

The Beauty Of Hackathons

BY MARK HRYWNA AND PATRICK SULLIVAN

World Wildlife Fund (WWF) needed another set of eyes on a problem. They got more than a dozen at the South by Southwest Eco Conference (SxSW Eco) held in October 2014.

The Washington, D.C.-based organization has been struggling to engage the public to help save monarch butterflies. The butterflies, which have a multigenerational migration of up to 3,000 miles, often cannot find the milkweed that their caterpillars depend on. WWF wanted to urge people to plant milkweed in their gardens, and they turned to about a dozen coders and developers at SxSW Eco to help them.

The ensuing 24-hour hackathon produced a mobile app called Monarchy. Monarchy, still in development, will allow users to input their location and have the app return the most suitable species of milkweed to be grown. Users can upload their photos of monarchs and can search others' photos for monarchs in their area. The app also mines Instagram and Flickr for photos of monarchs in a user's proximity.

"This was a great opportunity to engage the public to save the species if people would start planting milkweed in their gardens," said WWF Chief Scientist Jon Hoekstra. "We realized this is where we might turn to innovators. Is there a way to harness technology to reach the public about a problem and tell them how they can be part of the solution?"

Hackathons are timed events where programmers and technology developers sit down for 24 hours or more and crank out a piece of technology, often an app or a mobile website. Hackathon structures vary, but they are usually set up in teams who work on specific projects within a short time frame. SxSW Eco's hackathon lasted 24 hours, a common length for hackathons, but participants decided to subvert the usual team-based structure of such an event.

The hackathon "was a full-day event," with some staying all day and others "dipping in and out," said Hoekstra. "The group spontaneously decided to team up and pool resources. People came independently to it but decided to work together. It was an interesting variation."

It is sometimes unreasonable to expect a working product in 24 or 48 hours. That's why the Technology Association of Georgia (TAG), based in Atlanta, ran a month-long hackathon. The Mobility Live Hack-Back Invitational took place through August and September 2014 and benefitted three Georgia-based national organizations: The American Cancer Society, Boys and Girls Clubs of America, and Points of Light (PoL).

What amazed Tino Mantella, TAG's president and CEO, was "how intelligent the technology and the people using it are to make something happen so fast that nonprofits would think is out of reach," he said. Even with a month, however, some of the projects coming out of the Hack-Back were demonstrations or prototypes, such as one winning entry for nonprofit beneficiary PoL.

Scott Geller, PoL's chief technology officer and presi-

dent of Points of Light Digital, said PoL proposed two projects. One was for making PoL's website allfor-good.org mobile friendly. The second was to find some way to make the organization's national monument in Washington, D.C. -- The Extra Mile Points of Light Volunteer Pathway, soon to be known as Points of Light National Monument -- more interactive.

"We just got funding to expand, and part of that is (creating) a virtual experience," said Geller. Right now, said Geller, the monument is "frankly not that exciting."

The winning team for this project idea came up with an augmented reality app. A user holds a camera phone, with the app running, over one of the honoree



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--Amy Sample Ward

medallions, and the digitally-rendered honoree pops out of the medallion and begins to speak. Aside from the technical aspects of creating an augmented reality app, this project required finding an actor who looks like the honoree, and even then the app was only a demonstration with one honoree (Goodwill founder Rev. Edgar Helms).

Despite the limitations, PoL now has both a base upon which to build, and a fundraising tool. "The problem with a lot of hackathons is you end up with something cool and you throw it away," said Geller. "But the way (the Hack-Back) was structured lends itself to something that could live beyond the hackathon." He said PoL has used a video demonstration of the app in a presentation to the PoL board, "and it's been shown to some of our biggest funders."

The Hack-Back and the augmented reality app expanded PoL's vision for the national monument. Geller said the organization is "putting together a bigger vision around not only the national monument but a platform to inspire people based on what (the honorees) did and the Daily Point of Light Award." He wants users to use the app at the monument to de-

scribe themselves and what they're passionate about, and have the app match the user with an honoree exhibit that exemplifies that passion, and to connect the user with a Daily Point of Light Award winner.

