

# Managing Chaos

## The Disaster Planner's Handbook In Eight Parts

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New York City, 2013

### The Problem

Our secret fears are true: We write emergency plans that nobody reads[4].

But it's worse than that.

The presence of plans has **no correlation** to improvement in disaster response. None [10-13].

But it's worse than that.

Done wrong (and most of us do it sort of wrong), disaster planning creates complicated documents full of specific actions that make us *feel* prepared but really just perpetuate a fantasy world. **Poor planning makes disaster response worse** – hierarchical, slow, with a false sense of security and stubborn leaders that won't innovate when we need them most. [1, 22, 23].

But it's worse than that, even.

No researcher has gleaned the insights from the disaster-based social sciences to teach planners learn how to plan. That means there is no validated process for evidence-based planning in the literature. In other words, we should probably give up. [21, 25]

Except that good planning is desperately important.

### The Vision (or End State)

Comprehensive, *multi-hazard* planning based on *real needs* that focuses on *response management* will improve coordination, information flow, communication, and authority relations during a disaster every time [26].

We need to plan. But we barely know how.

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## The Mission

*Managing Chaos* distills the best research I could find into a Handbook meant to fill that gap. First, I compiled ten evidence-based criteria into  **The Disaster Planner's Evidence-Based Criteria**.

Based on those criteria, I propose a process that contains eight succinct phases – two pages each in the Handbook. These roughly follow and expand on FEMA's planning guidance[14].

Each phase follows a common planning structure:

- **Strategic Objective (Goal)** – a big picture statement on WHY you're doing what you're doing.
- **Mission Narrative** – a plain language story meant to help you grasp the entire phase.
- **Operational Approach** – some general guidance on the BIG HOW: how to consider the phase based on research.
- **Objectives** – a set of steps describing WHAT you should do to complete that phase.
- **Activities/Tactics** – the LITTLE HOW used to complete an Objective. Throughout, the handbook references Job Aids that give you specific planning activities/tactics to use.

The whole project is summed up by a  **Disaster Planner's Checklist**.

Taken together, these phases are a process for solving the wicked problems we face in disasters. Do you follow them all every time? No - you should build an all-hazards framework which wrestles with most of these. Nevertheless, you have to question that framework with every new problem.

This process doesn't make planning *easier*; it's not some off-the-shelf template. Instead, this a pathway to steep you in the character of the problem you're trying to solve[27].

Finally, this handbook *is* evidence-based, but it's *not* objective. Where ideas conflict, I choose one. Where there's no evidence base, I write from my experience. My **Goal** is to give you, disaster planner, a thread to guide you through *a* (not *the*) process.

I fell into my first declared disaster a decade ago and got lost. That's the thing about planning for disasters. You always get lost. There's no other way. So we'll use this thread and try to find out way out together.

-Mitch

P.S. All plans need to be alive. They only live in ongoing discussion. So send me thoughts/edits to [mstripli@health.nyc.gov](mailto:mstripli@health.nyc.gov), okay?

 **The Disaster Planner's Evidence-Based Criteria** is based heavily on the work of Enrico Quarantelli. Each Phase of the document will show which criteria that Phase addresses. Look for this symbol:   

The  **Disaster Planner's Checklist** will trigger your memory of what you learn in the *Handbook*. Maybe put this on your wall? No, really. Put it on your wall.

### Legend

[#] Numbered citations are found at the end of the handbook

 Denotes a Job Aid found in the accompanying folders

   Tells you which elements of Quarantelli's evidence-based criteria a phase fulfills

  Research note that delves into some theoretical concerns

 Personal advice from me to you

# I: The Consensual Hallucination

*Ye cannot live for yourselves; a thousand fibres connect you with your fellow-men, and along those fibres, as along sympathetic threads, run your actions as causes, and return to you as effects.*

-Herman Melville[28] variant found in [6]

*[T]he common thread found in successful operations is that participating organizations have understood and accepted their roles.*

-FEMA Comprehensive Preparedness Guide 101[14]

## Goal

Create a planning team that combines diverse executive leaders, community/business stakeholders and experts to agree on a vision (not a document) for the plan.

## Mission

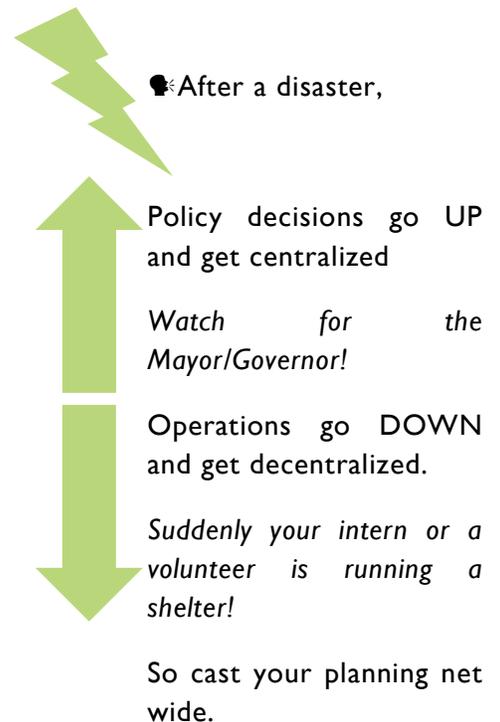
Planners that write by themselves will never have their plans used. Instead, convene creative teams with disparate views. Recruit a high-level executive sponsor to act as Incident Commander. Convene an advisory group with stakeholders from different response partners (including nonprofits, the media and the public) to help define strategy. Pull a smaller planning workgroup together to work through the details. Instead of just a document, this process will make the plan a **consensual hallucination** of the best ideas shared between the folks who will actually run the response

## Operational Approach

- Never write a plan in isolation or hire a consultant to write a plan in isolation. It will not help manage an emergency. Period. The best plan only really exists in the minds of those who will run the response [29].
- You need both senior leaders and outside stakeholders because in a crisis, senior leaders will get heavily involved, centralizing policy [30]. Meanwhile, there's so much to do that operations will get centralized, meaning low level staff and outside organization will suddenly be heavily involved in managing the response[31].
- The public has to understand the plan – as they are likely survivors and the primary first responders. Give them planning awareness, knowledge of their role, real understanding of likely impacts and a clear picture of what organizations can and cannot do for them [13].
- Bring the media into planning before it's news. Consider naming local media to help manage national media when it appears[22].



