

TOOLS FOR EFFECTIVE RESPONSE : SPACE DESIGN FOR EMERGENCY OPERATION

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Various Architectures for Emergency Response

Shelter



Mobile Medical Center



Logistics Center



Volunteer Center

Management

Go

Grouping

Job selection

Registration and
Orientation



How can we support
effective emergency
response by good design?

Emergency Operation Center

Place to manage emergency
response

Emergency Operation Center EOC





State of California

Japanese Central Government



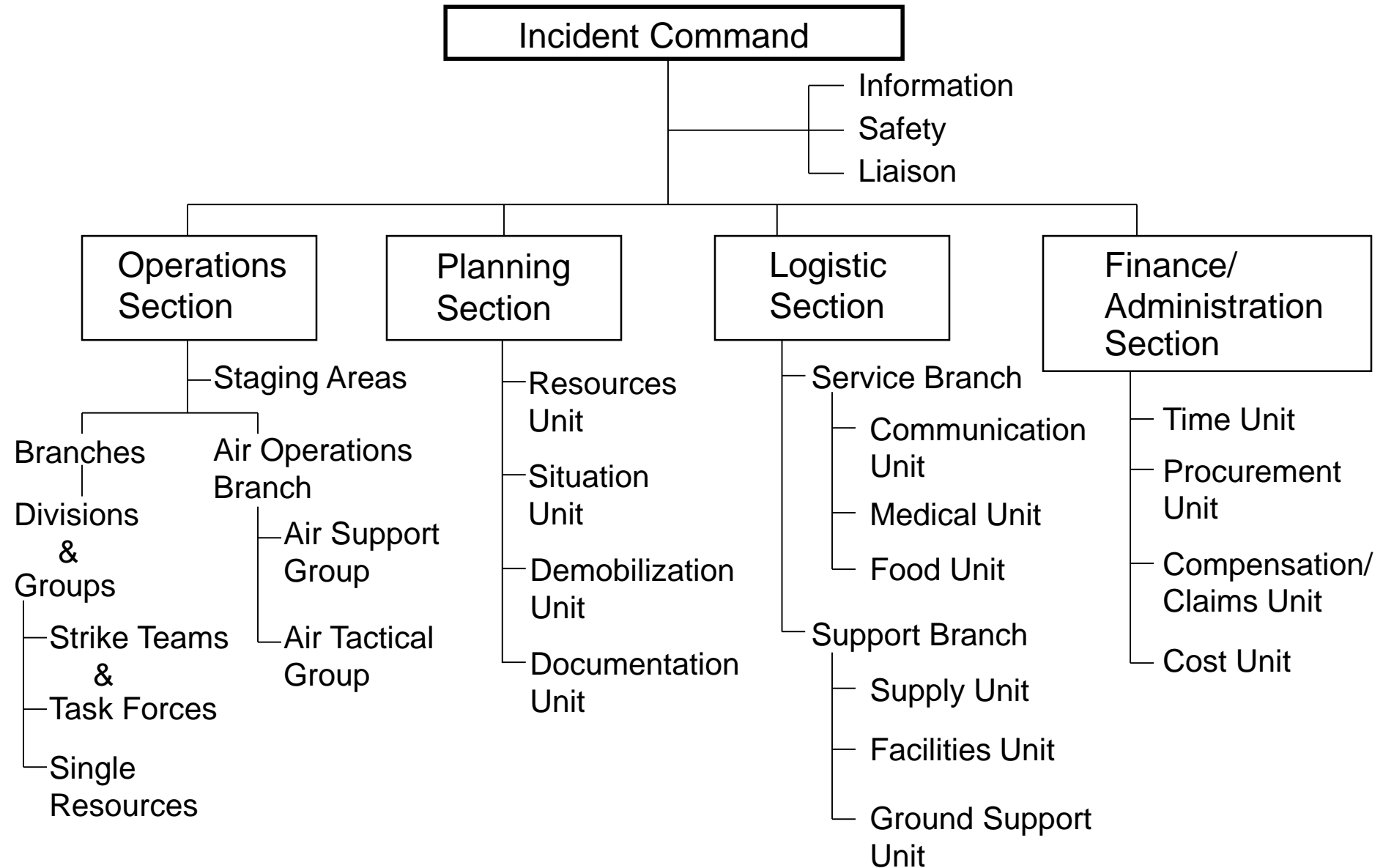
Emergency Response

- 1) Grasping Present Status
 - Situation
 - Resources
- 2) Sharing information among the responding agencies and responders
- 3) Decision making based on common operational picture

Framework to analyze the response

- command and control, and information management.
 - all the Incident Command System functions are
- Development of a common operational picture
 - all the active emergency operating section are

Fame work of “ICS”



