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# Improvisation as a Training Framework for Emergency Managers

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# Introduction

**Emergency Management:** Rapidly evolving, complex task of coordinating the response to a large-scale crisis



Our Focus:  
Operations Center  
level and higher

National Incident Management System (NIMS): nationwide framework

# “If you do not know what your needs are, I can’t request to FEMA what I need”

“At times FEMA, state, and local officials seemed unaware of local capacities and vulnerabilities. ... On the other hand, communication failures left local officials unaware of the full extent of assistance required”

Wachtendorf and Kendra, 2006



# Operational Experience is Perishable



San Diego firestorm 2007; previous:  
2003

Loma Prieta earthquake 1989;  
Northridge 1994



NEMA Survey: **2/3** of state  
Directors of Emergency  
Management in their position  
for **3 or fewer years.**

Our survey: **almost half** of  
respondents at their current  
agency for **5 or fewer years.**

# Improvisation as a Training Framework

The ability to recombine previously existing knowledge, skills, and other resources into novel combinations in response to the moment. (Weick, 2001)



Dependent upon training and proficiency within the domain of practice.

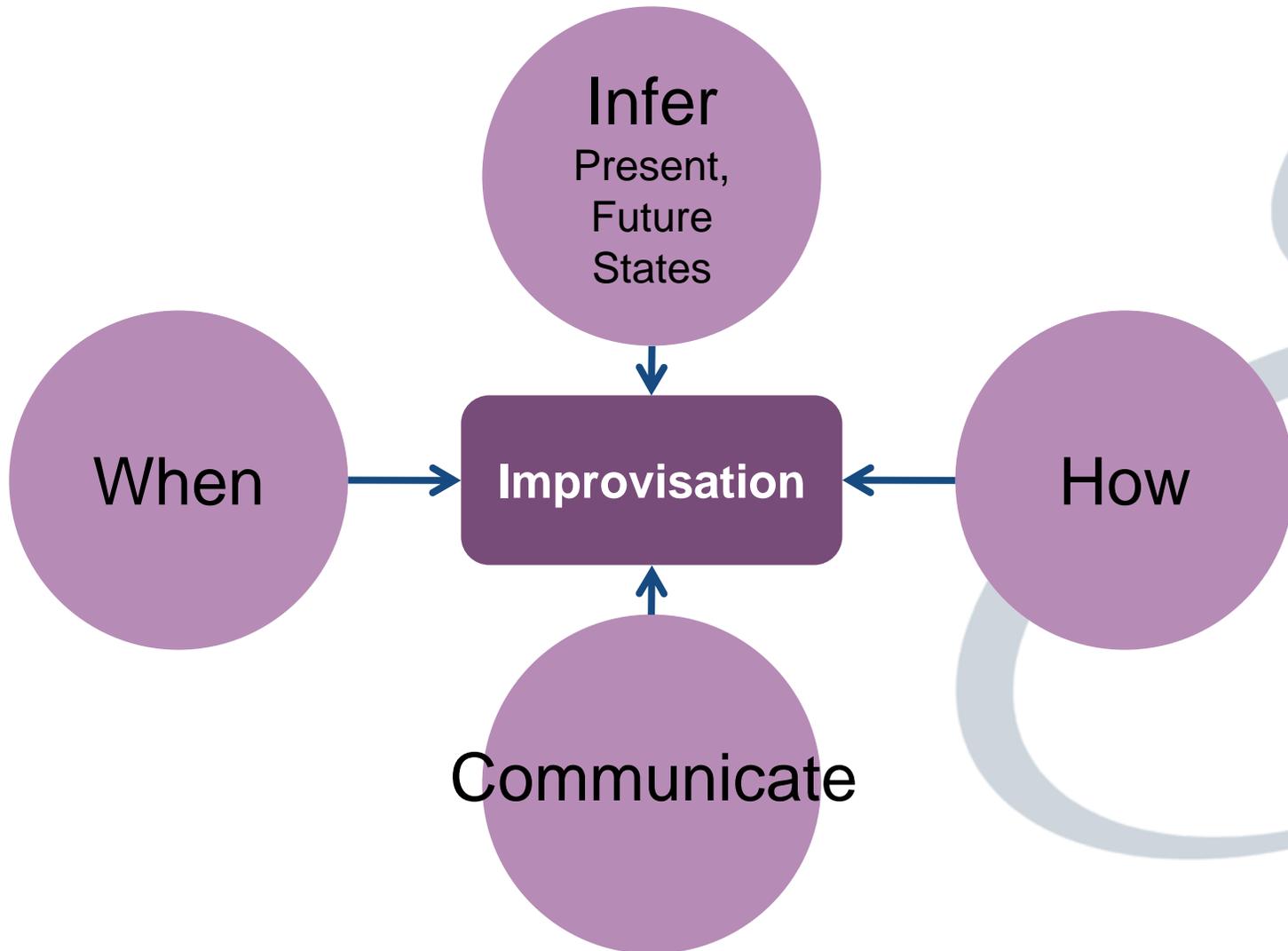
Improvisation as a group can also be successfully trained (Vera & Crossan, 2005)

Group collaboration skills

“Rules” of collaboration (in domain)

# Training Goals

(Mendonça & Fiedrich 2006)