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Capabilities Not Analogies	3
Coordinate don't Command	4
Strategize to Improve	5
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## Objectives

1. Choose a clear executive sponsor from the pool of senior officials who would actually lead your response. She will act as your **Incident Commander**; this is desperately important [32].
2. With the Incident Commander's help, ensure a clear communications line to elected officials. If they don't understand your plan, they will intervene and create their own system in a disaster, which will slow down the response[33].
3. Form a core team of five to ten planners who can represent all capabilities used in the plan [15].
4. Schedule regular meetings with this group. This helps you embed pre-crisis planning within your organizational structure and culture [31]. Emergency planning shouldn't just be a separate unit – emergency planners are there to support the entire organization.
5. Form an advisory group of 15-20 people to discuss and vet the plan contents throughout the process (not at the end). This core group should not just be emergency managers but should include stakeholders from across the community – for example, business, the media and social leaders. Different roles bring critical new perspectives. In particular, nonprofits and civil society groups (like neighborhood associations) will rush in after a disaster with their own activities – they more sync'ed you are with these unexpected partners early on in planning, the better off you'll be[33].
6. Make the scope and purpose of the process clear to all involved from the beginning with the  **Emergency Plan Project Start Agreement**. First question: What's your end goal for the planning process?

### Why There Can Be No Agency Plans

Most agencies suffer from the *Robinson Crusoe Syndrome* –imagining that they are the only person on the island. They (we) write their own plans; they don't connect these to others' plans. This arises from a fear of critique, a general sense of invulnerability, and an expectation that things will generally work the way they have in the past. These ideas are, well, wrong. Organizations are rarely comfortable with productive jurisdictional planning because it sits outside their comfort zone. It “won't make sense” to executives for whom the organization is their power base [31]. But it is the only way to succeed. In particular, partnerships grow from critique and organizations that have been critiqued by partners usually perform better in an emergency response [22, 34]. The public, too, is more likely to listen to you if it shares your idea of what the disaster *means*, which is much more likely if its representatives were involved in planning[33]. Don't be afraid. Put yourself out there.

🗨️ Why do you need an Incident Commander so much? Plans need simplicity; you'll only get there if you have an **Incident Commander** to lead the organizational learning portion of Plan Design (see below) [16], the reflection on the approach to the problem, and the adaptation to the incident as the problem

The  **Emergency Plan Project Start Agreement** is an initial brainstorming tool and a contract between the planner, the plan stakeholders, and the executive sponsor.

## 2: The Wrong Right Answer

Effective risk management depends on a consistent comparison of the hazards a particular jurisdiction faces.

–FEMA Comprehensive Preparedness Guide 101 [14]

Things seem inexplicable. And to make it worse, many of our ways of making sense of the inexplicable seem to have collapsed.

-Karl Weick [20]

### Goal

To move from a planning assignment to a visceral understanding of the real problem the planning process needs to solve.

### Mission

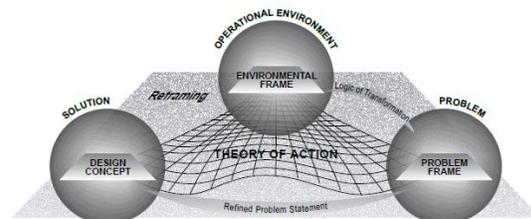
When planners accept a planning assignment at face value, they often spend a lot of time trying to solve a problem that doesn't really exist. With the best intentions, they develop **the wrong right answer**. Before any planning happens, the planner should interrogate their assignment to discover the real problem it is trying to solve. First, analyze the systems in your environment to understand how they function. Then, determine the impacts to those functions implied by the situation the planning assignment describes. From there, you can rank those impacts, figure out their root causes, and create a problem statement that summarizes the core issues the planning process must address. In this way, the **planning process** can focus on the underlying critical impacts and not get lost in fixing arbitrary symptoms.

### Operational Approach

- Many of the problems that emergency planners face are *inexplicable*. Before you engage in *planning*, engage in a process of **plan design** to define the problem and the executive's priorities for solving that problem [20].
- Disasters are *nonroutine social problems*. That is, they are created by the way some hazard impacts a specific community. The disaster is not the hazard; the disaster is embedded in the nature of the community itself [35, 36]. What is its capacity to help itself? How cohesive is it?
- Planning is non-linear: ideas always lead to new ideas and reframe old conceptions. [13]. So reframe the problem as you go to make sure you solve the right one. Keep thinking critically.



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### 💡 Design Before You Plan

Phases 2-4 walk you through a **planning process** that focuses on **Plan Design** and culminates in a **Planning Directive**.

**Plan Design** is “an approach to reasoning and critical thinking” that enables a leader “to create understanding about a unique situation and on that basis, to visualize and describe how to generate change.” [9]

## Objectives

1. Define an *end state* for your problem: the conditions on the ground at the point where your mission is complete [16].
2. Frame the *operational environment*: Define the complexities of the situation in which your problem will occur (your city or county systems). Use the research-based assumptions below to start. This gives you the context in which your plan will be implemented – and thus ground truth[20].
3. Frame the *problem* itself: Use the **Problem Frame Worksheet** to analyze how the problem will impact your operational environment. You will discover that what you thought was one problem is actually dozens of interlocking subproblems [20] . It doesn't matter if you're planning based on a scenario (e.g., nerve gas) or a function (e.g., transportation).
4. Summarize this work into a *problem statement* of around 200 words that defines the problem set to be managed. It should compare the imagined impacted environment to the end state. Focus on the elements you can change[9].
5. Target most at-risk 5% of the population with the **Vulnerable Populations Matrix Analysis**. It locates those with functional vulnerabilities or greater susceptibility/exposure to the problem

## 📁🎵 Planning Assumption Myth Busting

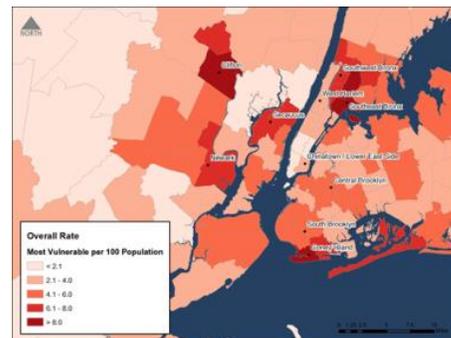
**On People** People cherish normal; this is why emergencies always seem unexpected despite warnings [12]. With few exceptions, people do not loot. They stay orderly, adapt, help[37], conduct initial search and rescue, transport more people to hospitals than EMS, donate food, share their homes and quickly create ad hoc teams that run parts of the response (e.g., ferry evacuation). They take themselves *either* to the closest hospital or one they trust. Families wait to evacuate together, often including pets[22].