Participatory Observation

March, 2011

Case of the 2011 Tohoku Earthquake Disaster

RESPONSE TIMELINE

Date	Mar. 11-12	Mar.13-18	Mar.19-Early April	Early April-May 10	May 10-July22
Phase	Setting up Communications	Securing Access	Setting up Relief Operations	Upgrading Life in Shelter	Closing Relief Operations
Main target	Search and Rescue	Opening Roads/ Relief operations	Relief Operations	Upgrading shelter life/ Recovery	Recovery
Major Operations	Search and Rescue Medical Assistance Setting up Communication Opening Roads	Opening Roads Search and Rescue Relief Operations Fuel Delivery Transferring patients Managing Dead Body	Relief Operations Lifeline Recovery Delivering Fuel Reopening School	Relief Operations Lifeline Recovery Interim Housing Removing Debris Damage Certificate	Interim Housing Operations for Recovery

Common Operational Pictures?

Iwate Prefecture EOC

Setting up Common
Operational Picture among
various organizations

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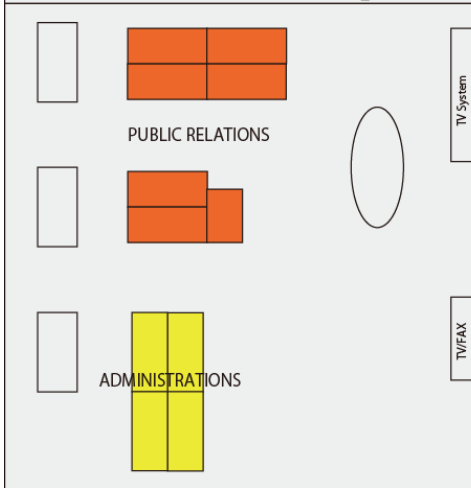
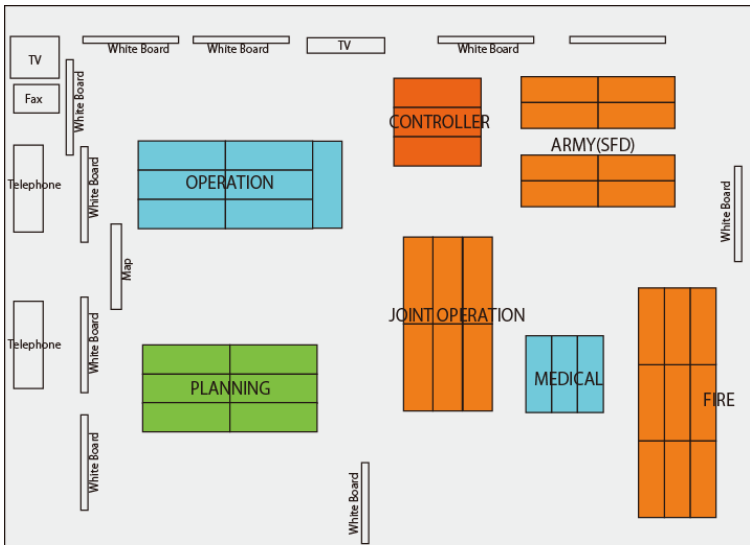
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岩手県
対策班

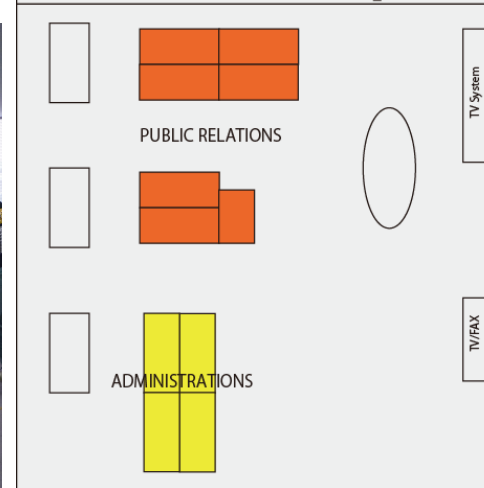
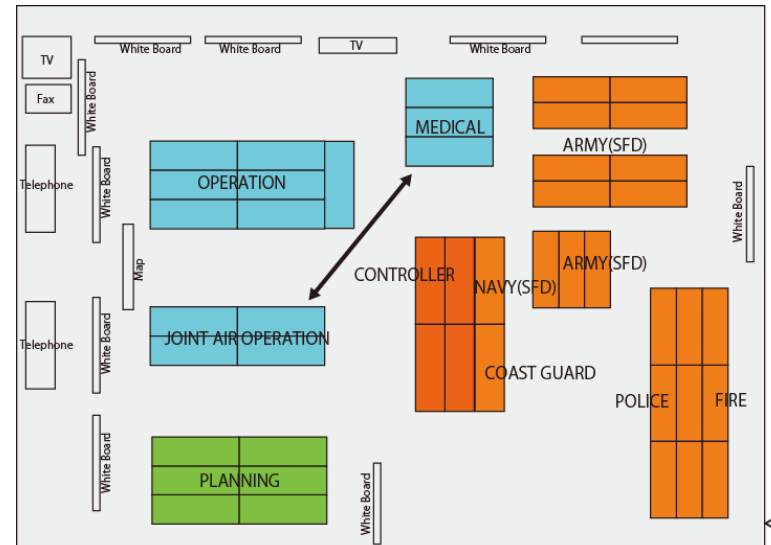
岩手県
対策班



