HOW TO PREPARE FOR EVERYTHING

Empowering You to Face Disruption with Your Community and to Feel Good About the Future*

Aaron Titus

* This book does not contain doomsday scenarios, zombies, or nightmarish predictions. Proceed with happiness and a sense of hope.
Dedicated to survivors,
to the volunteers who rebuild communities, and
to the VOAD movement,
which breathes life into whole-community recovery.

With gratitude to Ray Barton and others for making this book possible.
# CONTENTS

## SECTION A: PREPARE

<table>
<thead>
<tr>
<th>Content</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>3</td>
</tr>
<tr>
<td>Chapter 1: The Zombie Apocalypse and Other Dangerous Myths</td>
<td>11</td>
</tr>
<tr>
<td>Chapter 2: Moving Beyond Doomsday Speak</td>
<td>23</td>
</tr>
<tr>
<td>Chapter 3: Preparing for Disruptions Rather than Disasters</td>
<td>31</td>
</tr>
<tr>
<td>Chapter 4: How to Prepare for Everything</td>
<td>41</td>
</tr>
<tr>
<td>Chapter 5: Examples and Definitions of Disruptions</td>
<td>57</td>
</tr>
</tbody>
</table>

## SECTION B: SHARE

<table>
<thead>
<tr>
<th>Content</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 6: Running a Community “How to Prepare for Everything” Workshop</td>
<td>113</td>
</tr>
<tr>
<td>Chapter 7: Adapting the Workshop for Youth</td>
<td>129</td>
</tr>
<tr>
<td>Chapter 8: Adapting the Workshop for Business Continuity</td>
<td>133</td>
</tr>
</tbody>
</table>

## SECTION C: HELP

<table>
<thead>
<tr>
<th>Content</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 9: Preparing to Recover with Your Community</td>
<td>143</td>
</tr>
<tr>
<td>Chapter 10: How to Volunteer</td>
<td>149</td>
</tr>
<tr>
<td>Chapter 11: Your Role in Community Recovery</td>
<td>169</td>
</tr>
<tr>
<td>Epilogue: Crisis Cleanup</td>
<td>181</td>
</tr>
</tbody>
</table>

Acknowledgments                                                        197
Appendices                                                             201
About the Author                                                       243
Endnotes                                                               245
EPILOGUE: CRISIS CLEANUP

Why Crisis Cleanup?

During Hurricane Irene in August 2011, Wayne, Little Falls, Fairfield, Lincoln Park, and several other New Jersey towns near my home were flooded when rivers overflowed their banks. I joined thousands of Mormon Helping Hands volunteers to help clean up.

A thousand or more of us rallied each Saturday at various parking lots. Eager to work, we waited for up to ninety minutes to check in and receive our assignments. Periodically, someone would jog through the crowd and yell: “Make sure you sign in!” “If you haven’t had the safety training, come over here!” “Team leaders, get your work orders and maps at the table!” With each instruction, the volunteers paid less attention and absorbed themselves playing Angry Birds on their smart phones.

As the weeks progressed, I found myself in charge. Finally, it was my turn to shout instructions: “I need all team leaders over here, please!” Nobody moved. So I yelled, “Everyone else, just keep doing what you’re doing. You’re doing great!” Volunteers looked up from their phones and chuckled.

Though I was making a joke, inside I was panicking. Volunteers’ time is precious. Volunteers want to help, not stand in lines. Those who have a bad experience don’t come back, which is a travesty. Giving these one thousand volunteers something to laugh about was the least I could do while they waited for ninety minutes to be checked in.

I can’t stand inefficiency. Truly. As I looked at all the volunteers with smart phones, I knew that with a little bit of technology, I could check them all in and give them assignments in thirty seconds, not ninety minutes.

