



What a Successful Disaster Recovery Looks Like

Why Does Recovery Matter?

Disaster recovery is an often overlooked and misunderstood aspect of the disaster cycle. There are countless variables that affect recovery, including the magnitude of the devastation, coordination among federal, state, and local leaders, availability of capital, damage to major employers, housing availability, and so on. This whitepaper, a publication of the Business Civic Leadership Center (BCLC), is designed to inform community leaders and federal policymakers on what a successful recovery looks like, and what can be done to increase the chances of achieving success.

One thing is for certain, the cost of disaster recovery has gone up in the United States, even when adjusting for inflation. Based on statistics compiled by the Centre for Research on the Epidemiology of Disasters (CRED) at the Université Catholique de Louvain, BCLC has calculated that the cost (in 2008 dollars) of natural disaster damage in the United States increased from an average of \$22.6 billion per year from 1989-1998 to an average of \$38.5 billion per year from 1999-2008. This is an increase of almost \$16 billion dollars yearly in the past ten years.

Not surprisingly, the budget of the federal agency whose primary responsibility is to respond to disasters has coincided with the increased damage costs around the country. The Federal Emergency Management Agency's (FEMA) budget has increased from approximately \$5.5 billion in 2001 to \$21.6 billion in 2008.

Even in the face of such compelling numbers, there are those around the country that still don't believe that recovering from disasters is a major concern.

But there is an important reason why all of us, even those living in non-disaster prone areas, should be very concerned about these escalating numbers. In today's world, we are all interconnected. If a disaster happens, cities that are not physically affected might still be economically impacted because of trade linkages with damaged areas. Businesses in "non-impacted" areas of the country can experience disruption of suppliers, loss of customers, breakdowns in transportation routes, failure of communication networks, etc. If the damage is severe enough, and the city interconnected enough, economic effects from a disaster can be felt throughout the entire country. The \$38.5 billion in yearly disaster losses in the United States are not isolated within the physically damaged communities, they trickle down to affect the entire nation's economy.

Problems with How We Have Handled Recovery in the Past

Despite the escalating costs of disasters in the United States, we have had a historically misguided approach to disaster recovery. The major reason for this is because most government agencies and relief organizations focus on short term relief, and largely ignore long term recovery. FEMA's official mission statement includes the word

recovery, but the vast majority of their efforts are within the first few months of a disaster. Other than temporary housing and technical assistance from ESF #14, FEMA has little ongoing presence in a community. The U.S. Small Business Administration (SBA) offers loans to bring back homes and businesses, but these loans assist people in returning to the status quo when the realities of their community have drastically changed. Many nonprofits inundate damaged areas with relief supplies but rarely remain engaged in a community for months or years after an event. Local community leaders and chambers of commerce are typically the only groups that remain committed over the long run, but they often lack the expertise to truly bring back a community. Recovery is a process that frequently takes months and years to complete, but when the news cameras go away, communities are too often left to fend for themselves.

In addition to a lack of emphasis on disaster recovery, there are a number of other mistakes that are frequently made that adversely affect recovery. First, cities usually attempt to restore what existed before the disaster. While this seems reasonable, the truth is that disasters fundamentally change the makeup of the communities they damage. Relationships change because some people move away and others move in. Business networks change because some close their doors forever, others are made stronger, and new businesses form. The industrial makeup of the community changes, schools receive different amounts of funding because student populations change, traffic patterns alter, and neighborhoods are different. Communities that understand that it is impossible to bring back what existed before are better positioned to make decisions that propel the community into the future.

A second problem is that lessons learned from previous disasters are not transferred between communities. City leaders in New Orleans have countless lessons learned from Hurricane Katrina, but these lessons are not necessarily communicated to those at risk today. Even if the lessons are cataloged, they usually go unread until after a new disaster happens. By then it is too late.

A third important problem with the way that we handle disasters is mismanagement of the diaspora that often leaves a community after a disaster. We are relatively skilled at evacuating people, but often fail at bringing them back. It is difficult for a community to recover when a large percentage of its population leaves the area and does not return.

Debris removal and clean-up is another important recovery factor that is often mismanaged. A fast cleanup is a great psychological encouragement for the people in the disaster area. Recovery is a long, slow process, so seeing signs of improvement in the community helps people cope with the losses. Also, cleaning up quickly encourages evacuees to return to their communities and reinvest.

Finally, disaster recovery needs to be more systematic and depend less on individual effort. Recovery often hinges on the heroic effort of one or more individuals that refuse to see their communities decline. By taking lessons learned from previous communities and establishing common criteria for successful recovery, there is less need for one person to take control. This will reduce the variance in recoveries across communities.

