



16 Million Pounds of Lithium and a Sea of Mud

Environmental Health
Leadership During
Complex Emergencies

Monterey County
Health Department

One County. Two Unprecedented Emergencies.

The Monterey County public health system faced two completely distinct disasters—the Pajaro Flood and the Moss Landing Battery Fire. Our mission is to protect community health through uncertainty.



1. Deconstruct the operational extremes of both events.

2. Identify the hidden overlaps in leadership demands.

3. Build a universal preparedness framework for public health leaders.

Incident I: The 2023 Pajaro Flood

A natural disaster defined by immediate, massive, and highly visible physical destruction.

Drinking Water Contamination

Agricultural Worker Impacts

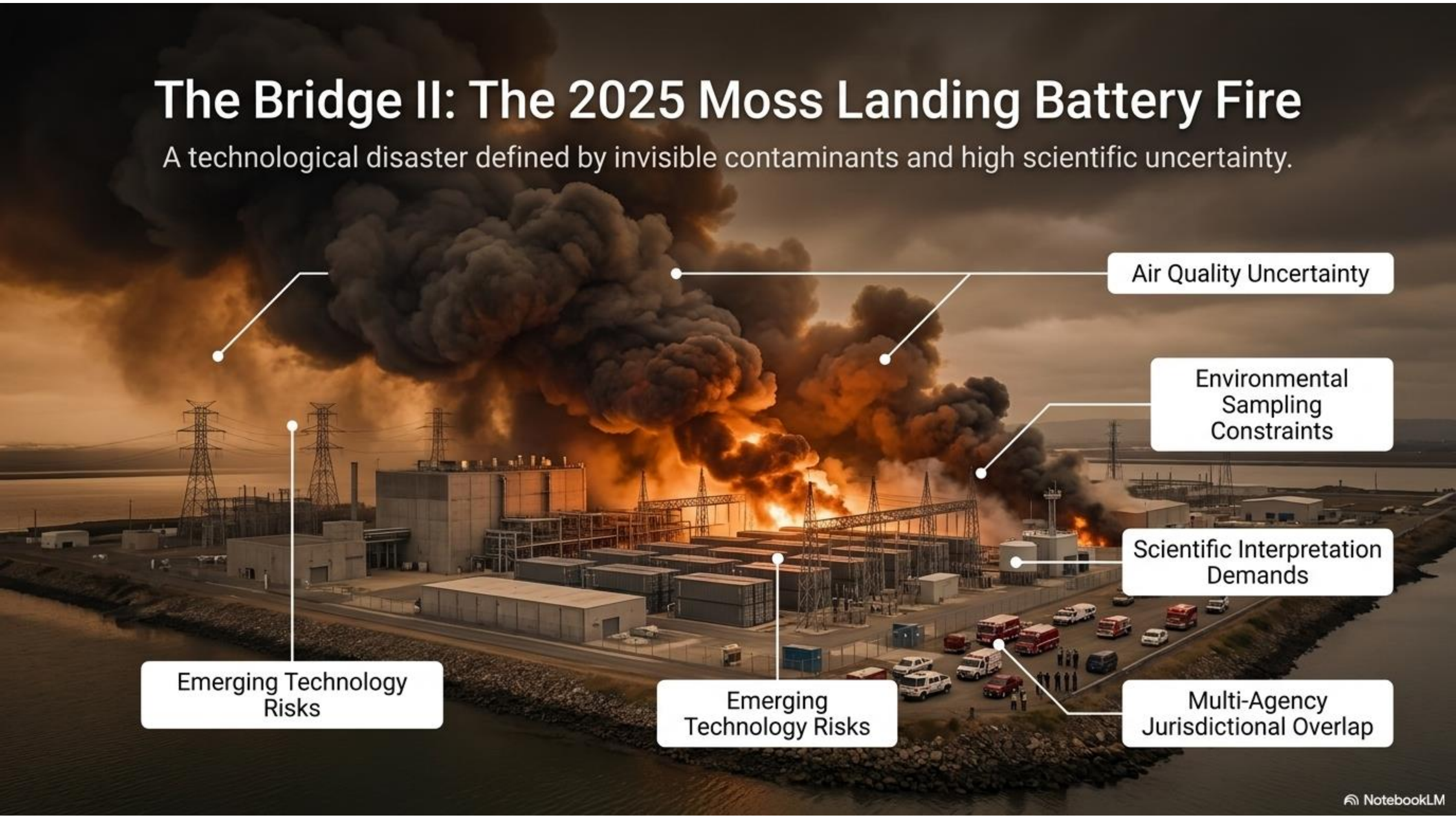
Agricultural Worker Impacts

Debris Management Challenges

Community Displacement
& Shelter Support

The Bridge II: The 2025 Moss Landing Battery Fire

A technological disaster defined by invisible contaminants and high scientific uncertainty.



