Prepare, mitigate, respond, recover. It's a cycle I have been through thousands of times. Navigating hundreds of disasters and crises ranging from small to seemingly impossible is all part of the job when you are leading emergency management agencies at the local, state, and federal levels.

I've had a fortunate and exciting career in emergency management, with the opportunity to work at every level of government. At the local and state level I have successfully led agencies through the accreditation process for the Emergency Management Accreditation Program (EMAP). Since 2010, I have been a certified emergency manager under the International Association of Emergency Managers (IAEM). I consider my experience in emergency management and exposure to disasters, catastrophes, and crises to be substantial.

During my career, I have realized that disaster recovery is a beast with many lives; hard to slay without forethought and the right tools. Through the initial stages of a disaster, the ability to mount a robust response is key. But don't be fooled: your response is only the beginning. As an emergency manager, you will ultimately be graded on the success of the full recovery effort.

There is a tendency in our field to focus only on the first half of recovery. We all generally agree the recovery starts immediately after the response and think it's over when the FEMA Joint Field Office leaves town. But when we view the finish line as the day when most of the Individual and Public Assistance missions have wrapped up, we miss the most important (and hardest) part: the often invisible second half of recovery.

This often disregarded second part of recovery requires sharp vision and an often-ignored set of tools and skills.

You can't slay the beast without the right tools.

Despite my years of experience working in various government roles, it wasn't until I transitioned to supporting disasters in the private sector that I truly understood the weapons needed to slay the disaster recovery beast.

Critically important pieces of the emergency management recovery enterprise are the tools of program management, construction management, and integrated procurement and contracting. These tools are vital to ensure comprehensive disaster recovery. Without them, recovery is slower, and losses (both in dollars and reputation) are higher. Utilizing these tools will propel you through the recovery phase, saving time and precious dollars.

These tools are often offered by the private sector instead of public entities. Having worked in emergency management at various levels of our government, I am aware that there are some strong feelings about this sector. Let me be clear: the private sector is an essential part of the disaster-response ecosystem.

Our government has limited resources—something I found out firsthand while leading FEMA during the opening days of COVID-19. Without the strength, skills, and global resources of the private sector, our government would have been unable to provide critical resources during the pandemic. Companies like Federal Express, UPS, Radiant, McKesson, Cardinal, Pfizer, Moderna, General Motors, and 3M, among many others, were essential in helping our nation get crucial supplies and materials.

In the emergency management enterprise, we often discuss the "whole of community" solution set. The simple fact is that the private sector is part of this solution set. Effectively addressing the challenges posed by the steady torrent of disasters our nation faces demands a seamlessly integrated and coordinated team. Preparation, response, and recovery all require a collective effort to navigate both the complexities faced by disaster survivors and the jurisdictions striving to rebuild after the profound impact of a disaster. The power and talent of the private sector are integral components of this disaster ecosystem.

No government, regardless of size, possesses the requisite capacity, resources, or skills to tackle the challenges of responding to a disaster in isolation. When disasters strike, collaboration between the public and private sectors is paramount. The absence of private-sector talent makes the recovery process more arduous, costly, and protracted. Love them or hate them, the private sector is part of the emergency management world, and it is critical to successful disaster recovery.

Program Management: Winning the Three-Round Fight.

In the wake of a disaster, some may define success as the skillful and timely actions of a proactive response. Some may believe the disaster recovery beast has been vanquished after this early win. But those who have been through the disaster gauntlet know full well that the beast lives on; the response is only round one. After the response, the beast will be quiet at first, gradually regaining strength as it readies itself for rounds two and three.

The second round in disaster recovery is the familiar and necessary routine of applying for the FEMA Public Assistance program. The Public Assistance program delivery model is the process FEMA uses to deliver grant assistance to applicants following the presidential declaration of a disaster. The "program provides funding for emergency assistance to save lives and protect property and assists with funding for permanently restoring community infrastructure affected by a federally declared incident."