Issues Affecting Recovery

Before we can ascertain what a successful recovery looks like, it is important to establish the specific factors that play a role in whether or not recovery happens. The following is a list of important criteria that play a major role in disaster recovery:

Magnitude of Devastation: The best way to recover from a disaster is not to have one. The more devastating the disaster, the harder it will be for the community to recover. While we cannot prevent disasters from happening, we can minimize the devastation that they cause. Communities that are more prepared can, in effect, decrease the magnitude of devastation faced. For example, the community that has stronger building codes will be less affected by an earthquake than the community that experiences the same earthquake but has more relaxed laws.

Preparedness and Resilience: The more a community has considered the possibility of disasters and planned accordingly, the easier the process of recovery will be. Preparedness includes a number of important criteria like adequate building codes, viable insurance markets, emergency preplanning, pre-coordination between important stakeholder groups, business continuity planning, smart urban design, etc.

Political Jurisdiction: Disasters are rarely contained within one political jurisdiction; they cut across city, county, state, and sometimes national lines. Local governments that work well together, as well as with state and federal partners will be better positioned to help their citizens recover.

Capital and Financing: After disasters, businesses and individuals often find themselves in quick need of capital. Unfortunately, it often takes weeks and months for the money to flow in. Bridge loans or other mechanisms that provide financing quickly to disaster areas allow the rebuilding process to commence. The longer the community waits to rebuild, the greater the chance that it will never happen.

Housing: The availability of housing, especially affordable housing, is an important factor in recovery. Disasters will heighten the housing problems that the community faced beforehand, so it is important that those issues are rectified before the disaster. Additionally, transition from temporary to permanent housing is essential because no community can recover when large numbers of its citizens are still in temporary housing.

Evacuations/Diaspora: When people leave a community and don't come back, it is very difficult to recover successfully. Cities should not only have an evacuation plan, but also a plan to encourage people to come back. This is very rarely done, but is a crucial element to effectively managing recovery.

Communication and Coordination among Different Entities: Businesses, nonprofits, and government agencies are not often accustomed to working together. In a disaster, it is imperative that each sector works together to achieve the common goal of recovery.

Each sector has unique talents and abilities that need to be harnessed after a disaster, and without coordination among the groups, recovery will sputter.

Attitudes of Relief Agencies: Relief agencies need to think about relief with an eye toward recovery. Actions that provide initial relief can sometimes hinder the recovery. For example, giving out free food prevents people from buying food from local stores. Providing temporary housing for non-temporary time frames hurts the real estate market. Relief agencies must consider how their decisions will ultimately affect the recovery.

Patience: Recovery is a long and difficult process, and discouragement can easily set in.

Successful Recovery Process

People Need a Reason to Come Back

A common rhetorical question at BCLC is, ‘would you accept \$100,000 to live in a community with dilapidated houses, damaged roads, no businesses or basic services for miles, contaminated water systems, and spotty electrical service?’

Unless you give people a compelling reason to come back to the area to live and to invest, they will not. While this point may seem simple, it is often ignored, and much easier said than done.

In some communities, giving people a reason to come back is relatively simple. The communities are either blessed with things like sun and beaches that make them attractive places to live or they have natural resources like oil or other minerals that draw businesses back. Other communities are located in strategic locations that give them access to trading routes, or have major businesses that were undamaged or able to recover quickly. These things provide people with reasons to rebuild and recover.

Unfortunately, not all communities that have experienced devastating disasters are blessed with these intrinsic characteristics. Those communities need to work even harder to give people a reason to reinvest. The following factors will help those communities communicate value to their citizenry:

Clean Up: There is no stronger psychological message that a community can send to its citizens than to clean up quickly. People understand that rebuilding takes time, but clean up should be as close to immediate as possible. Cleaning up shows residents that city leaders are committed to recovering and that the disaster has not destroyed everything. A fast and effective clean up is the first step to a good recovery.

Capital Access: One of the most needed (and often hardest to come by) resource after a disaster is capital. It is needed for the obvious reason of rebuilding and restoring damaged infrastructure. Adequate insurance is very important and provides much needed capital to those affected, but it takes time for insurance adjusters to make accurate assessments and for the checks to be received. The federal government also provides grants and loans to individuals and businesses to help them get back on their feet, but

this also takes time because applicants need to fill out complicated paperwork that has to be reviewed. In major disasters, the backlog of applications and insurance adjustments can be enormous because everyone needs capital immediately and there is a bottleneck. The quicker people get capital into their hands, the more likely they will rebuild. If a person has to wait for six months for the money to rebuild their house, it is likely that they have already moved on to another community. Bridge loans and other mechanisms for getting capital quickly to an area are crucial to recovery.

