging water games, resources for vulnerable communities and a water conservation tool for utilities among other.

Each team had five minutes to pitch to a group of eight judges, consisting of our sponsors, a member of the California Public Utility Commission and a member from the local community. In the end, we awarded three prizes, several giveaways and created lasting memories. The grand prize winner of \$1,000 donated his winnings to a local charity solving water problems through advanced technologies in developing countries.

The lessons from this event were profound.

- 1) We built an experience for water professionals to collaborate across the sector in ways that may never have been available to them before.
- 2) We introduced more than 100 people to the world of water and helped them

understand how they can help us solve some of our most complex problems.

- 3) We engaged policy and business decision makers in new, innovative ideas.
- 4) The participants developed technology products that could be incorporated into existing business models or create new business models altogether.
- 5) Everyone had a great time. We laughed. We made new friends. We learned new skills.

There was one final lesson from the event that we did not originally map out in our goals. It is one of the most important. *No matter who you are or where you are at in your career or what skills you have acquired, you have something valuable to offer.* In hackathon events, while the technology is cool and there is excitement in the air, everyone can contribute their knowledge and skills to a team, while learning something new. Collaboration is about sharing that knowledge and those skills with others to create meaning together. Collaboration is the secret to enabling innovation and driving solutions in today’s water scarce world.

Should you ever find yourself with the opportunity to participate in a hackathon or similar event, I encourage you to do it at least once, for the experience itself and perspective it brings. If you are thinking of hosting an event, I am always happy to share my learnings. Better yet, join us in Austin, Texas for the June InvestH2O Water Internet of Things Hackathon. If you want to learn more about the 2015 Water/Energy Nexus Hackathon, check out the video we put together at [www.waterinnovationproject.com/project/2015hackathon](http://www.waterinnovationproject.com/project/2015hackathon).

Hack on! ■

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**Chris Peacock** has 20-years of experience in the water sector and has contributed to numerous publications on the topics of water innovation and smart water. He published the multi-award winning anthology, *Damned If We Don’t! Ideas for accelerating change around water*. He is the founder of The Water Innovation Project and AQUAOSO Technologies, which is currently building a water management and trading platform. He can be reached at [chris@waterinnovationproject.com](mailto:chris@waterinnovationproject.com)