Planned Layout



EOC on March 20, 2011



3/11-13
“Setting up Communications”

Decision making



Relief Phase

- No coordination among players in prefecture government



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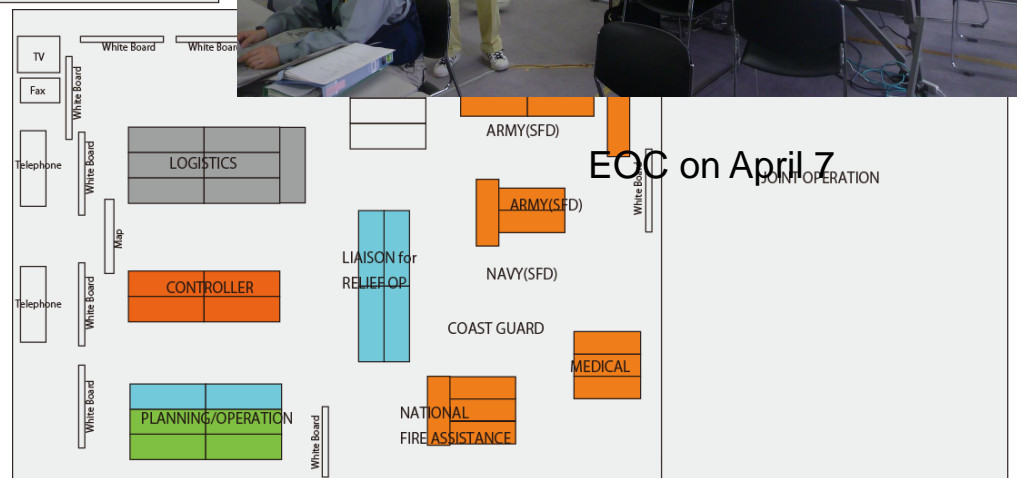
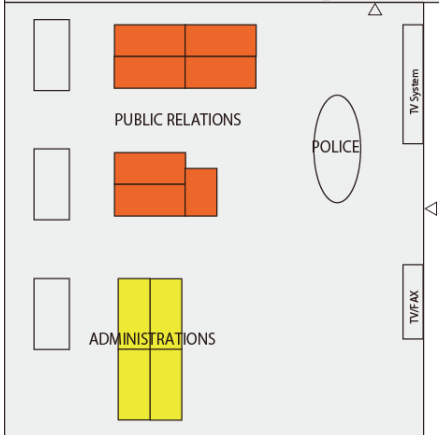
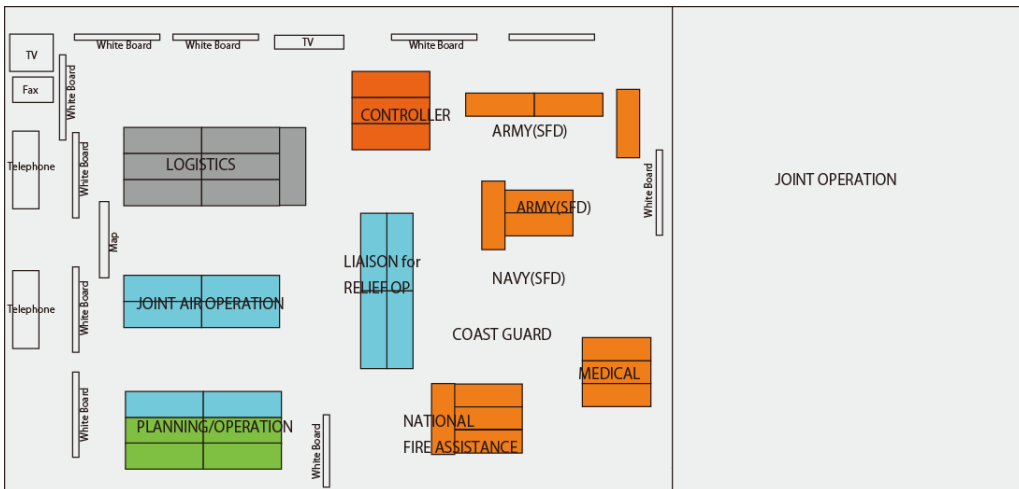
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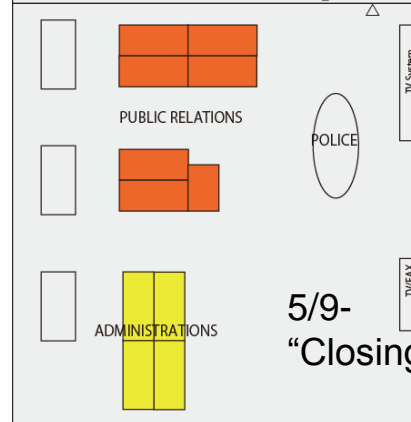
空