Business Restoration: Businesses provided the community with all the resources it needed before the disaster, and this system needs to be reestablished as quickly as possible after the disaster. Getting capital into the disaster affected area is one way to help reestablish business activity. Other ways to get businesses to reinvest include rebuilding the support infrastructure like roads, utility systems, and social services for employees. Technical assistance is often needed to help small businesses understand the new post-disaster realities. These types of support mechanisms help businesses get back on their feet and subsequently are catalysts for the community rebounding more quickly.

Restoring Permanent Housing: Temporary housing should in fact be temporary. Communities cannot fully recover when parts of the population have made temporary houses their new permanent dwellings. Often, restoring permanent housing requires building adequate amounts of affordable housing for low income families. Communities need sufficient levels of housing; without it, businesses will have no employees, retail stores will have no customers, and there will be no reason (or possibility) for anyone to live or reinvest in the community. Businesses, nonprofits, and government should all be a part of the process to rebuild housing.

Restore Schools/Hospitals/Social Services: If your company is back up and running and your house is rebuilt, can you truly reenter the community if your children can't return to school or daycare, if you have nowhere to go when you are sick, or if the fire department is not back up and running? Social services are an often overlooked but crucial aspect of everyday life. Housing and businesses are crucial aspects of the community, but social services are the glue that holds everything together.

Transition Quickly from Recovery to Redevelopment

Communities that are successful in reestablishing the aforementioned areas of society will be more likely to recover from a disaster event because people have a reason to reinvest. However, performing these actions in isolation is not enough. There are many other variables that make up community recovery and leaders need to be flexible to the changing demands of the population.

Leaders must also transition quickly from recovery to redevelopment. Disaster recovery is like community and economic development under special circumstances. If leaders are too focused on building back exactly what existed before, they will be destined to fail. Every business understands the need for growth because stagnation will ultimately lead to

decline. Communities are no different, and they should use the disaster as a jumping off point to smart development.

To build back better the following actions are typically needed:

New Businesses and Industries: Like any economic developer will tell you, cities need to attract new businesses and industries in order to continue growing. This is especially true for areas that have been affected by disasters, and even more so if the community was in decline before the disaster. Disasters bring about new realities, and new businesses and industries might be better able to thrive in the new environment. Just as forest fires give new trees the chance to grow, disasters sometimes make it possible for new businesses and industries to flourish. For example, as part of strategic economic development planning, New Orleans is currently trying to attract high tech companies that did not exist before the storm. The new economic realities after the disaster might make it impossible to return to the old way of doing business.

New urban plans: Major disasters fundamentally change the landscape of the community. This includes the social, business, and physical landscapes of the urban area. For this reason, the old urban plans cannot simply be dusted off and reused. New urban plans must be created, and the citizens must be involved in the process. Community leaders and citizens alike must assess the new challenges and opportunities that the community faces and create a “preferred future” for themselves. Outside experts can assist in the formulation of the new urban plan, but the future should be based on citizen input.

New infrastructure: Areas that have been hit hard by disasters need to redevelop their infrastructure based on the new urban plans, and the businesses and industries that exist in the community. An important aspect of rebuilding infrastructure is to ensure that the new infrastructure is more resilient to future events. It is naïve to think that the community will never experience a major disaster again, so the infrastructure needs to be designed to withstand major impacts in the future. The new infrastructure should also reflect the new realities of the community and be suited for the industries that the community is trying to attract.

Mileposts for Recovery

Progress is extremely important for any community that has recently experienced a disaster. However, it is sometimes difficult to see if progress is truly being made. For this reason, it is important to establish key mileposts so that citizens can see the progress and ultimately reinvest in the community.

The following mileposts can help communities realize that progress is being made:

A. **Debris removal**

In many communities, debris removal is the important first step on the road to recovery. Nothing can progress until the debris is cleared and disposed of. You

cannot expect any other recovery action to take place before cleaning up what has been destroyed.

B. Regional Strategic Recovery Plan

Disasters make it extremely apparent how interconnected we are. Disasters also have a bad habit of cutting across various political jurisdictions like cities, counties, and states. During the post disaster time period, it is crucial for the leaders in the various political subdivisions to work together to build a strategic recovery plan. The purpose of the plan is to focus limited dollars, time, and energy on the most important recovery actions. After cleaning up, the community leaders should work quickly to establish a plan that all jurisdictions can be happy with. This is the second milepost for recovery.