The Hack-Back has "spawned other ideas that have become a bigger vision," said Geller.

Hoekstra also did not expect aspects of the solution developed by the SxSW Eco team. "The photo mining solution was really surprising to me, really creative," he said. The WWF marketing and sales team, which helped sponsor and coordinate the event, is now developing Monarchy further. Hoekstra said WWF is still in contact with some of the hackathon participants. "We're exploring how we can take the data and build it out," he said. "It's a really cool way to bring new ideas to the fore and now we're in the stage of determining how to figure out how to get it fully functioning."

The Steel City CodeFest started in 2013 as a partnership between Google and the City of Pittsburgh, in an effort to promote innovation and technology, according to Jennifer Wilhelm, innovation and entrepreneurship strategist for the Center for Innovation and Entrepreneurship at the Urban Redevelopment Authority (URA) of Pittsburgh. "The idea of the nonprofit challenges came through in the second year when we realized we had all this great talent and enthusiasm," she said. The next CodeFest will be held Feb. 21-22.

PASTEURIZED THE MILK

Participants sign up and pick any one of a dozen challenges provided by local nonprofits. By the end of the weekend, nonprofits that had a challenge can partner with any team and apply for a grant to bring the app to completion. The nonprofits whose challenges are chosen are invited in a couple of times over the weekend to guide the teams and provide feedback.

The hackathon is "a way that people with really great skills who want to do something for a purpose outside their 9-5 job, donating their energy and creativity," said Rebecca Young, project manager for innovation and communication at The Forbes Funds. Nonprofits selected for the hackathon can then apply for grants from the Forbes Funds to help bring their app to fruition.

CodeFest helps build capacity for all nonprofits in the region, according to Young. Even local affiliates of large, national organizations saw a need, she said, and apps that can scale, either within an organization or outside.

The southwestern Pennsylvania affiliate of Planned Parenthood and the local Salvation Army both participated in the 2014 CodeFest. The app for the Salvation Army enables staff to forgo pen and paper when dropping off supplies, eliminating a step and directly inputting into a computer what they're dropping off and where. Planned Parenthood is developing an app that lets someone text questions about sexual health to peer advisors, but also allows staff to approve questions and answers before they go out.

Hackathons generally have a pitching portion where

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nonprofits can define the problems they're having and the solutions they're hoping the teams will develop. While many of the developers will come up with solutions you'd never think of, it's still a good idea to be as specific as possible in defining the problem and offering guidance.

Richard LeBer, vice president of finance and strategy for the Atlanta Community Food Bank (ACFB), said his organization pitched about 20 projects, including a revamp of one of ACFB's internal systems and a text-based method for client agencies to share food, to 130 attendees during Atlanta's local National Day of Civic Hacking event in June of 2014. LeBer said that specifics depended on the project being pitched.

"Some of (the projects), like the internal systems upgrade, were quite specific," said LeBer. Other proposals, such as the texting app, were somewhat more vague. "We did a one-page (information sheet) on each idea. For what turned into the texting app, I just wrote that our agencies would like to share if they have too much of something (a food item). The idea of texting and the technology to do that, (the developers) came up with," said LeBer.

Of 20 projects, 12 were taken up, and ACFB is following up on five of them. "As normally happens, they were all experimental," said LeBer. "Some work, some don't. Some are more fully developed than others."

Pittsburgh Cares was among more than two dozen agencies that pitched its proposal for the 2014 Steel City CodeFest. The pitch session "felt like a nonprofit speed dating event," according to Deb Hopkins, executive director of Pittsburgh Cares, an affiliate of the Hands On Network and Points of Light. Each agency had five minutes to present their mission along with their technical challenge while coders then had about 30 minutes to circle through the room, speaking to them.

Pittsburgh Cares has an online volunteer matching database. Annually, the organization has about 12,000 volunteers sign up and register with some 400 distinct nonprofits. The challenge was to create a mobile app because Pittsburgh Cares experiences a 55-percent bounce rate when someone attempts to register on the database via smart phone.