After each volunteer received an assignment and we deployed to the field, we discovered many new neighborhoods that needed help. Sometimes several relief agencies would work in the same area and duplicate efforts, while other neighborhoods were ignored. Many survivors called 2-1-1 to ask for help, but these lists often did not end up in the hands of the waiting volunteers. After we completed a work order, we would either have to travel back to the command center or call someone to get a new assignment. When we could not contact the coordinator, some volunteers thought there was no remaining work and left.

www.howtoprepare.com
We worked with several other faith groups and community organizations. Each had separate Excel and Google spreadsheets. They did their best to share the information, but eventually most of these lists were lost or forgotten in email attachments. Disaster relief coordination is always chaotic and inefficient, but I knew we could do better. Much better.

**Doing Better**

After my Hurricane Irene experience, I was assigned to continue coordinating Mormon Helping Hands volunteers in other major disasters. I started designing a system to solve many of the coordination and communication failures I had encountered as a volunteer. I looked for partners, funding, and anyone who would work with me. Unfortunately, I was not able to find any tangible support. So, I wrote and launched the first version of a website (or “alpha” version, in software terms) on my own. We used it to clean up after strong winds took down trees in southern New Jersey in June 2012.

The alpha version was a simple proof-of-concept. The public called New Jersey 2-1-1. They entered their request into the system. I copied work orders onto a map. Cleanup crews would claim work orders in the middle of the week and go to work on the weekend. They did not have to travel to field command centers.

Though simple, the system worked well. We organized over seven hundred volunteers and helped several hundred residents. When a survivor called 2-1-1 for an update, call center staff could look at the map to see the status of the request.

Hurricane Sandy arrived just four months later: I re-activated the system and opened it to 120 organizations. Several talented programmers, including Jeremy Pack, Bruce Christensen, and Andy Gimma, rewrote the platform to make it more stable and automatic. Since then, the same system has been used in sixty disasters in thirty states and five countries—a new disaster every two weeks, on average. It’s for voluntary relief agencies. It’s free. It works. It’s called Crisis Cleanup.

Crisis Cleanup (www.crisiscleanup.org) helps volunteers from reputable relief agencies help more people by implementing the principles of volunteerism in Chapter 9, including:

- Letting volunteers organize themselves
- Enabling spontaneous organization out of chaos
- Providing equal access to big-picture information
- Allowing many organizations to update relief data at the same time
- Empowering the community to help itself
- Encouraging volunteers to creatively solve problems
Crisis Cleanup demonstrates that these principles work in real life. I am deeply dedicated to creating practical improvements in preparation, recovery, and volunteerism. Communities are resilient and can help themselves in amazing ways, given the right tools. Crisis Cleanup has accomplished a stunning amount of good since its beginnings in 2012. It improves volunteer efficiency by 25 percent or more, and has saved survivors at least $38 million. It’s available at no cost to relief organizations. I hope you will get involved.

**How Crisis Cleanup Works**

With Crisis Cleanup, volunteers perform assessments over the phone or in person. Crisis Cleanup allows relief organizations to see a map of the disaster area and work together with other organizations. Volunteers claim work orders from the map. They call the resident and arrange a time to serve. Volunteers from every agency can see who needs help, who has been helped, and which work orders are in progress. Once a person has been helped, volunteers mark the work order closed. When survivors ask for help from several organizations, Crisis Cleanup prevents duplication of effort. The live map also allows volunteers to focus on areas that have not been helped.

Crisis Cleanup can’t guarantee that every survivor will be helped, but it can guarantee they won’t be forgotten. Crisis Cleanup helps volunteers help more people. This means no more waiting in lines and playing games on your phone.

The system has helped hundreds of organizations assist tens of thousands of families in cities across the country and around the world. It helps groups like AmeriCorps, the United Way, Catholic Charities, the United Methodists, Islamic Relief, Team Rubicon, LDS Charities, NECHAMA, 2-1-1 operators, and seven hundred others.

Crisis Cleanup improves volunteer efficiency by 25 percent or more. Here are two examples that illustrate that point:

**Assessments without Crisis Cleanup:** The first step to helping is finding survivors who need help. This requires two or three volunteers to knock on doors in disaster-affected neighborhoods and interview each resident. Each of these conversations can take between fifteen and forty-five minutes, plus travel time. Each assessment takes at least thirty volunteer minutes and can easily take several volunteer hours.