This round cannot be escaped in a federally declared disaster. It requires preliminary damage estimates, eligibility determinations, appeals and arbitration, determining eligibility criteria,

creation of project worksheets, damage description and dimensions, cost estimates, and so on. Each of these tasks is part of the important work needed to get closer to a complete recovery. At the end of this round, when all the paperwork has been filed and the funding has come through, you may think it's time to declare success. You now have the federal "line of credit" necessary to start getting those shovels in the ground. This is where it ends for many emergency managers and those charged with leading recovery efforts: the un-ceremonial hand-off to the novice procurement staff and hungry general contractors. At this point, all that's left is the ribbon cutting—right?

You might think you are done, but the beast sleeps once more as it gains strength for round three! This is the round most emergency managers and those in government leadership positions never see coming—and it's often the knockout round. This is where it's crucial to understand program and construction management, procurement, and contracting expertise—and why these tools are essential for a true recovery.

We must consider program management as the overarching umbrella for disaster recovery.

Convincing the Chief Elected Officer.

It usually starts like this: The FEMA team is in town performing both the Individual and Public Assistance missions. FEMAs' presence provides an elected leader and the community with a sense of hope and forward progress. The elected leader is generally satisfied with the progress of FEMA and the performance of their own team. Everything seems to be under control. Time goes on, and attention to the disaster fades. Post-disaster problems and issues are whittled down and routine life inches back in.

But ahead lies the road where the beast awaits.

When the elected leader can't or won't see the road ahead of them is when the recovery starts to falter. They have failed to realize that their team doesn't have the necessary skillsets or the right contractor to navigate the path where the beast waits to strike. Their thought process goes something like this: my team has done a great job so far, so why not let them continue to manage the recovery? It's human nature to think this way, but the problem lies in the team's unfamiliarity with what it takes to truly complete the recovery. The unseen second half of a complete recovery requires program management.

To combat this tendency to ignore the road ahead, I've found that it's most valuable to take the time to explain to elected leaders what the path of a complete recovery looks like. I describe the trail, starting with the disaster in their jurisdiction. I tell them about the wins, the pitfalls, the false starts, the inadequate procurement process, and how easy it is to burn through funding

without tangible progress. I share about the friction of internal frustration felt by local, state, territory, or tribal governments rubbing against the external growing impatience and disillusionment of the greater community. Drawing a map for them helps them truly understand what lies ahead.

Before we go further, it is important to understand that no commercial enterprise would attempt to undertake a million-dollar project without the below listed constructs, let alone a complex billion-dollar program. Let me share some short definitions and descriptions.

Program Management: The Project Management Institute (PMI) defines program management as "the centralized coordination and management of a set of related projects to achieve strategic objectives and benefits. It involves overseeing interdependencies, optimizing resource utilization, and ensuring alignment with organizational goals."

In the aftermath of a disaster, program management (PM) expertise is indispensable for orchestrating a seamless and effective recovery process. A skilled program manager plays a pivotal role in coordinating various aspects of the recovery efforts, overseeing multiple projects, and aligning them with the overarching goals of rehabilitation and reconstruction. With a deep understanding of the complexities inherent in disaster recovery, program management expertise ensures streamlined communication, efficient resource allocation, and timely execution of projects. This leadership is critical for maintaining a cohesive strategy, managing dependencies, and adapting to evolving circumstances, enabling a more resilient and comprehensive recovery that addresses the diverse needs of affected communities.

Construction Management: The Construction Management Association of America Management (CMAA) defines construction management (CM) as "a professional service that provides a project's owner with effective management of the project's schedule, cost, quality, safety, scope, and function. Construction management is compatible with all project delivery methods, such as design-build. The construction manager represents the owner's interest and provides oversight over the entire project directly for the owner."