# Example: San Diego “Firespotter Incident”



Purpose of fire spotter rule: To coordinate drops with firefighters on the ground

State spotters train with Navy, National Guard, but not Marines

# What Emergency Managers Say

Online survey: [www.terrorismpsychology.org](http://www.terrorismpsychology.org)

*“You have a plan so you have something to deviate from.”*

*“Plans and procedures anchor you, but you must be flexible in your approach. Creative problem solving under pressure is the hallmark of the emergency manager”*

*“Improvisation is a key skill, & comes with experience & training, but should be an emergency option based on solid knowledge & situational awareness, not used as a standard operating procedure or Course of Action. “*

# What are the primary issues encountered when managing a large-scale disaster involving multiple agencies?

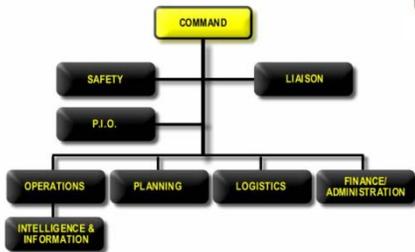


Knowledge of Roles and Responsibilities

## Communication



Ambiguity in authority or Chain of Command



Coordination

Resource Management



# Hands-On Training



Training often limited to classroom/online

Too great a time gap between training to field application

Currently, exercises often done outside the context of basic training and instruction

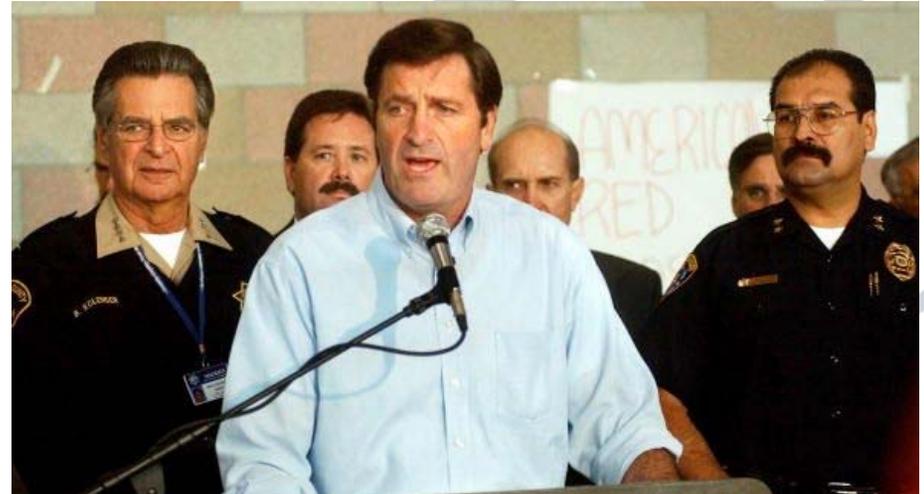
# Consistency in Training



Inconsistency across locales

Cultural differences across organizations

Training for higher level and elected officials



# Quality Planning Process



Creating, testing, and practicing EOPs

The *process* is what is important:

Evaluation of risk

Evaluation of available resources

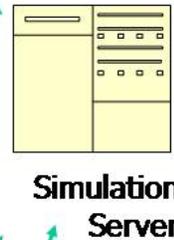
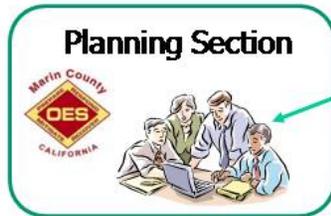
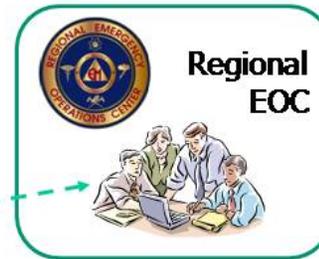
Relationship building within/across orgs



# Improvisation-based Training System

Feedback support

In context of plans procedures, specific roles



Cross-Organizational Training



Frequent, cognitively accurate practice

Support for a wide variety of situations

# Conclusion: Role of Policy



# Thank You

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# Improvisational Construct

- Originally: validate three 4-item subscales intended to measure different aspects of improvisation
  - inventiveness
  - simultaneity of planning and action
  - suddenness of events
  - One additional question as criterion item:
    - “Improvisation is a fundamental skill for disaster managers”
- Results: poor consistency
  - both total and subscale

# Improvisational Construct

- Some consistency across scales
  - Exploratory factor analysis
- Five factor solution found



# Factor 1: “Expertise factor”

- Disaster management can be characterized as a process that has distinct planning and action phases
  - versus simultaneous planning and action
- I feel at my best when forced to think on my feet
- Reacting to swiftly can cause serious problems

## Factor 2: “Tactical inventiveness”

- During disasters I use resources/personnel in new ways
- I have been forced to rapidly devise a completely new approach to a problem

# Factor 3: “Inventiveness”

- My role as a disaster manager is to be inventive
- If several significant problems arise, it is best to get more resources as quickly as possible
  - versus reconsider the incident completely

# Factor 4

- When faced with a complex, time sensitive problem, it is usually better to respond immediately with the resources at hand
  - versus wait to get the right resources

# Factor 5

- Improvisation is a fundamental skill for disaster managers
- During a disaster my perception is that time moves faster than normal
  - versus more slowly than normal