**On Organizations** Organizations are slow, stumble, do not cooperate, do not know how to integrate with citizen efforts and usually cause most of the problems after a disaster[1, 10]. Emergency workers usually behave as trained without major changes[38].

**On Disasters** Social/political structures remain in place, no societal breakdown occurs. The most vulnerable suffer most. Disasters are a *non-routine social problem*[39]: the effects are embedded in the structure of society but invisible until an incident occurs.

The **Problem Frame Worksheet** instructs you to consider attributes and impacts to major systems of society: Political, Economic, Social, Infrastructure, Informational, Responder and the Environment.

The **Vulnerable Populations Matrix Analysis** finds headcounts of the most vulnerable based on Census data and other sources to help you direct resources and interventions.



🧠 The only panic will be elite panic – the panic of those in power who assume victims will panic.[1]

### 3: Yes Means Yes

*San Francisco can count on Sacramento for the last bit of bread and meat in the house, can draw on us for every dollar we have, and then you can have our blood if you need it.*

-Mayor of Sacramento, 1906[22]

*Fractious and disparate planning always leads to fractious and disparate response.*

-P. Marghella, *Destroy the Three-Ring Binders* [40]

#### Goal

Delineate and engage the network of partners who will participate in any emergency response. Document their capacities and resources.

#### Mission

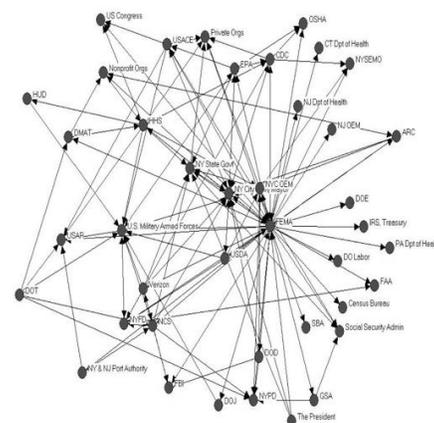
An organization that tries to plan by itself will have its ideas overrun by new faces during a disaster. Before defining any strategies to solve the problem, the planner should diagram and engage the universe of partners who will be involved in responding to the defined problem. First, create a map of all of the groups who will join the response to your problem, even those who aren't involved with emergency management right now. Then, document your best guess at the resources these groups will bring and any risks associated with including them in the planning process. Describe the planning processes they currently drive or would need to undertake to resolve the problem. Finally, integrate these groups into your planning process. This will clarify the wide-ranging strategies & resources that are available to you and ensure that when you ask if the whole jurisdiction is engaged, the answer is **Yes Means Yes**.

#### Operational Approach

- Remember, government thinks it is more central to a response than it actually is [41]. There's a huge response network during emergencies. Most critical infrastructure is private, especially healthcare [42]. Plus, business leaders often try to influence a response if they aren't part of the planning [43].
- All of these social units from families to corporations are already problem solvers. Invisible planning is happening all over the jurisdiction at a grassroots level [44] and they will supercharge their problem-solving after a disaster [12].
- In emergencies, local governments are expected to be strong. However, in normal times, they are designed to be fairly weak[29]. That means you'll need the help.



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📖🎵 This **response network** used to be called the *mass assault*. HUNDREDS of groups-government/nonprofit/private, established/brand-new, local/state/federal/ international - will swarm into an affected area and start trying to help[17, 18]. FEMA situation reports listed 456 organizations during the response to the 2001 World Trade Center Attack[18]. The New York Times counted 1,607[24].

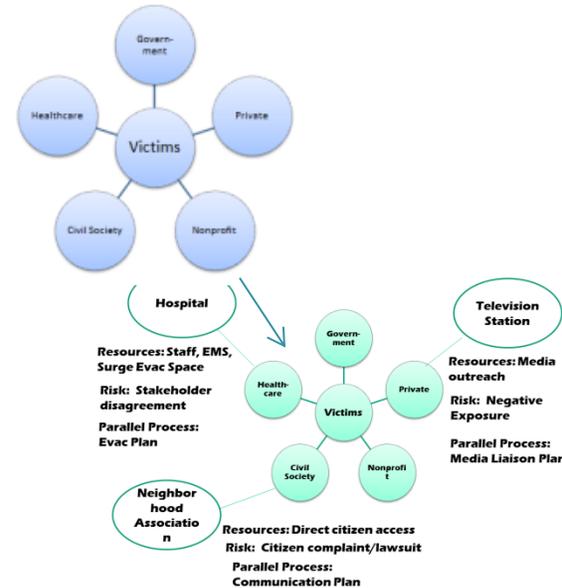
## Objectives

1. Create a **Network of Means** of all the possible response organizations for your problem. These are your planning partners. There should be at least two dozen. There were 1,607 separate response organizations for the 2001 World Trade Center attacks[18].
2. For each partner, inventory the resources and capabilities of the groups: What usable resources do they have (e.g., staff, equipment, technical expertise)? What are they able to do in a crisis (e.g., surveillance, outreach, call centers) and how does that relate to the impact you found in problem analysis? [15]
3. Describe the possible risk in working with each partner (e.g., security risks, media leaks).
4. Name the potential planning projects they should engage in to help solve the defined problem (e.g., a continuity plan, an outreach effort). [13, 20]
5. Integrate some partners into the planning team, the advisory group and a larger outreach forum that includes more representatives from different kinds of partners.
6. Check your work with **Quarantelli's Typology**. Did you successfully find all types of organizations that will respond in an emergency?