**Assessments with Crisis Cleanup:** Instead of door-to-door assessments, survivors call the Crisis Cleanup hotline. Volunteers answer calls from their home and enter work orders into the system. The assessment is done in seven minutes by one volunteer. This saves at least twenty-three volunteer minutes and usually several volunteer hours. The saved time improves volunteer efficiency by between 76 and 98 percent.
Volunteer Deployment without Crisis Cleanup: Without Crisis Cleanup, a team of ten volunteers drives thirty minutes to a command center or volunteer reception center, where they wait for up to ninety minutes to check in and receive their assignments. Afterward, they drive another forty-five minutes to their assigned location. Before this team of ten even begins working, they have wasted a combined 27.5 volunteer hours in travel and overhead.

Volunteer Deployment with Crisis Cleanup: The same team can skip the line and go straight to work. The team leader logs into the system on a Wednesday. He or she claims a few work orders, calls the homeowners, and arranges a time to meet on the weekend. On Saturday morning, the ten volunteers drive forty-five minutes to the survivor’s homes. The team only spends 7.5 volunteer-hours in travel before they start working. After they are done, instead of driving back for another assignment, they log into the Crisis Cleanup map, where they claim a work order less than a mile away and start working immediately. Combined, the team spends between twenty and fifty more volunteer hours each day helping people instead of traveling. If they work a full day, Crisis Cleanup improves their efficiency by between 25 and 60 percent.

These hours add up to real savings for survivors. Removing a tree can save a survivor $500 or more. A “muck-out” after a flood can save between $10,000 and $15,000. Volunteers have used Crisis Cleanup to provide $230 million in service. Of that value, $38 million would have otherwise been lost to wasted volunteer time without the system. Volunteers use that saved time to help more survivors. These statistics allow me to estimate the value each volunteer gives back to her community: at least $1,500.

As of this printing, about $260,000 has been invested into developing this open-source system. That investment has produced $38 million in value for survivors. Crisis Cleanup is a catalyst and force multiplier, and we have reached only a small fraction of our potential.

Open to Any Reputable Relief Agency

Any reputable recovery organization may use Crisis Cleanup. Crisis Cleanup shares vital information with community leaders and relief agencies across the region, even as the disaster is unfolding. Relief organizations (including local churches and non-profits) can join Crisis Cleanup for free if they:

- Have a physical presence in the area
- Do this type of work, including canvassing, assessments, clean up, debris removal, chainsaw work, muck-outs, and/or rebuilding
- Interact directly with survivors
- Are reputable

#H2Prep
Relief organizations have used Crisis Cleanup in a new disaster every two weeks. A list through mid-May, 2017 includes:

- Northwest Wisconsin tornado (May 2017)
- Southeast Michigan floods (May 2017)
- Mississippi tornadoes (May 2017)
- Missouri floods (May 2017)
- East Texas tornadoes (Apr. 2017)
- Virginia Beach, Virginia tornado (Mar. 2017)
- San Antonio, Texas tornadoes (Feb. 2017)
- Worland, Wyoming ice dam (Feb. 2017)
- New Orleans tornadoes (Feb. 2017)
- Southern Georgia tornadoes (Jan. 2017)
- Hattiesburg-Petal, Mississippi tornado (Jan. 2017)
- Southern Colorado windstorm (Jan. 2017)
- Gatlinburg, Tennessee fire (Nov. 2016)
- Yarra Range storm, Australia (Oct. 2016)
- Hurricane Matthew (Oct. 2016)
- Minnesota/Wisconsin flooding (Sept. 2016)
- Hurricane Hermine (Sept. 2016)
- Louisiana flood (Aug. 2016)
- Roaring Lion fire, Montana (Aug. 2016)
- Pine Bluffs, Wyoming hailstorms (July 2016)
- Minnesota storms (July 2016)
- Detroit re-flooding (July 2016)
- Nederland, Colorado Cold Springs fire (July 2016)
- West Virginia/Virginia floods (June 2016)
- Fort McMurray, Alberta, Canada fire (June 2016)
- Texas floods (May 2016)
- Southeast Texas floods (Apr. 2016)
- Louisiana/Mississippi/Texas floods (Mar. 2016)
- Louisville, Mississippi tornado (Mar. 2016)
- Virginia tornadoes (Feb. 2016)
- Mississippi/Alabama tornadoes (Feb. 2016)
- New Jersey coastal floods (Jan. 2016)
- Flint, Michigan water crisis (Jan. 2016)
- Midwest winter floods (Dec. 2015)
- Southern tornadoes (Dec. 2015)
- South Carolina fast-track repairs (Nov. 2015)
- Texas floods (Oct. 2015)
- Central Texas fires (Oct. 2015)
- Carolinas floods (Oct. 2015)
• Central/west coast Florida floods (Aug. 2015)
• Southeast Michigan floods (Aug. 2015)
• Lusk, Wyoming flood (June 2015)
• Texas/Oklahoma floods (May 2015)
• Northern Illinois tornadoes (Apr. 2015)
• Boston, Massachusetts snowstorm (Feb. 2015)
• Columbia, Mississippi tornado (Dec. 2014)
• Long Island/New Jersey floods (Aug. 2014)
• Florida Panhandle floods (Apr. 2014)
• Baxter Springs, Kansas tornado (Apr. 2014)
• Typhoon Haiyan, Philippines (Nov. 2013)
• Midwestern tornadoes (Nov. 2013)
• Blue Mountain fires, Australia (Oct. 2013)
• Typhoon Phailin, India (Oct. 2013)
• Colorado floods (Sept. 2013)
• Pulaski County, Missouri floods (Aug. 2013)
• Black Forest Fire, Colorado (June 2013)
• Moore, Oklahoma tornado (May 2013)
• Hattiesburg, Mississippi tornado (Feb. 2013)
• Gordon/Bartow, Georgia tornado (Jan. 2013)
• Hurricane Sandy (Oct. 2012)
• Southern New Jersey Derecho Storm (June 2012)

Crisis Cleanup in Action

Crisis Cleanup’s story is inseperably intertwined with the stories of more than a hundred thousand volunteers across the world. These are just a few of them.

CRISIS CLEANUP IN TEXAS

Over the Memorial Day weekend 2015, large parts of Texas were hit with a devastating flood. I activated Crisis Cleanup and deployed to Wimberley, where some of the worst damage and loss of life occurred. From a heavily damaged bridge crossing the Blanco River, I saw debris scattered amidst hundreds of toppled trees. The torrent had removed tree bark high above my head. Even after witnessing the startling destruction, I could not fathom the amount of water that must have moved through that small town.

The local Ace Hardware store was the heart of the community response. Neighbors volunteered to help neighbors, and survivors came for a free lunch and shade from the summer sun. I drove down the street, where AmeriCorps volunteers had set up a makeshift command post
in on the second floor of an ambulance station. I saw a large stack of wrinkled, dirty papers on the desk—cleanup requests from survivors.

Some of my colleagues from other relief agencies called to tell me they were planning to leave. They could not find work in Wimberley. I looked at the stack of dirty papers in front of me. If they could just have access to these paper records, they would stay and help, I thought. The only reason these survivors were not receiving help was because their names were written on paper. I quickly gathered a few volunteers in the AmeriCorps command post and asked them to enter the work orders into Crisis Cleanup. It was not glamorous work. As minutes turned into an hour or two, one of the volunteers received a text message from a friend. Her friend was helping clean up a destroyed home. She sighed and said to another volunteer, “I’d rather be out doing real work.”

I sat next to the volunteer and thanked her for helping. “Do you realize how vital your work is?” I asked. “Right now, you are the only person who knows these families need help, because you have their papers. You could go out with your friends and spend an hour as one member of a crew that helps one family, or you can alert ten teams and mobilize several organizations to help those families,” I said, pointing to the papers. “Tell their story and send them relief.”

THE GREAT FLOOD OF 2016

Since that time, I have opened a public hotline for major disasters, staffed by volunteers. One-and-a-half hours answering phones saves enough field time to clean up an entire home.

