Accelerating Recovery from Landscape Scale Disasters

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ACTING IN TIME
Against Landscape-Scale Disasters
If they can see your incident from space –

it is generally not a good thing.
The Simple Analytics of Acting in Time

Can the hazard be – and is it – foreseen?

- No
- Yes

Can we develop high value actions?

- No
- Yes

Can – and do – we mobilize to take action?

- No
- Yes

ACTING IN TIME

“Visibility”

“Mobilizability”

“Actionability”

NOT Acting in Time
The Comprehensive Risk Management Framework: Five Points of Action against Landscape-Scale Social Hazards

Pre-Event

Advance Mitigation
(prevent/mitigate consequences in advance of an event)

Preparation of Response
(prepare to prevent/mitigate consequences during an event)

Preparation of Recovery
(prepare to prevent/mitigate consequences after an event)

Event

Response
(respond to an ongoing event)

Post-event

Recovery
(recover from the consequences of an event)
Example:
The post-earthquake world in the Bay Area

ASSUME:
- Mitigation was effective:
  - buildings do not collapse
  - basic services disrupted but restorable
  - relatively few deaths and injuries
- Response was effective
  - survivors rescued, injuries treated
  - fires contained

BUT THERE IS STILL:
- Massive disruption, displacement, destruction
- Many buildings unusable
“Tipping”: People (home and business owners) have to decide whether and when to reinvest while they
o are uncertain about how rapid and effective government (and other) recovery efforts will be
o are uncertain about what others will do
o have just witnessed the destruction of many of the things that they loved about their the Bay Area
o stand in the midst of widespread system collapse
o are suddenly not creditworthy (along with nearly all other people and organizations in the area)
o are traumatized

They are sudden, involuntary pioneers in a new and scary land…and they don’t have to stay.
“Tipping” will:

- begin quickly

- take place (at the outset) in the *absence* of much real data about the recovery

- go on for a long time

→ Accelerated actions that drive positive perceptions are key to an effective recovery
Why the **Lifelines** work is so important

Focused on rapid restoration of key services

Crucial early indicator of competence/ rate of recovery

Major driver of confidence – one direction or the other
Challenges of *Lifelines* design, planning, and response

Lifelines are *systems* – subject to the rules of system dynamics

Charles Perrow “Normal Accidents” – tightly coupled systems are subject to collapse

Your systems are
-- individually tightly coupled (there are complex internal interdependencies *within* each system)
-- collectively tightly coupled (there are complex interdependencies *across* your systems
-- tightly coupled to the SF social and economic ecology
Increasing vulnerability within and between your systems

Many systems tend to become more tightly coupled and complex over time

-- They *form* (rather than being intentionally designed) (they are “self-organizing”)

-- Economic forces (efficiency demands) produce incentives for “just in time,” elimination of buffers, …

-- Technology improvement allows greater complexity
Implications for *Lifelines* work

Carefully examine system vulnerabilities

Recognize that your systems are embedded within other systems
→ increases your vulnerability
→ you are contributing to the larger system’s vulnerability

Recognize that in the aftermath of a major event here, you will be trying to undertake rapid restoration in the context of a shattered system ecology → carefully examine your assumptions about what capabilities will be available to you, and plan accordingly.
What should we do?

Build a comprehensive strategy for social risk management (based on the Comprehensive Risk Management Framework)

Assemble a comprehensive, five-domain description of current activities

Search for additional valuable investments in each domain

Build an “advance recovery” strategy – and execute it (which is just what you are doing!)
Recovery will be long and difficult – no matter what you do.

But it will be a lot faster, less expensive, and more reliable if you build a platform for accelerated recovery in advance.

This *can* be done.

And *you* *can* *do* *it*.

It’s best to move *in advance* with all deliberate speed.
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