### Using and Abusing ICS

When you bring partners together, suddenly everybody gets delusions of org charts. Well, okay, but... In a crisis, political leaders will always rely on trusted relationships over formal plan elements when the two differ[45], so making a separate command structure isolates your response; odds are, then your operations will be taken over by political officials, leading to 'management by press conference' [22] where you learn the big stuff on TV. Instead, build a system of shared governance with radically connected partners and political leaders [12] where *Command* is much less important than *Coordination*. Avoid spending much planning time delineating complex chains of authority or giving your personal organization an unreal level of authority, which happens a lot [46]. Create a loose temporary emergency structure with ICS that cuts through bureaucracy, speeds decisions and creates accountability[47]. Include all types of organizations and new citizen efforts per **Quarantelli's Typology**. Ensure that organizations send reps with full command authority to the EOC [26]. In this way, ICS can support the complex response network while admitting that the power centers aren't going to change.

The **Network of Means** is on page three of the **Planning Directive Tool**. Use it to brainstorm connections between different organizations in a response.



**Quarantelli's Typology** [5] tells us that organizations will take on unexpected tasks & build new relationships. Meanwhile, brand new groups will emerge after disasters. All need to be included in an emergency with ICS.

		Tasks	
		Old	New
Relationships/Structures	Regular	Type 1	Type 3
		Established Organizations	Extending Organizations
	Non-Regular	Type 2	Type 4
		Expanding Organizations	Emergent Groups

## 4: Mysterious Ways

During this process of building an incident scenario, the planning team identifies the requirements that determine actions and resources.

-FEMA's Comprehensive Preparedness Guide 101 [14]

The commander's thinking, foresight, instinct, experience, and visualization are particularly important during the early design effort, when identifying the true nature of a complex problem and designing an approach to the solution will drive subsequent planning and execution.

—General James N. Mattis, U.S. Joint Forces Command[16]

### Goal

With potential response partners and your incident commander, determine the high-level Ways to resolve your problem and document it in the  **Emergency Management Planning Directive**.

### Mission

Most plans move straight to tactical detail - which is then ignored during an emergency response. Instead, create a compelling theory of action that is owned by the senior executives who will manage the emergency response. With executives, define the vision for a credible *end state*, which is the finish line for declaring the problem solved. Agree of a set of high-level *lines of effort*, which are the major thrusts of your activities. Prioritize certain parts of both the problem and your response over other parts, resulting in defined *centers of gravity*. Compile this into a clear *mission narrative* that's understandable to those who haven't been involved in planning. This will give you a clear visualization of *Commander's Intent* – the **mysterious ways** that frame the more detailed planning process.

### Operational Approach

- Ensure your strategic approach covers all phases of a disaster – mitigation, preparedness, recovery and response. If it's not systems-based, you'll miss something[35]. There should be no pure "response" plans.
- Coordinated action, not "communication", is actually the biggest problem in disaster response[22]. So design your strategies around radical coordination with the partners identified in the last phase.
- Open systems beat closed systems in responses. Convince commanders to integrate new outside resources, volunteers and citizen efforts that appear during the emergency [48].



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The  **Emergency Management Planning Directive** template summarizes the Commander's Intent you've gathered during *Plan Design* as guidance for more staff level work during *Planning*.

 Why are ways mysterious? They have to define clear strategies but leave room to improvise tactics.

 Healthcare systems in particular are likely to respond in isolation [6]; healthcare strategies that bring together facilities and insurance providers tend to be more successful[19].

## Objectives

1. Reframe your *End State* from Phase Two. The desired end state consists of those conditions that, if achieved, represent the accomplishment of the mission.
2. Describe the main *Lines of Effort*. A functional way of connecting various actions together in a coordinated way towards an end state. Bigger than an operation or an objective. These lines of effort are interdependent and should mutually reinforce each other [20].
3. Prioritize by designating *Centers of Gravity* for your Mission and for the Problem you're trying to solve. A *Mission Center of Gravity* is the source of your strength on which your efforts depend. A *Problem Center of Gravity* is the point where your efforts must be directed to succeed. It could be geographic or a particular part of your operation. Examples:
4. With senior executives, build a visual **Theory of Action**. A Theory of Action is your Commander's visualization of the solution and what he wants to accomplish to get there[20]. This should inspire/focus the planning team and orient each operation by linking its purpose to a set of conditions that define the entire desired end state[9].
5. Create a concise *Mission Narrative* that is legible to someone outside the planning process (see note) below.
6. Combine these elements into an **Emergency Management Planning Directive** which your Incident Commander approves, which will guide all future planning. This create a shared view of the process among all players, which is critical to the success of the system[21].

## 📄 Selling the Mission Narrative

You must be able to brief the mission of your plan to outsiders in about twenty seconds. Mission Narratives are great for that. Dr. Jack Kem (Army War College) recommends a specific format for them which we've found very effective [49]. It works like this (see image at right) :

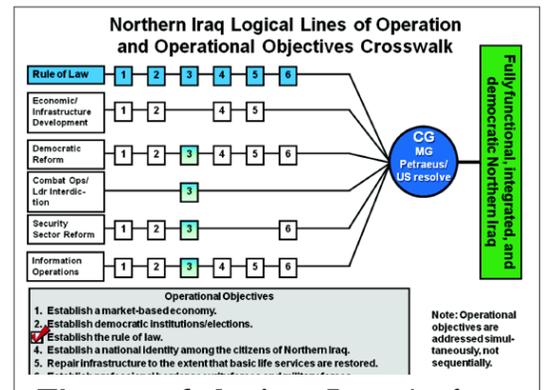
- **Condition** – Describe the conditions of the hazard that make the objective necessary (e.g., What's the problem?).
- **Opportunities** - What inside the hazard makes it possible for us to change the situation. This sentence should reference the objective directly (e.g., What can we address or leverage?).
- **Key Actions** – Two or three key actions that will be taken should be specifically spelled out (e.g., steps we'll take)
- **Payoff** – **This is the most important part.** Describe how the actions will change the original conditions in a way that external stakeholders will understand.

💡 Don't start with the steps you want to take! First, you have to agree with you Incident Commander on when your mission is done.

💡 Emergency Support Functions are a good example of "Line of Effort" thinking but don't always match what you need.