In August 2016, a large complex of thunderstorms from the Gulf of Mexico met a high-pressure area and stalled over southeast and central Louisiana. It never strengthened enough to be named. National media mostly ignored this “no-name storm” as it dumped more than three times the amount of water as did Hurricane Katrina—thirty inches of rain in some places. Meteorological charts ran out of colors to illustrate the seven trillion gallons of rainfall. Nobody thought that much rain could fall in a couple of days. The “Great Flood of 2016,” as it became known, turned out to be a so-called “thousand-year flood.”

I opened a toll-free number that the public could call to request assistance. Volunteers from several relief agencies in many locations answered phones. One of those volunteers was Jennifer Ete.

Jennifer Ete’s home was one of only five in their Baton Rouge-area neighborhood that did not lose power, phone, or internet. Surrounded by destruction, the Ete family opened their home. Jennifer’s teenage daughter, Hana, family, friends, and neighbors gathered to answer calls
while the water was still receding. Many of the volunteers had lost homes themselves. They answered calls from their neighbors and entered the requests into Crisis Cleanup. Once the request was in the system, any of the relief agencies in Louisiana could go straight to work and help those in need. Thousands of Louisianans were helped this way.

The Ete home turned into a virtual call center staffed by spontaneous volunteers. They were able to answer more than three thousand phone calls during the first two weeks. While children played in the background, volunteers answered calls in the living room, kitchen, and just about any place they could find an empty chair. Crisis Cleanup handled upwards of ten thousand cleanup requests after the Great Flood of 2016.

**HURRICANE MATTHEW**

Hurricane Matthew hit the east coast of the United States from Florida to Virginia in October 2016, causing downed trees and flooding along the way. I opened the Crisis Cleanup hotline, and within a few weeks, the system contained ten thousand requests for assistance.

One man, Norman Kutz, answered more than a thousand calls. For the past thirty years, Norman has been an inventory and distribution manager. Once I discovered his outsized role in the response, I spoke with him about his experience. The people he remembered most, like a single mother with three children, needed much more than help cleaning up a home. They needed someone to listen. The single mom had just buried her mother, who died from a heart attack brought on by stress from the flood. Her father had passed away the week prior. She spoke about feeling abandoned. After a long conversation, Norman reached out to a local relief agency to ensure she was helped immediately.

I asked him how he dealt with these phone calls. “It wrecks you,” he admitted. “Sometimes you just need to step back and start over.” He often goes to the store for an hour to reset. To my surprise, he was between jobs and was sacrificing his job search in favor of helping people. “With so many people who need help, what kind of a person would I be if I didn’t help them?” he asked me rhetorically. I wanted to encourage him to look for a job but could not bring myself to do it. At the time, I was also unemployed and foregoing a legal career in favor of helping people on the other side of the country.

**HATTIESBURG-PETAL TORNADO**

In the early morning hours of Saturday, January 21, 2017, a large EF-3 tornado tore a path through parts of Hattiesburg and Petal, Mississippi. The tornado splintered trees, ripped off roofs, and killed four people. The entire community responded. A near-endless parade of local faith
communities began cleanup work immediately.

Ross Arroyo of the LDS Hattiesburg, Mississippi Stake, used Crisis Cleanup to organize five hundred volunteers from a radius of one hundred miles. Their volunteers answered hundreds of phone calls from survivors and entered them into Crisis Cleanup. They ran a near-paperless operation, where each of their team leaders accessed the map directly. Teams cleaned up more than two hundred homes in a single weekend. Coordinating with dozens of organizations, volunteers provided survivors nearly a half-million dollars in service.173

Enabled by people like Jennifer Ete’s family and friends, Norman Kutz, AmeriCorps volunteers, Ross Arroyo, and many like them, Crisis Cleanup silently touches thousands of lives. It enables the heroic efforts of volunteers across the country.

**Collaborative Accountability**

In this effort, volunteers and their organizations must work with others. Some misunderstanding and poor coordination is inevitable in any complex operation. But one way to ensure bad communication and lousy cooperation is to try to tell others what to do. There is a universal truth about communities in general and disaster recovery specifically: *There is no pyramid, and you are not on top.*

Crisis Cleanup recognizes this reality. Many work-order management systems exist, but they all have one thing in common—someone is in charge and tries to tell others what to do. Many organizations have internal hierarchies or agreements to assist each other. But in a whole-community response, there is no hierarchy among independent individuals or organizations.