Construction management expertise is paramount in the post-disaster recovery scenario, where the reconstruction of damaged or destroyed infrastructure demands precision and efficiency. A proficient construction manager navigates the complexities of rebuilding projects, overseeing site logistics, coordinating with various contractors, and ensuring that construction activities adhere to safety standards and regulatory requirements. Their expertise in scheduling, budgeting, and quality control is indispensable for minimizing delays, managing resources effectively, and delivering resilient structures. From supervising on-site operations to resolving unforeseen challenges, construction management plays a pivotal role in not only expediting the recovery

process but also in ensuring that the reconstructed facilities are robust, compliant, and capable of withstanding future uncertainties, contributing to the long-term resilience of the affected communities.

Project Controls: One of the key components of PM and CM is project controls. Project Controls refer to the systematic and strategic processes implemented to ensure effective planning, monitoring, and management of various project elements, such as scope, schedule, cost, and risk. These controls encompass a range of tools and techniques, including project scheduling, cost estimation, performance measurement, and risk management, to facilitate the successful execution of a program. Project Controls plays a crucial role in providing visibility into project progress, identifying potential issues, and enabling informed decision-making, ultimately contributing to the overall success of the program by helping to achieve project objectives within the defined constraints.

Procurement and Contracting: One must also have a comprehensive and integrated process for procurement and contracting. Having procurement and contracting expertise during the design and construction phases of disaster recovery is essential for efficient resource allocation, cost management, risk mitigation, compliance with regulations, timely project completion, quality assurance, and maintaining transparency and accountability throughout the process.

Now that we've covered these definitions, it's time to talk about round three and the way to finally slay the beast.

Here's the secret: you must embrace the complete lifecycle of a disaster.

The road where the beast waits is predictable. With a little planning and the right tools, you can see what is required for a full recovery: you just have to look far enough ahead.

What is the lifecycle of a disaster?

First, there's the actual disaster: implementing emergency protective measures, and doing everything possible to save lives and minimize property damage while the threat is active. Once the threat to human life has subsided, we enter the next stage: recovery.

This begins with the processes described earlier in this article: the arduous undertaking of the FEMA Public Assistance process and other similar recovery processes in other federal agencies. Once funding is clear, next comes determining priority projects, outreach to communities, overcoming local permitting and environmental issues, blending in mitigation measures (and funding), building repeatable procurement processes, interviewing contractors, design, constructability, contract negotiation, and finally, construction. This is where many of us think the lifecycle ends.

But it doesn't stop with construction. You must ensure that your original plan includes commissioning, maintenance, and sustainability. It is a long road before you reach the celebratory day of ribbon cutting.

To successfully navigate to the ribbon-cutting phase, you must implement a Project Management Information System (PMIS). A PMIS is a software-based tool or platform that assists project managers and teams in planning, executing, and managing projects. It serves as a centralized hub for project-related information, facilitating better coordination, communication, and decision-making throughout the project lifecycle. A PMIS will typically include features such as scheduling, budgeting, document management, communication tools, and collaboration capabilities.

Another essential step is making sure your elected leaders understand the full breadth of pain and suffering that will occur following a major disaster. They must understand that success is not defined by achieving the promise of FEMA public assistance dollars. Successful project completion (especially when the project(s) is complex), begins with understanding what a successful recovery looks like.

What is a successful recovery?

When communities affected by a disaster are restored to a state of resilience, well-being, and sustainable development, then—and only then—is your recovery finished and the disaster lifecycle complete.

Key indicators of success include the timely and comprehensive reconstruction of damaged infrastructure, ensuring that homes, schools, and essential services are not only restored but have also been fortified against future risks. Livelihoods, economic activities, and social structures must be re-established, fostering a sense of normalcy and community cohesion. Moreover, a resilient recovery addresses the root causes of vulnerability, implements effective risk reduction measures, and integrates lessons learned from the disaster to enhance preparedness for future events. Ultimately, success is measured by the improved capacity of communities to withstand and recover from future disasters, creating a more adaptive and secure environment for all residents.