**Mission Centers of Gravity**  
Public trust; arrival of medications; mayoral agreement w/objectives.

**Problem Centers of Gravity**  
Coney Island, Level of Contagion,



**Theory of Action Example from Jack Kem [3] based on 2010 U.S. Military Operations in Iraq**



💡 **Want an example?** I wrote each Mission Narrative in this handbook using this method.

## 5: Three Choice Courses

Planners consider the requirements, goals, and objectives to develop several response alternatives. The art and science of planning helps determine how many solutions or alternatives to consider; however, at least two options should always be considered.

-FEMA Comprehensive Preparedness Guide 1010, 2010 [14]

### Goal

Competitively design and debate strategies to achieve the mission until one emerges victorious.

### Mission

Planning processes that only consider one solution miss both the complexity of the problem and the improvisational nature of leadership. Instead, create a process where multiple solutions compete against each other to create a set of winning strategies. Use your finished **Planning Directive** for guidance. First, have separate small groups create *Courses of Actions* – strategies for **what** emergency responders will do to accomplish the Commander's Visualization described in the Planning Directive. Then, evaluate each Course of Action to make sure it is plausible and effective. You'll have at least **three choice Courses of Action**. Competitively brief each one to executives and design a final set of flexible strategies based on their feedback. Stronger ideas will emerge from this competitive process and executives will be more likely to use a set of strategies which they developed.

### Operational Approach

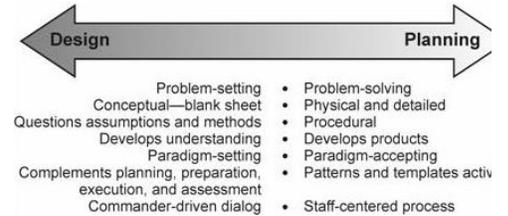
- The emergency manager can't just accept things as they are but must set a vision for the community to plan for and respond to a disaster as one connected network [21].
- Brainstorming Courses of Action reveals unexpected ideas. Also, as the count of considered Courses of Action increases, better solutions become more likely. Competition helps good ideas win out over bureaucratic groupthink[50].
- It's more important to address how the response will solve the problem than to address the problem itself. That is, plan how you will coordinate and make decisions, not treat particular types of injuries [12]. Specifics are for later.
- Your Courses of Action should surge day-to-day systems and hew closely to normal organizational strategies, not invent new systems [21], to increase their use by executives [51]. Any systems you do create should be easy for new players to understand and grab onto with their own improvised operations [52].



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### 👤 Plan Design ↔ Planning

Until this point, you've been engaged in *Plan Design*, which is a Commander-driver dialog. Now, you begin *Planning* proper, in which your team takes the Commander's guidance and develops strategies for her review[16].



👤 To make sure the Courses of Action (CoAs) are different, it helps to name them. Also, you may want your CoAs to cover these three types before you brief:

**Executive** – pretty much what you *think* the Commander is thinking.

**Iron Major** – What your team thinks is best based on evidence.

**Cuckoo's Nest** – A third, wildly creative option that may not be possible but helps inspire new ideas.

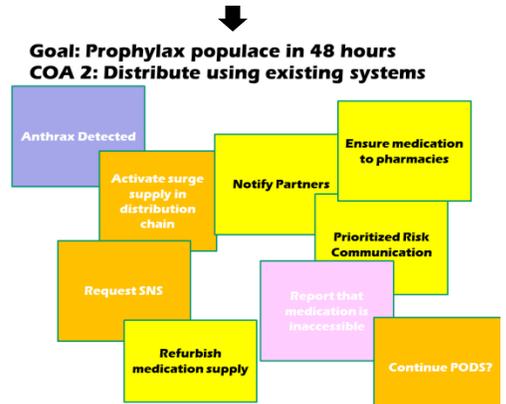
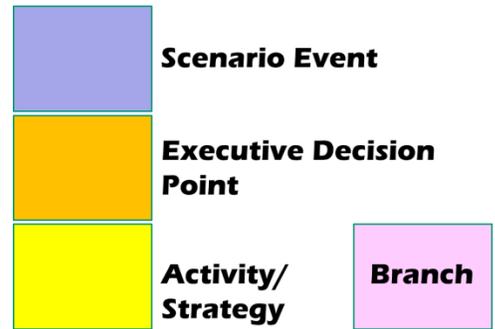
## Objectives

1. Divide your planning group into three or more teams. Each team should take the completed Planning Directive and *separately brainstorm* a Course of Action using sticky notes:
  - A **Scenario Event** is something outside of your control.
  - An **Executive Decision Point** is a senior official's choice.
  - An **Activity or Strategy** is what the response does.
  - A **Branch** is a fork in the road that needs a different set of Activities.
2. Write each element on a sticky note and paste them to a wall in sequence. This story of what you will do is your Course of Action.
3. Using this method should generate several different Courses of Action (CoAs). Capture them on the  **Courses of Action Worksheets**: The First sheet (*Strategies by Incident Phase*) describes the big picture of several different Courses of Action. The Second (*Strategies and Tactics by Group*) goes deeper into a specific Course of Action.
4. The team should rank these Courses of Action. In particular, check that the Means you have described are sufficient to really accomplish each CoA (this can be political) [12] and that each one considers logistical dependencies (e.g. suppliers, distribution means) [6]. Use the  **Courses of Action Evaluation Tool** to competitively grade CoAs.
5. Brief your ranked list of multiple CoAs to your Incident Commander. She may choose one, or combine them in some way. Either way, she will define a clear strategy for your plan.

### The “What” of Course of Actions

A *Course of Action* builds out “What We’re Doing” to accomplish the *Commander’s Intent* in the *Planning Directive*. To be complete, a CoA must address all those generic functions which a community needs during a disaster. Research says it must spell out how a jurisdiction evacuates, communicates to the public & between agencies/sectors, cares for medical emergencies, conducts heavy rescue, manages fatalities[13], tracks/distributes lists of patients/survivors/casualties[17], manages an excess of volunteers [39], monitors/prioritizes/sequences tasks, reallocates resources, transmits known info to hospitals, conducts/distributes one unified needs/situation/resource assessment, issues passes to incident sites, handles triage/transport, distributes patients equitably, fulfills logistical needs, manages/tracks excess resources [22], registers mass requests for aid[33] and allocates concrete roles to ad hoc units/volunteers[39].