Intuitively, we all know this: the Baptists don’t report to the Mormons (as my Baptist colleagues remind me), and the Salvation Army does not report to the American Red Cross. The sheriff’s department can order you out of an area, but they can’t order you into an area. Individuals and organizations have sovereign but interdependent relationships. Each member of the community is accountable to one another, but not some imaginary “king” of the community.

Like members of a sports team, each organization encourages others toward a common goal. The Baptists and Mormons work alongside each other in disasters across the country. When the American Red Cross opens a shelter, they work with the Salvation Army to provide meals. These organizations don’t control each other, but they work closely
together. When one of them misbehaves, the others call out and cut off the bad behavior. This is called “collaborative accountability.”

You find collaborative accountability in teams. For example, if one member of a soccer team does not pull his or her weight, during half-time the team goes to the locker room and a little bit of “collaborative accountability” ensues. Collaborative accountability is different from hierarchical accountability, which is when your boss tells you to do something and you can get in trouble for disobeying an order. True collaborative accountability requires shared vision and mutual respect—between volunteer and survivor, relief agency and community member, and between government and voluntary organizations.

## Working with Others

When I started Crisis Cleanup, I defined “success” as “more people receiving help.” By that measure, Crisis Cleanup has been a wild success. But it is an utter failure in others. Despite years of trying, I have not (yet) been able to raise a sustainable source of income for the platform. This is an important detail, but frankly, I have stopped worrying about it. I will continue to do what I can for as long as I can. And if I must stop someday, at least I have done some good.

Amidst widespread adoption, the project has attracted attention from all kinds of people who want to “work together.” These two innocuous words are often code for other intentions. Regardless, my response is always the same: “I will talk with anyone who wants to talk, and I will work with anyone who is willing to work. Crisis Cleanup is a collaborative tool. I seek collaborators.”

In reality, I have found that most people and organizations are looking for a one-sided relationship that often violates the core principles of Crisis Cleanup. When I say, “I’m willing to work with anyone who will work,” it’s a polite way of telling people to go away unless they’re willing to roll up their sleeves.

I have found that people who want to “work together” usually fall into one of five categories.

1. **The Project Amoeba** says, “Your project has accomplished amazing things and accrued a lot of goodwill. I want it. I don’t really know what your core principles and goals are, and I really don’t care. Let’s ‘work together’ to roll your project into mine so I can suck it dry like an orange. I don’t have any funding, and I’m not willing to do any work. I just want your success for my project or organization.”

2. **The Data Leech** approaches with the following proposal: “You have valuable data. I want it. You should spend a lot of time,
effort, and money building your tool so I can suck all the data out of it for my use. I don’t really know what your core principles and goals are, and I really don’t care. I don’t have any funding, I’m not willing to do any work, and I’m not willing to contribute data to the project. I just want your data.”

3. **The Shallow Consultant** pitches, “I am a consultant/company that trains government workers how to use technology. You should spend a lot of time, effort, or money training me how to use Crisis Cleanup and providing marketing collateral so that I can ‘promote’ the system through my business.”

4. **The Bylaws Breeder** suggests, “We have similar ideas and goals. Let’s ‘work together’ to build Crisis Cleanup and my project into a super-organization and combine forces to do amazing things. I don’t know what those amazing things are, and I don’t really know how combining forces will accomplish those goals, but building organizational structures feels like progress, and it’s the only thing I know how to do. So, let’s do that. Oh, and I don’t really have any funding or programming skills.”

5. **The Overconfident Tech Startup Founder** proclaims, “After analyzing your project for five or ten minutes, I can see it creates value. It’s a good thing I’m here to give you three broad, obvious approaches to monetizing it. Don’t bother me with detail, nuance, mission, constraints, ethical values, or market conditions. The only reason you haven’t been able to make money on Crisis Cleanup after years of trying is because you haven’t had the same brilliant ideas I just came up with in the last ten minutes.”