The growing impacts of climate change mean more intense, more frequent, more devastating, and more costly disasters. We must do everything we can to ensure successful recoveries.

Accomplishing this monumental task—truly slaying the disaster recovery beast—requires embracing program and construction management, procurement, and contracting *before* the disaster happens.

How do I embrace program and construction management?

First, get educated about project management and its subordinate components: procurement, contracting, and construction management. You don't have to be an expert in these fields, but you must understand what they enable you to do and why they are essential to the success of your recovery. You need to understand governance, structure, and reporting, and you've got to know your metrics for success.

Key Performance Indicators (KPIs) are a cornerstone of measuring success. These are measurable metrics that organizations use to evaluate and assess the performance of various aspects of their business. These indicators are crucial in measuring progress toward strategic goals, identifying areas for improvement, and making informed decisions. KPIs can be measured in a wide range of areas including financial performance, customer satisfaction, employee productivity, project success, and more. Effective KPIs are typically specific, measurable, achievable, relevant, and time-bound (SMART), providing a clear and quantitative assessment of performance.

Second, build the PM/CM, procurement, PMIS, and contracting concepts into your recovery plan. Emergency managers won't be the ones performing these roles, but your plan must clearly outline how these services will successfully propel you to the end of recovery. This ensures all stakeholders (likely including stakeholders you have not met before) understand the complete lifecycle of a disaster.

Your Responsibility.

When I served as a local and state Emergency Management Director, one of my greatest fears was having to tell my boss that the recovery had been "mismanaged." Whether that meant we owed the federal government money due to a lack of oversight or that we had run out of funding to finish a project, I knew either situation was one I didn't want to be responsible for reporting.

Your responsibility as an emergency manager is to draw your boss a map of the road to a complete recovery. You can't do that if you don't fully understand the recovery lifecycle. By investing in planning before a disaster strikes, you will have a map to start your recovery off on the right foot. The alternative is blindly heading off into the unknown without even a destination or compass to guide you. This is an open invitation for the recovery beast to consume you along the way.

Disasters are Here and More are Coming.

According to the International Code Council, in 2023 the U.S. experienced a total of 28 billion-dollar disasters, the highest number of billion-dollar disasters in U.S. history. The cost was high: 492 lives and \$93 billion in economic losses.

By comparison, in 2022 the U.S. experienced a total of 18 billion-dollar disasters. 474 lives were claimed, and economic losses totaled \$165 billion. At the time, 2022 tied 2017 and 2011 for the third-highest number of billion-dollar disasters in U.S. history.

As we face more and more disasters, the more likely it becomes that you will be called upon to manage a complex, multi-billion-dollar, multi-year recovery. If that thought terrifies you, take a deep breath.

Start preparing now by taking an inventory of your government. A good place to start is understanding the depth of knowledge and capability for project management, complex procurement, and contracting that encompasses alternative delivery processes like progressive design-build and multi-project construction management.

As an Emergency Manager, the onus is not entirely on you.

Should disaster recovery on single disaster take twenty years to complete?

No. We need to move towards more efficient disaster recovery. It is time for FEMA (and other federal agencies that fund disaster recovery efforts) to insist that federal disaster recipients not only comply with the rules and regulations when obtaining disaster funds but that recipients also demonstrate how they employed program management tools and methods that will ensure taxpayer dollars are being spent in the most timely and efficient manner.

The practices of comprehensive recovery program management are tried and true. The only way forward is for all of us to insist that adopting and planning for the use of these practices becomes an industry standard.

For more information on the topics discussed in this article, visit the following organizations:

FEMA and its Public Assistance Program and Policy Guide: <u>fema_pappg-v4-updated-links_policy_6-1-2020.pdf</u>

The Project Management Institute (PMI): Project Management Institute | PMI

The Construction Management Association of America (CMAA): <u>Home | Construction</u> Management Association of America (cmaanet.org)

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