Timing: Hours, Days, Weeks



 Scoring Course of Action  
The  **Courses of Action Evaluation Tool** uses these criteria.

Adequacy	Addresses the major problem elements
Feasibility	Realistic for the situation
Acceptability	Complies with Commander's intent (also, legal)
Completeness	Guides the action to the end state
Distinguishability	Really different than other options
Aligns with research	Integrates Planner's Checklist and other evidence

 All this in every plan? No – use an all-hazards framework BUT it should adjust and grow with each problem you address.

## 6: Code Response DNA

*The planning team develops a rough draft of the basic plan, functional annexes, hazard-specific annexes, or other parts of the plan as appropriate. [14]*

-FEMA Comprehensive Preparedness Guide 101, 4-16

*The key to NASA's success in reaching the moon was that all the participants were impressed not only with their role...but more importantly with how their role interfaced or interacted with other roles....The problem of getting to the moon was solved by many experts performing in their own separate fields of expertise but all with the same goal in mind. [53]*

### Goal

Detail the specific actions, responsibilities and needs for each piece of how you will accomplish the chosen Course of Action.

### Mission

Without clear task ownership, a well-managed information flow and a logical path to allocate resources, response decision-making will be uncoordinated. Therefore, planners should detail how the chosen Course of Action will be achieved. Measurable operational objectives should be set which describe **what** must be achieved, with one clear owner for each objective. These objectives should be broken into strategies, general plans for **how** they will be accomplished, and then actions/tactics, specific elements that can be used to allocate resources. Collecting resource and information needs for each element will increase the likelihood that these elements can be accomplished successfully. This information **codes the response DNA**; it will increase coordination and improve decisions by allowing leaders to improvise based on a deep understanding of the mechanics of the problems and its solution.

### Operational Approach

- Everything you write is part of one jurisdictional plan – not an agency plan – that should include all **capabilities** by which the community responds to, recovers from, and mitigates crises[21]. Your focus should be to make the larger, all-hazards community system work. [32]
- Remember that anyone not given **clear tasks** will make them up (and likely duplicate someone else)[13].
- Design your plan to increase the improvisation capacity of your response network[29] and help it learn [21]. That's better than setting fixed contingency plans; these can decrease the motivation to solve problems which drives planning [51].



Write the Process ≠ Plan	1
Raise Wicked Problems	2
Capabilities Not Analogies	3
Coordinate don't Command	4
Strategize to Improvise	5
Write Reality	6
Be One Community	7
Slow the Burn	8
No myths	9
Think Management	10

🧠 The wrinkle is, not all “**capabilities**” are the same in all hazards (e.g., *Evacuation* means something very different in a coastal storm and a nuclear event)[1].

🧠 To allocate **clear tasks**, use this litmus test: Does each piece of your Operations Section (or similar) should correspond to an operational objective?

## Objectives

1. With your *Planning Directive* and your final *Course of Action* in hand, hold a series of 2-3 hour *Plan Development Workshops* (possibly one for each major objective). Make sure that attendees are response leaders. Discuss all specific activities needed to achieve your end state and negotiate ownership [15] of these activities.
2. Code your material into the  **SOARS Framework Worksheet**[54]. This is the DNA of your plan – it shows Ownership of all of the Activities needed to reach the End State within your chosen Course of Action. *Note:* I added the *Operational Approach* and *Strategy* elements to address some of the work done in Plan Design and give leaders more flexible choices.
3. Hold *Plan Writing Workshops* to draft edits to the plan. Make sure the right senior managers (who would actually lead the response) are included[15] as writers for the pieces they would manage. Planning by users increases ownership[22].
4. Avoid joint ownership of Objectives; your Incident Commander needs to know where to direct her instructions.
5. Address policy issues that arise. Prepare solutions to tough problems even if political leaders won't listen. In a disaster, existing practices will destabilize and windows will open to change your system for the better. Usually, though, only predesigned ideas are ready to use the window when it appears[55] [31].
6. Compile this material. Use the  **Scenario or Functional Plan Template** to frame the big picture response. Most important here: A Concept of Operations using Mission Narrative techniques (described above) so outside readers can understand. Then, use the  **Operational Objectives Template** to document ownership/resources/information needs for each Objective/Strategy/Action using SOARS.

### All Hazards? Really? All of 'em?

Plans work best when they focus on core functions (“capabilities”) that can work across different scenarios[37]. Three caveats. First, the functions must be evidence-based. Leaders with “9/12 syndrome” argued that lessons learned prior to 9/11 no longer applied. This has proved incorrect[56]. Second, “all hazards” does not mean “one-size-fits-all”. The functions need to be created in your jurisdiction by the people that will manage them[13]. Otherwise, “capability planning” is just checking grant boxes. Third, capabilities need to be “ground truthed” based on different planning scenarios with vastly different demands[1]. Think of how Evacuation is different in a coastal storm and a dirty bomb. Otherwise, “all-hazard” plans don't account for flexibility [51] and will make leaders believe a plan exists when in fact it doesn't.

 “Editing” often turns into “people adding new stuff to the plan”. Your job is to streamline keep the focus on creating a plan that will concretely help manage the incident.

  The  **SOARS Framework** works like this:

<b>Strategic Objective (Goals)</b>	WHY you're doing what you're doing
<b>Operational Approach</b>	Leadership guidance on the WAY to achieve the Goal.
<b>Operational Objective Strategy</b>	WHAT the response must do General choice for leadership on HOW to reach an Objective. A container describing sets of Activities.
<b>Activities (Tactics)</b>	A set of actions to describe HOW to reach an objective (best contained within a Strategy.)
<b>Responsible Party</b>	Discrete piece of the response that owns an Activity (WHO)
<b>SOPs</b>	Measurable tasks (WHEN, WHERE) that detail resources to accomplish Activities.

 Maybe 90% of your objectives can be found in “capabilities” documents national/ international standards[15] based on years of research into disasters. We always do pretty much the same stuff, you know? Even if it feels surprising. The issue is you can't just copy these – you have to organically build them in your jurisdiction. They need some blood and sweat behind them to work.

## 7: Prime Cognition

Each annex, as well as the basic plan, may use implementing instructions in the form of SOPs/SOGs, maps, charts, tables, forms, and checklists and may be included as attachments or references.