The people in these categories don’t understand that I’m not interested in building big organizations, especially when simple collaboration works better. I will never sell client records, nor refuse some local church to use it just because they can’t pay. Whether government adopts Crisis Cleanup is irrelevant; the system is for the rest of the community. Instead, I seek another category of collaborators: Problem Solvers.

6. **The Problem Solver** tells me, “I believe in the vision and goals that Crisis Cleanup is trying to accomplish. I can articulate use cases for Crisis Cleanup, and I’m willing to roll up my sleeves, work, or provide resources to help accomplish those goals. I may not have much to offer, but I’m more interested in building solutions to hard problems than organizational structures. Let’s work together.”
So far, Problem Solvers are discouragingly rare. I know they’re out there. They are the people who are willing to work and solve real problems. And they’re worth their weight in gold.

**Opportunities for Growth**

Speaking of gold, like many relief organizations, Crisis Cleanup could use some of that stuff. We have accomplished more than I imagined at the outset. It’s the most successful whole-community disaster relief platform of this decade. Yet, like hiking mountains rewards you with views of ever-higher peaks, we can see how much more Crisis Cleanup could accomplish with funding. Here are some important improvements for the future:

- Create a smart phone app that does not require a live internet connection (a useful feature after a disaster).
- Make a smarter database structure and application program interface (API) to allow Crisis Cleanup to talk with other programs.
- Create a new interface for long-term recovery and rebuilding.
- Include advanced analytics.
- Develop the ability to import work orders.
- Allow Crisis Cleanup to display data on external maps and websites.
- Allow appropriate government access. Right now, we have to keep government out, because we can’t appropriately limit access to just what government needs to know.
- Improve and integrate the phone system.
- Create a trusted relationship directory for relief agencies.
- Develop dozens of other improvements.

**Other Technology**

In addition to Crisis Cleanup, I am working on several other exciting projects that will improve collaborative disaster recovery. These include:

**Crisis Caller**: Crisis Caller is an open-source interactive reverse-911 system for faith groups, clubs, and other community organizations. After a disaster happens, everyone wants to know two things: who was affected, and where are they? Emergency managers and the American Red Cross often perform damage assessments, but these can take days or weeks to perform and are rarely shared with the public.

Crisis Caller allows pastors, scoutmasters, PTA presidents, schools, and others to determine exactly who was affected by a disaster in real-time. After a disaster happens, someone like a pastor logs into Crisis Caller and uploads the names, addresses, and phone numbers of everyone in his church. When he clicks a button, each member receives a phone call that says, “This is Pastor Bob. Please let me know if you were affected...
Epilogue: Crisis Cleanup

by the flood. Press zero if you are okay. Press one if your power is out. Press two if your home has flooded. Press three if you have evacuated....”

The person presses a number, and then indicates the severity of damage. Instantly an icon appears on a map. Pastor Bob can see exactly who was affected and (just as importantly), the areas that were not affected. He can also see areas where the phones are out, which might indicate a problem.

The system is collaborative because multiple organizations can use it at the same time. Pastor Bob might want to know how Jane Smith is doing, because she is in poor health. Even if Jane does not answer her phone, Pastor Bob can see basic responses from a local scout troop and a Jewish temple who also used the system to check on their members. Pastor Bob cannot see personal details about those individuals, but he can see that someone’s basement on Jane’s street flooded with three feet of water. He now knows that Jane might need help. Anonymous versions of this information can be shared with community and response organizations. When the whole community collaborates, we can build powerful maps of the damaged areas in minutes, rather than weeks.

I have built a prototype that has delivered more than thirty thousand phone calls during five disasters. Within two hours I can collect ten thousand data points, place them on a map, and make the information available to community leaders. Crisis Caller still needs work before it is ready for widespread use, but my dream is to make this available nationwide to the whole community for free or at a nominal fee.

Peer-Driven Service App: Chapter 10 illustrates the power of decentralized service. I am designing (and would love to build) an open source smart phone app that facilitates peer-to-peer and community broker service. Volunteers will be able to create their own service opportunities, invite others, and serve with trusted friends. The app will allow large, reputable service organizations post opportunities for their own volunteers, and recruit new volunteers from the community. It will also allow emergent organizations to engage community volunteers.