C. Flow of Funds

A plan is not useful unless it is implemented. And plans cannot be implemented without funding. The third milepost that community leaders should look out for is the flow of funds. These funds can come from various sources like insurance claims, Federal Government grants, loans, or reimbursements, or other sources of private funding like bridge loans. The flow of funds into a community is the third important milepost for recovery.

D. Construction Starts

A fourth mile marker is the start of construction. Typically, this means that homes are starting to be reconstructed and businesses are reopening. It is important that the funds that flow in are used to construct new (and disaster resistant) infrastructure that also follow the regional strategic plan. If construction is taking place in an unplanned, ad hoc manner, it can be counter productive. When done correctly, the sound of new homes and buildings being constructed is an important milestone.

E. Restoration of Public Buildings

With the construction of private sector buildings comes the restoration of public buildings. These two mileposts go hand in hand for a very simple reason. If homes are constructed but there are no police stations, fire stations, schools, or hospitals, no one will want to live there. It is not enough to construct business parks and housing developments without the social services that make a community run. This milepost should happen simultaneously with the previous.

F. Restoration of Population and Business Base

Once construction and redevelopment has taken place, people need to return to the community. Communities do not work without people, so an important milestone is the return of the diaspora. If the recovery has been implemented correctly, residents will be glad to return home and reinvest. New people will be encouraged by the success of the recovery and want to relocate into the community. The purpose of the recovery and redevelopment process is to make

the community a good place to live, work, and do business. Disasters can disrupt people's lives temporarily, but it is possible to restore them.

Metrics for Recovery

As the aforementioned mileposts are being met, the community should be systematically determining the success of the recovery and redevelopment. It is commonly said, "what gets measured gets managed," so it is important to establish the correct metrics in the beginning of the process in order to measure success. Too often, communities do not track these metrics for reasons that include a lack of leadership to fear of failure. But establishing the correct metrics is important because it frames the recovery around specific goals. Without these goals, any idea seems like a good one and the community can end up floundering with no coherent recovery strategy.

Every community will recover at a different pace, so each one should set its own goals for how quickly each step in the process will happen. For this reason, we list specific items that communities should measure, but do not dictate specific percentages or timetables for recovery.

Communities that have recently experienced disasters should consider the following metrics:

- A. **Transition from Temporary to Permanent Housing**
A baseline measure should be how many permanent housing structures were established in the immediate aftermath of the disaster. The measurement of success should be how many of those people in temporary housing units have transitioned to permanent housing and how many are still living in temporary structures. Citizens that left temporary housing and moved to other cities should not be counted as successes for the community.
- B. **Restoration of Schools, Hospitals, and Monuments**
These are the things that truly make a community what it is. The community should measure how many schools, hospitals, and important community monuments existed before and how many exist today. If the numbers are far less, it is a sure sign that more work needs to be done.
- C. **Restoration of GDP**
Ultimately, the GDP of the community needs to exceed what it was before the disaster. Communities should measure GDP levels at different intervals after the disaster (six months, one year, two years) and compare them with the GDP before the disaster.
- D. **Restoration of Jobs**
People will not return to a community if there are no opportunities for them to be successful. By measuring the number of employment opportunities before and