-FEMA Comprehensive Preparedness Guide 101, 3-18; 4-16

Extreme levels of stress produce more than simple or graceful degradation in performance. Eventually, the effects of stress can become catastrophic...resulting in a choking or panic state.

-Bourne and Yaroush, *Stress and Cognition*[7]

### Goal

Make sure leaders and staff remember the plan and build on it in the heat of the crisis.

### Mission

Leaders (and most staff) won't review plans during an emergency; they may not even *remember* any strategies due to the chaos. By creating **Job Aids**, planners can **prime the cognition** of responders to take appropriate action and learn as they go. First, determine the types of Job Aids needed for each piece of the response. Create leadership tools that begin with context and questions so that leaders improvise well. Create checklists for rote positions to make sure staff complete processes. Focus attention on maps/infographics since the brain processes graphical information more clearly under stress. Use these tools constantly in preparedness meetings, exercises, etc. In this way, planners can ensure planned strategies are orient decision making and responders follow proper protocols.

### Operational Approach

- Under pressure, executives tend to choose familiar actions and assign resources based on past experience [51] – especially as event severity increases **and even when these ideas clearly won't succeed**. [50]. Two common symptoms:
  - Initial assessments are generally wrong; leaders often trust them when they should question them
  - Instinct pushes us to just grab the closest problem and solve it; leaders need to see the full picture and prioritize[22].
- Always include “why” (context) alongside the “how” (actions) in your Job Aids.
- Remember : Stress makes us see differently. Documents need to be designed a certain way to be useful in an emergency. [57]. First rule? Short phrases. No sentences.



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Zhang Biao *The Beginning of Chaos*, 2009

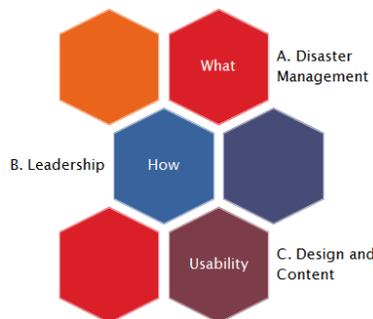
🧠 Weird, right? Just when leaders need to think outside the box, instinct pushes them back inside. Also, most staff are more likely to ask their supervisor permission in a disaster, not less.

📄🎵 Why? The Job Aids will be read faster and remembered longer[8]. Also, this is an example of how to do it.

## Objectives

1. Break your plan into targeted sections and decide what Job Aids each targeted group needs to fulfill their role using the  **Plan Implementation Worksheet**.
2. Build tools for senior leaders first, like NYC's  **Threat Response Guides**. **Focus on context** and not *specific actions* for leadership tools. Context makes decisions more rational and allows plans to adjust to changing conditions[40]. The content of these Job Aids should function as a *decision aid*, not a checklist, helping leaders keep the priority items in their memories as the stress drains their cognitive capacity [7].
3. Create Job Aids like the  **Three Column Checklist** that empower leaders throughout the response. *Informal* leadership (e.g. staff who step up) correlates more strongly to success in crisis than *formal* leadership [58].
4. Make Job Aids for street-level actors (e.g. NGOs, bystanders, the media); not just government. In crises, these players are thrust into action and need to use emergency systems, too[35].
5. Draw tools that connect the response to time (e.g., our  **Timeline Sample** or operational period schedules). Understanding the sequence of events is critical to making the right response decisions[32].

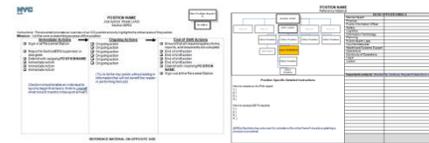
6. Evaluate the Job Aids you make with the  **Decision Aid Evaluation Criteria** based on work by NASA, the FAA, Quarantelli and Yukl [59, 60]



## Plan to Manage

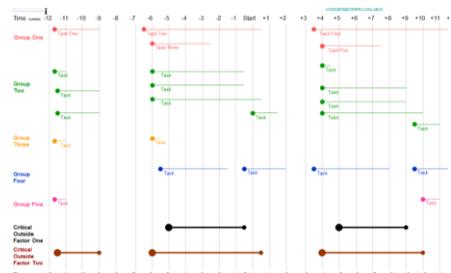
Leadership in a disaster is often its own disaster. As a planner, your job is to help leaders improvise well, not make them stick to rigid procedures[23]. Successful crisis response must be innovative, so it usually breaks rules[61]. However, this creative rule-breaking has to be balanced by discipline to keep the response cohesive[52]. Not easy. What's the good news? In the stress of a crisis, leaders cope better with information overload if they can connect new facts to be learned to existing knowledge[52]. To manage best, leaders need to understand likely contingencies, interagency coordination, specific agency/position roles, and to use up-to-date technology infrastructure to improve response communication[17]. Their Job Aids should prepare them first for these elements.

NYC stores redacted versions of  **Threat Response Guides** for 21 scenarios on CDC's Epi-X system.



The  **Three Column Checklist** categorizes actions on just one page. Atul Gawande made an instructional checklist for it[2]. Our version includes response contacts and an org chart on the back based on staff feedback.

The  **Timeline Sample** is really simple but it connects objectives to time by owner, which is what you need.



 In true catastrophes, priorities change. Leaders should be prepped to push for a unified capacity assessment/adaptation process, to immediately restore and enhance communication, to institute more flexible decision making, and expand coordination & goodwill among emergency responders.

## 8: Think in the Thick

The third floor of the fire station on Bush Street [in San Francisco] was the official residence of Chief Dennis Sullivan. When the quake struck, it toppled a set of brick smokestacks, which plummeted through the roof, critically injuring the Chief. He...died 3 days later. He, more than any man in the city, had been aware of the frightful fire potential presented by the miles of crowded wooden buildings.

-In Disaster Response Auf Der Heide [22]

In a crisis, the situation is dynamic, with the body of knowledge growing hour by hour from the latest information sources and intelligence reports. An adequate and feasible...response in a crisis demands flexible procedures keyed to the time available, to communications that are rapid and effective, and to the use of previous planning, whenever possible.

-Joint Field Staff Officer's Guide [62]

### Goal

To create a disaster response that thinks critically and flexibly while always putting victims first.