Other Projects: I am also working on an open-source donations management platform, a trusted relationship directory for relief agencies, and a refugee service platform.

Crisis Cleanup’s Future

Crisis Cleanup supports two new disasters every month. For more than five years, it has been a free, open-source passion for me and others who have sustained the project. Many people and organizations have helped develop it for a season, but most have moved on. Day-to-day, Crisis Cleanup is powered by my personal neurosis and the Visa debit card in my back pocket (both of which are limited resources). Friends will
often reply, “That isn’t fair! FEMA—or somebody—should fund it. It does so much good!”

I appreciate the sentiment, but to be frank, focusing on fairness is not very pragmatic. If I waited to act until things became fair or the way they “should” be, thousands of volunteers would still be sitting on curbs while survivors lose millions of dollars. I care far more about what is, what does, who will, what could be, and why. Should and fair are irrelevant in practical terms.

If you are like so many well-meaning individuals who want Crisis Cleanup to succeed, thank you. You might have some general ideas for making it financially stable. I am grateful for your interest and engagement. That is why I ask for your understanding while I bluntly short-circuit through conversations I have had hundreds (perhaps thousands) of times in the past four or five years. Hopefully identifying what does not work can help us move to real solutions. Crisis Cleanup faces a few challenges.

- I cannot and will not ever charge survivors for this service.
- Crisis Cleanup suffers from the “Tragedy of the Commons.”176 Everybody benefits from Crisis Cleanup, but no single organization will sponsor it.
- I ask relief agencies to pitch in and have gratefully received occasional small, token grants. Most relief agencies can’t or won’t pay. I refuse to disadvantage survivors by withholding core services simply because a local pastor doesn’t have a budget to pay for Crisis Cleanup.
- Government is unlikely to fund Crisis Cleanup because:
  1. It is not appropriate for government to own client records.
  2. Improving cleanup efforts helps the homeowner but does not save government money, except in the very long term.
  3. Crisis Cleanup facilitates work that is outside government’s scope of responsibility.
  4. Crisis Cleanup can’t guarantee service, because volunteers do the work. Most emergency managers will only pay you if you can guarantee a service for their residents.
- I have solicited crowdsourced donations on the website in the past. I raised $500.
- I have not approached venture capitalists or investors, because I don’t have a for-profit business plan. None of the obvious customers (survivors, relief agencies, or government) can or will pay for the service.
- So far, I have been unable to find philanthropy willing to fund Crisis Cleanup, not for a lack of trying. Most philanthropists only fund one disaster at a time, not improvements to system-wide capacity.

#H2Prep
Now that I have outlined Crisis Cleanup’s challenges, I ask for your collaboration.

**How to Help**

Fortunately, you can help Crisis Cleanup in several important ways:

- **Use Crisis Cleanup**: The next time you volunteer to clean up after a disaster, encourage your relief agency, faith group, or community organization to use Crisis Cleanup.
- **This Book**: If this book breaks even or better, the proceeds will support Crisis Cleanup by either allowing me to work on the project or to pay for some of its development.
- **Contract**: If you want your own branded version of Crisis Cleanup or want to ensure Crisis Cleanup is available to your community when you need it, give me a shout, and I can help.
- **Volunteer**: Crisis Cleanup needs experienced Ruby on Rails, Postgres, and JavaScript developers. We could also use grant writers.
- **Philanthropy**: If you know a charity willing to support a good cause, I would love an introduction.
- **Other ideas?** I am open to new ideas. I will talk with anyone who will talk, and I will work with anyone who will work.

I hope I have conveyed how deeply I care about the mission and benefits of collaborative disaster recovery. I have supported this system and the thousands of volunteers who rely on it while holding down a full-time job and through periods of unemployment. I have spent thousands of dollars developing and maintaining it. I will do all I can for as long as I can. In the meantime, I hope you feel inspired to help your community when they need it most.

**NOTES AND INSIGHTS**