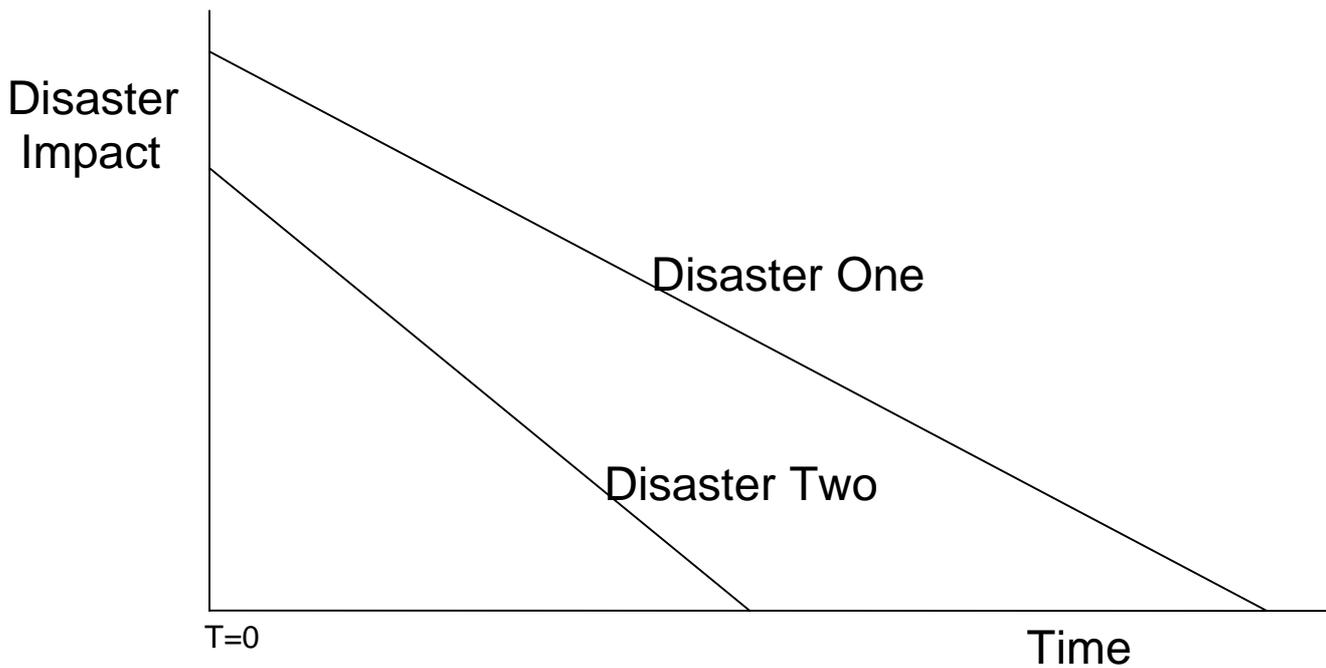
- after a disaster, a community is able to determine if their city is still an attractive place to live.
- E. **Percent of Tax Base Restored**
In order for the government to continue functioning, the tax base needs to be restored. Governments often experience revenue shortages after disasters, which escalates the problems the community is already facing. Because this data is readily available to community leaders, this is an excellent measure of progress of community recovery.
 - F. **Number of Businesses Before and After the Disaster**
If the community is going to function normally again, basic services must be transferred back to the private sector and away from the government and nonprofit sectors that typically assist people after disasters. If businesses don't reopen, this is not possible. For this reason, it is important to measure how many businesses existed before the disaster compared to how many exist after the disaster. It might also be helpful to segment this list so that it provides more meaningful data.
 - G. **Number of Abandoned Houses Still Remaining**
No one wants to live in a community where most of the houses are dilapidated. An important measure of recovery is a simple count of how many abandoned houses still remain versus how many have returned to functioning homes.
 - H. **New infrastructure**
It is important to measure whether or not new infrastructure is being built because this is a good measure of whether people think the community is still a good investment. If there is no new construction, the reasons must be determined. This measurement could be as simple as counting the number of new construction projects in a particular area.
 - I. **Population levels before and after**
Communities cannot function without people, so it is important for community leaders to understand the population changes that have taken place since the disaster. Additional demographic data like the number of children and retired people compared to the number of working age adults is also important.
 - J. **Civic sector restored**
An often overlooked measurement of recovery is whether the civic sector has been restored. This sector is responsible for many aspects of the community that positively affects residents' mental, spiritual, and social health. This is very important aspect of a community that many people value and it should be measured.

Conclusion

So to answer the question, ‘what does a successful recovery look like,’ there is no simple or single answer. Every disaster is unique, as is every community. There will always be “curve balls” that differentiate each disaster.

That being said, we should be able to track progress made along the following chart:

The Mitigation of the Intensity and Duration of Impact



In this graph, the intensity of the disaster impact is measured by the y axis. The time it takes the community to recovery is measured on the x axis. Two disasters with the same intensity (disasters one and two) should affect a community differently depending on resiliency measures that the community employs.

Preparing communities ahead of time to be resilient to disasters will reduce the original impact of the disaster as shown by the “disaster two” line at time zero. While this is important in and of itself, community actions after a disaster can reduce the recovery time even further by accelerating the return to “normal.” This is shown by the steeper slope of the “disaster two” line as compared to the “disaster one” line. Reducing the initial impact and accelerating the recovery afterwards will dramatically improve the community’s economic position after a disaster

Measuring progress as outlined in the chart above will help us determine if recovery has truly been successful in communities. There is no silver bullet to recovery, but following

the suggestions above will help decision makers understand what process to take and how effective recovery efforts have been.