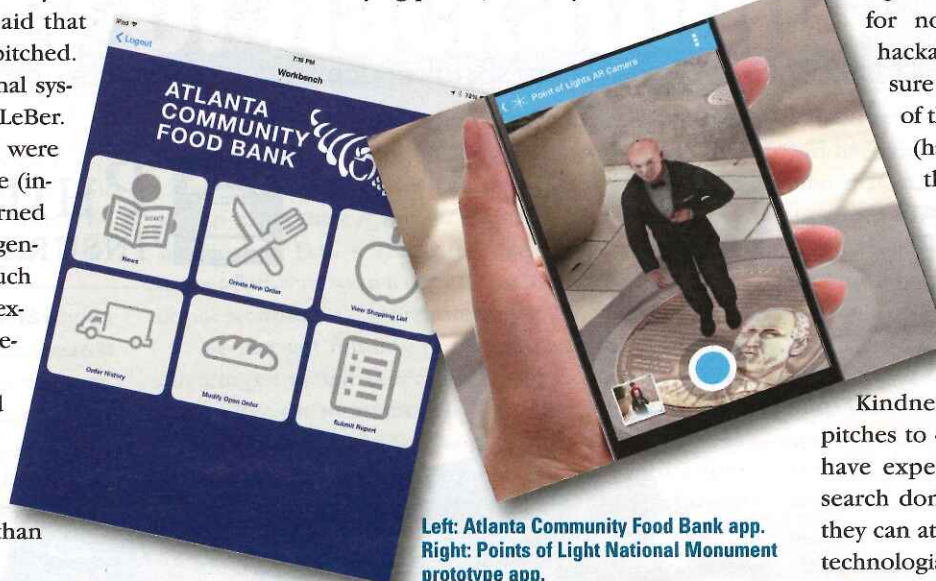
The only expense for Pittsburgh Cares was staff time, with Hopkins and her technology director attending the pitch session to make their case and then being available on an ongoing basis to support to the coders.

Pittsburgh Cares has a staff of seven, with a budget of about \$500,000, and a technology director who's already putting in 50 hours per week. "This was just a wonderful wish list that she wouldn't have the ability to get to," Hopkins said, estimating at least \$60,000 worth of volunteer time if they had hired a consultant.

"The experience for me was a little different because

working with volunteers is what we do. For me it was very validating. Since I arrived, I've been recruiting volunteers, touting the value of what volunteers can bring, beyond unskilled man hours," Hopkins said.

Amy Sample Ward, CEO of Portland, Ore.-based NTEN (Nonprofit Technology Network), said a common problem with hackathons is the solutions developed often go nowhere. "A lot of the criticisms of hackathons are that people are spending 48 hours coming up with ideas but things often die after that," she said. "There are of course opportunities for hackathons to have more staying power, but they often don't."



Left: Atlanta Community Food Bank app. Right: Points of Light National Monument prototype app.

Sample Ward said that an organization's problems must be clearly defined and fully realized, and they should be chosen very carefully with the framework of a technology solution in mind.

Carefully vetting projects was a big task for Kim Wall and Jodi Jones when they were setting up dsmHack in Des Moines, Iowa, and a big reason why the event was so successful, they said. Jones and Wall, both IT professionals, wanted to mobilize Des Moines' thriving "Silicon Prairie" tech community to give back to local nonprofits.

"We did a lot of discussing of the projects, and viability was one thing we considered," said Wall. They were looking for projects that could be either done or close to done in the 48 hours allotted for the June 2014 event. Some 19 projects came in initially, and Jones and Wall narrowed that field down to nine, all of which were worked on during the event.

"All of the organizations had different levels of technological acumen," said Wall. "For some organizations it was simply a matter of resources and time to get what they needed but they might have (in-house) support. Others had no tech staff. Trying to balance solutions for those folks was one of the challenges."

One nonprofit needed a specific and intricate Salesforce solution. Jones and Wall did not choose the project because "we knew we may not be able to give them

what they needed" depending upon the developers that showed up, said Wall, though they did invite a representative of the nonprofit to attend the event and speak with a Salesforce expert.