### Mission

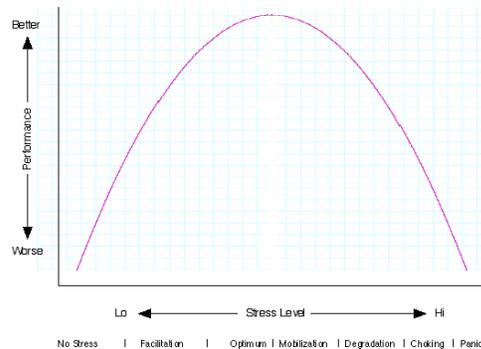
Crisis situations tend to create shortsighted tunnel vision within emergency responses. Resources need to be sequestered for forward planning in order to maintain a big picture path forward. A unified planning process with senior leaders should be maintained in every operational period. Key operations need to be well-designed even as they're being stood up. Each days' activities need to be evaluated and reconnected to the big picture goals for the emergency. In this way, leaders can **think in the thick** of it and a connect a dynamic situation to the desired end state even as they improvise and leave the pre-planned elements behind.

### Operational Approach

- Static plans are inherently inadequate to the changing dynamics of the crisis environment[40]. Truly catastrophic incidents overturn basic explanations of disasters and how to integrate the community[44]. So leaders always have to learn and plan during emergencies and can't rely on fixed protocols.
- To make it through a disaster, original thinking is required[63].
- Planning should not speed up the response, but instead must *slow down* decision making to make sure leaders have the right information in hand [13]. Keep executives away from operations (!) to ensure they focus on clear decisions[22].



- Write the Process ≠ Plan 1
- Raise Wicked Problems 2
- Capabilities Not Analogies 3
- Coordinate don't Command 4
- Strategize to Improve 5
- Write Reality 6
- Be One Community 7
- Slow the Burn 8
- No myths 9
- Think Management 10



📖🎵 Your brain on stress first performs better and then degrades as stress increases according to the Yerkes-Dodson Law[7]

🧠 It's tough being a senior official - you don't commit much time to emergency management, but then must lead in crisis. This creates stress, leading to decision hesitation and a fixation on getting a direct response from the jurisdictional Emergency Operations Center (EOC) rather than making decisions. [21].

## Objectives

- Leaders consistently forget to plan, which makes outcomes worse [64] and can lead to unethical decision-making[19]. Conduct a **Crisis Action Planning** Cycle for new operations.
  - New operations often duplicate other work. Reach out to your partners before you strategize to make sure the whole city's brain is working on the critical problems – not just yours[46].
  - Ensure consistent leadership and a clear reporting structure to your Operations Section.
  - Define a clear end state, sequester staff, manage data, and develop a unified resource/needs capacity assessment.

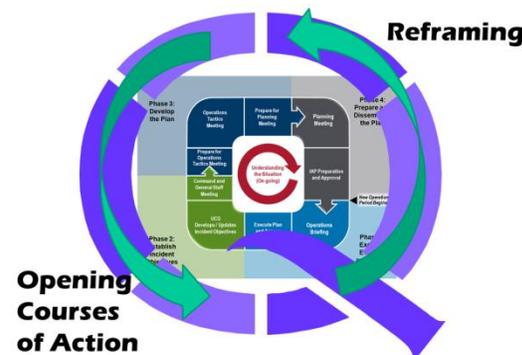
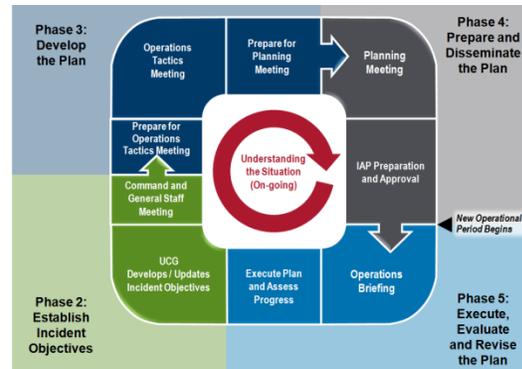
A few minutes planning will save hours of response confusion.
- Institute a clear **Planning P** for each operational period – this is the core cycle of emergency response. It must build an overall, multi-organizational strategy to guide your response or it will fail. The response should be subdivided into functional/geographic groups and organizations given clear assignments [65].
- Consistently rewrite **Job Aids** during the disaster. This ensures that individual learning gets translated into established routines. These Job Aids function as the response system's *memory* and have to be kept up to date [30] or they hurt the response by being wrong [66].

## Mind your Planning Ps and Qs

Plans go wrong as soon as they're written. The Planning P drives a response forward, but it's often critiqued for just mapping out the next step[40] – what do we do when we need to turn around[23]? Pair the Planning P with a **Planning Q** – sequester some staff to create a rapid feedback loop that questions assumptions, reframes the mission and opens new Courses of Action during the crisis. Ensure all sectors make joint decisions, remove hierarchies between leaders and priority programs, avoid “big bang” exhaustion by demobilizing burnt out staff [31]. Clarify task ownership for new or overlapping tasks to reduce clashes between leaders[23]. Listen for and incorporate external critique to speed the adoption of important lessons [34]. Use a management metric (like Harrald 2006) to evaluate the response. [52]. Give decentralized leadership proactive support, even if it's outside of set plans[45]. Make sure ICS hierarchies support horizontal coordination (i.e. work from the top down so everything works from the bottom up[9]). Ensure that your response is open and flexible. Visionary leadership will emerge during an emergency response and should be elevated, not shunted aside[14] [21] Find ways to say yes [58]. Just like *Plan Design*, the Planning Q helps you question your assumptions and keep your focus on the real end state.

The **Crisis Action Planning** toolkit is an experience-based guide to plan a response operation during a disaster. *Phase 1 Task List* sets objectives/strategies toward a goal. *Phase 2 Task List* assigns/tracks progress. The *Phase 2 Plan Outline* documents results to make sure everyone is on the same page. Rough but handy.

The **Planning P** (below) has been validated in hundreds of responses. Each operational period, your Incident Commander works establishes objectives *for the next operational period*. Each group develops strategies/tactics to meet them. Planning Section compiles it all into a plan for the next shift [14].



This **Planning Q** is really just my idea so far. But what a mnemonic! Who's going to forget “Mind your Planning Ps and Qs,” am I right?

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