Air Quality Uncertainty

Environmental
Sampling
Constraints

Scientific Interpretation
Demands

Emerging Technology
Risks

Emerging
Technology Risks

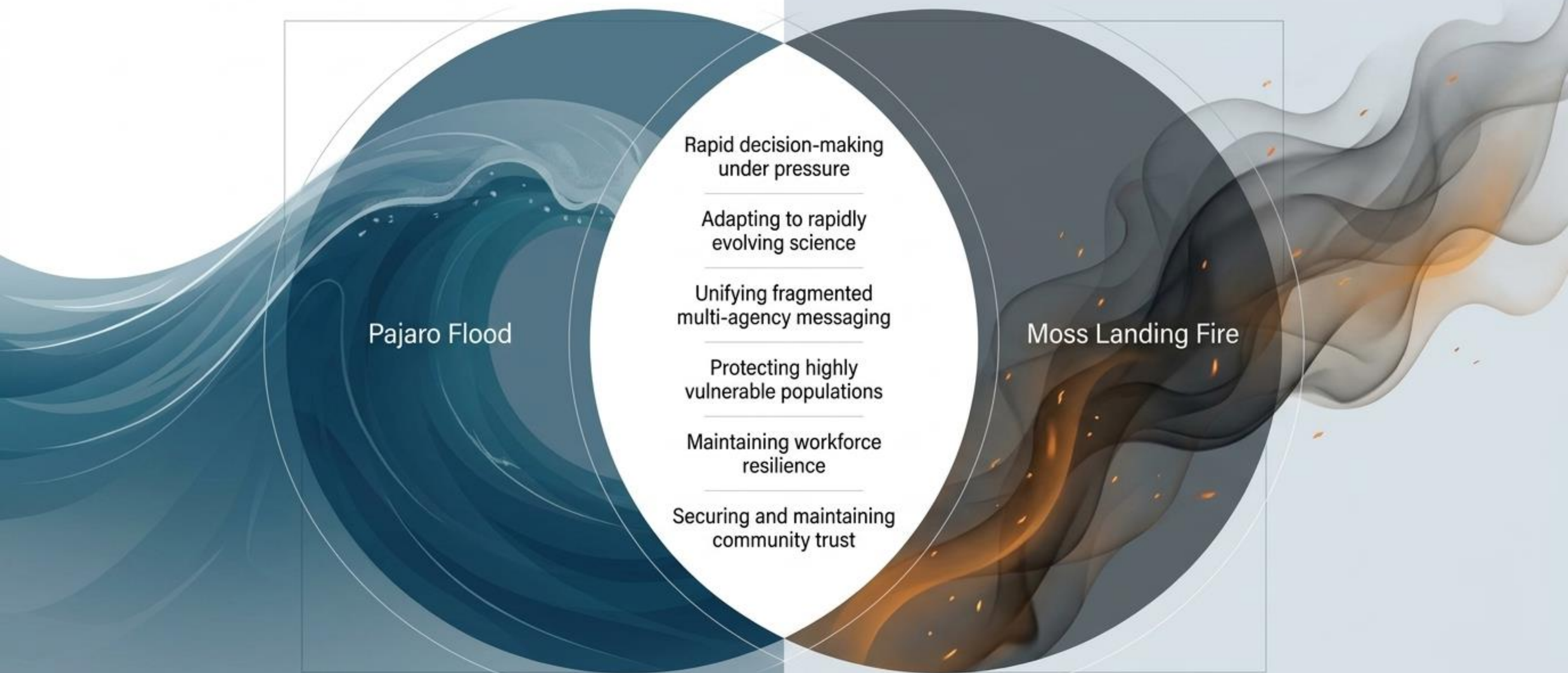
Multi-Agency
Jurisdictional Overlap

The Operational Divergence

Pajaro Flood	Moss Landing Fire
Disaster Typology	Disaster Typology
Natural Disaster	Technological Disaster
Threat Profile	Threat Profile
Visible Destruction	Invisible Contaminants
Impact Horizon	Impact Horizon
Immediate & Acute Impacts	Long-Term Uncertainty
Primary Medium	Primary Medium
Water & Mud	Air & Plume
Public Reaction	Public Reaction
Mass Displacement	Risk Perception & Fear
Response Model	Response Model
Established Protocols	Emerging Playbooks

Divergent Operations. Identical Leadership Demands.

While the technical responses were complete opposites, the leadership required to manage the crises was remarkably similar



The Prerequisite for Crisis Management

Peacetime Zone (Before the Alarm Rings)

Successful response depends entirely upon elements established long before the incident:

Existing
inter-agency
partnerships

Baseline
community
trust

Pre-established
shared
objectives

Clearly defined
operational
roles

Channels for
transparent
communication

Crisis

**“You cannot build
trust during the
emergency.”**

Redefining Environmental Health

The Outdated View



The Crisis Reality

Environmental Health as the Operational Bridge



Navigating Uncertainty: A Leadership Framework



Lead with Science.

Base critical decisions on verifiable data, not public optics.



Communicate Honestly.