Large or small, participating nonprofits "really are in the same boat in terms of budgets for technology," Hopkins said. "And yet, universally, our resources are being dedicated to direct service, most of us barely keep up with demand. Mobile apps and others on a tech wish list are just luxuries, we don't have the time or money," she said.

Having the right people in the room is key for getting a workable product, said Sample Ward. That goes for nonprofit staff and constituents, not just hackathon participants. "It's important to make sure staff is in the room so they can see the angle of the work and the opportunity," she said. "Also, (have) people who participate in the programs the organization provides so they can say, 'Here's what I wish you could deliver.'"

According to Neisan Massarrat, a Washington, D.C.-based associate at Second-Muse, which is an operational partner of the National Day of Civic Hacking and a founding partner of the Random Hacks of Kindness initiative, when nonprofits are making pitches to developers at a hackathon, "It helps a lot to have experts (from the nonprofit) present with research done on the obstacles and needs," he said. "If they can attend the event, that helps massively because technologists don't often have the background (in the nonprofit's mission area)."

The National Day of Civic Hacking (NDCH, in which LeBer's ACFB participated in 2014) began in 2013, and in 2014 had about 90 hackathons and 40 other projects happen during the 48-hour event on May 31 and June 1. Random Hacks of Kindness traditionally had two hackathons per year, but Massarrat said it has shifted to a more locally-based model, with "some of the communities having the (hackathons) and others continually working on different projects."

Massarrat said most of the projects that come out of NDCH and Random Hacks are "early stages projects or prototypes," but organizers are very invested in seeing these projects advance to more sustainable long-term relationships.

Massarrat said nonprofit managers should look to "programs that have a lot of volunteers with really interesting skills willing to support projects in their (mission) areas. If nonprofits need extra resources to act on their mission, a number of initiatives have been created," such as state technology associations like TAG.

"We see hackathons as a way to spur communities to engage with each other," said Massarrat. "We see it as part of a longer term process. If the opportunity is only a hackathon, there's a limited time for full-blown projects. But we're interested in having local communities find these projects and lead them to a sustainable outcome." *NPT*

DIRECT MAIL

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In some cases, borrowing approaches might require more than a little modification. Larger nonprofits could have a fair amount of brand equity, a benefit that smaller organizations can't easily claim.

The trick might be to vie for a donor's attention based not on the organization's name, but rather its mission. "There are a relatively small number of types of charities people are predisposed to support," May said. Those major categories include services for children, fighting disease, ending poverty, international relief, helping veterans, emergency relief, and political

issues and candidates, he added.

"If a [smaller] organization can successfully define itself as falling into one of these categories in a way the public can understand, often the brand itself can be somewhat secondary" to making sure the prospective donor has a clear understanding of what he or she is being asked to support, mission-wise, May said.

"The smartest thing [smaller nonprofits] can do would be to contribute \$25 to four or five organizations in their category, every year, and track the fundraising efforts they receive from those organizations, with the assumption that [they're receiving] the most successful ap-

proaches," he suggested.

Smaller organizations also have opportunities larger nonprofits can mimic. In smaller organizations, department staffs have more latitude to be entrepreneurial. Large organizations can bring some of that feel in-house by providing independence and rewarding entrepreneurship, within basic guidelines, to different departments.

Nonprofits large and small need to keep mailing, even if acquisition mailings are break-even (or worse) propositions, said The Heritage Company's Michie Zornik. New donors often make back acquisition costs with subsequent efforts. "You can imagine a board sitting around

saying 'we are not making any money on acquisitions, so we are not going to do acquisitions,'" she said. "But donor attrition rates are 20 or 25 percent each year. When organizations don't do donor acquisition, they lose."

Finally, there's the personal touch, which might be easier for a smaller organization to pull off. A handwritten thank-you note combined with a live postage stamp will usually get an additional something back from the donor. "A lot of letters, from small and large organizations, are a little bit too 'computer' looking," said Michie Zornik. "Once you start producing thank yous en masse, you start losing that loving feeling." *NPT*