Openly acknowledge scientific uncertainty when contaminants or risks are unknown.



Coordinate Relentlessly.

Serve as the connective tissue between fragmented response agencies.



Maintain Flexibility.

Adapt operations instantly when established playbooks fail to match reality.



Protect Trust.

Prioritize transparent community advocacy above all else.

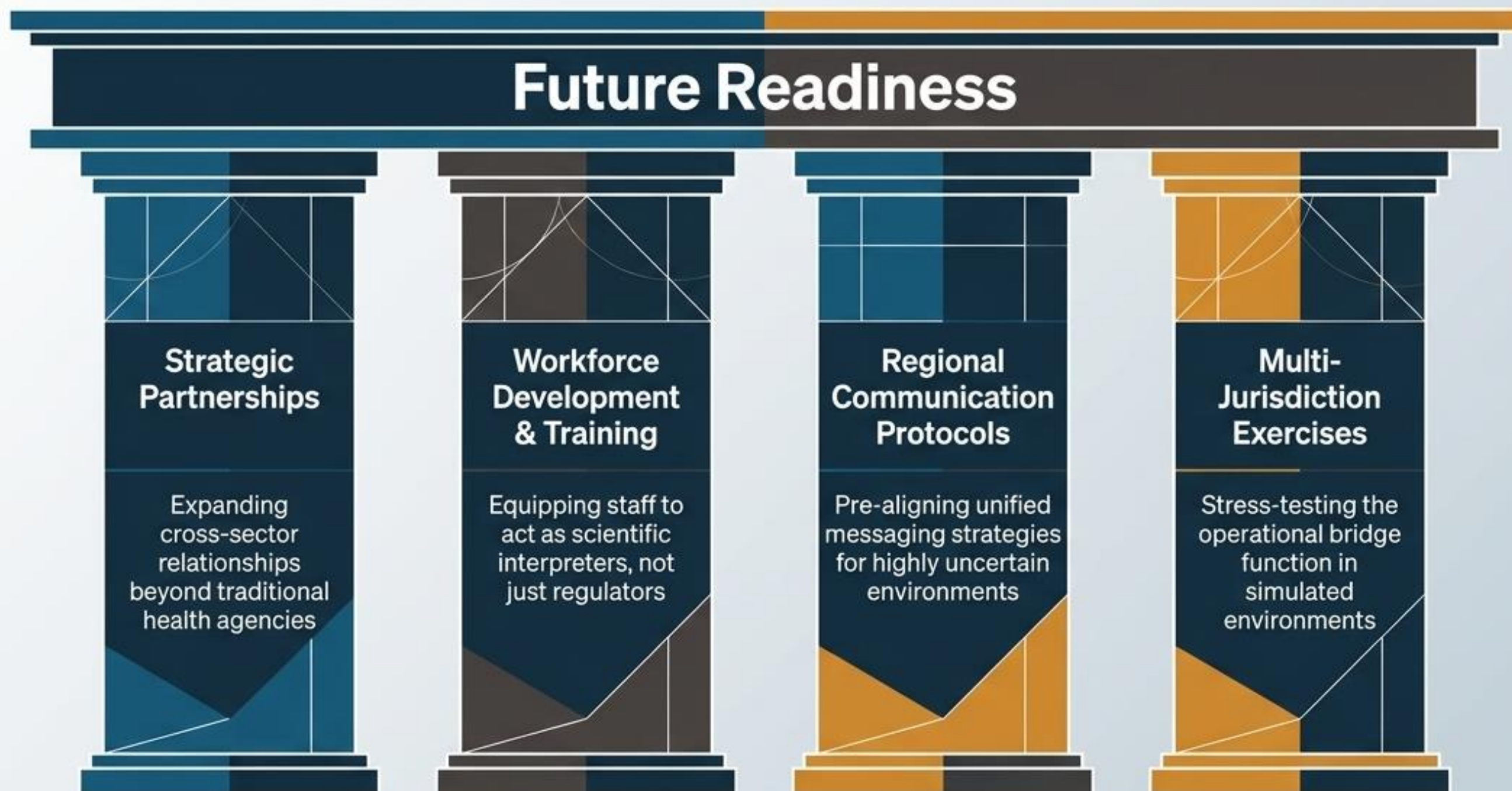


Shield the Workforce.

Actively support the mental and operational resilience of your own staff.

Strengthening Regional Capabilities

How to prepare operations before the next unprecedented event strikes



The Core Principle of Public Health Response

“Although the Pajaro Flood and Moss Landing Battery Fire were fundamentally different emergencies, both demonstrated that successful public health response depends on the same core principle: Strong local coordination across human health, environmental systems, and community recovery.”

Environmental Health is Operationally Central

Environmental Health is not simply a regulatory program. It is an essential component of the entire crisis lifecycle.



Emergency
Preparedness



Scientific
Interpretation



Public
Communication



Community
Resilience



Recovery
Operations



Public Trust
Maintenance

Thank You.

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