航空運送

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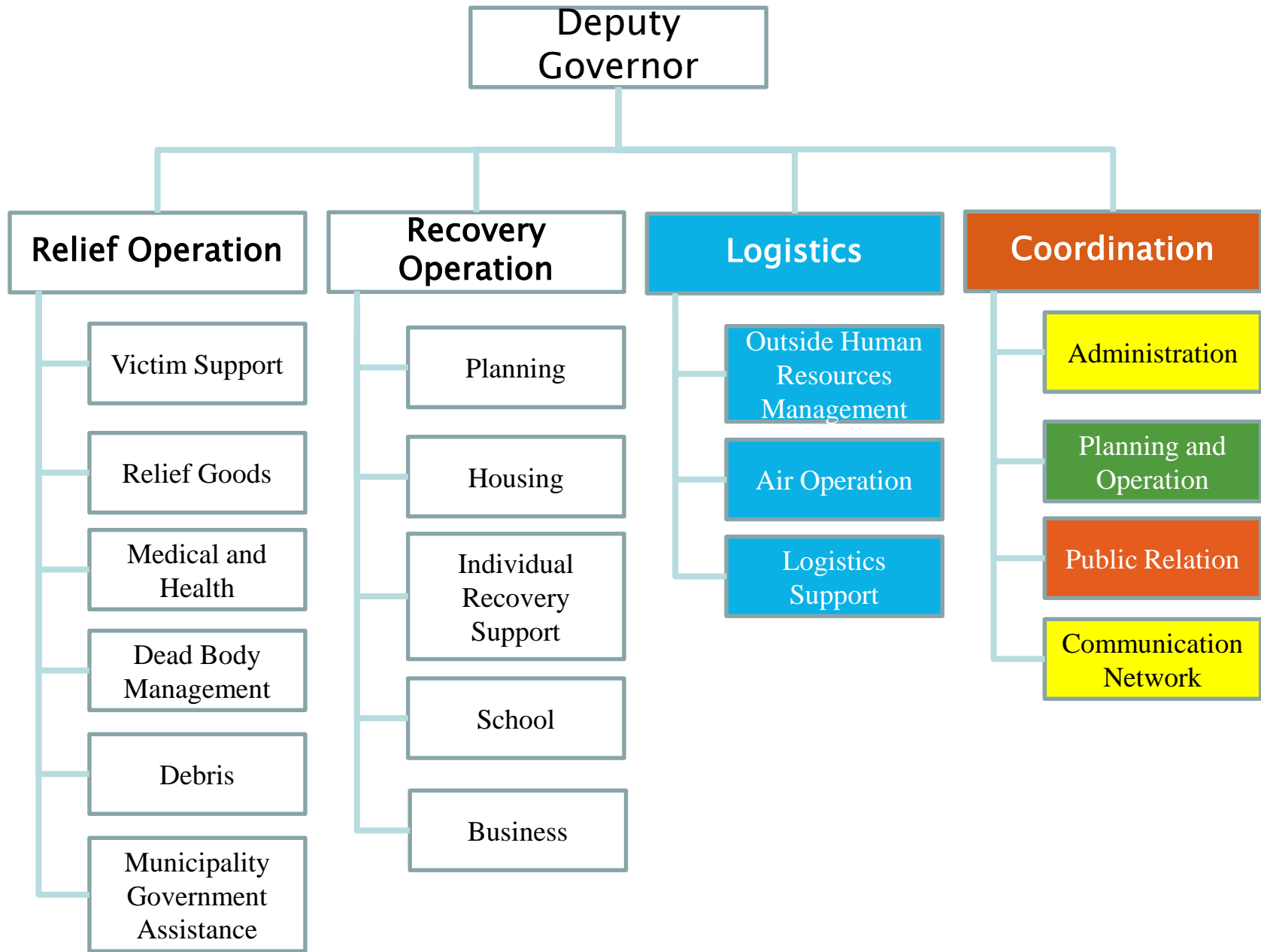


3/25-
 “Setting Up Relief Operation”
 “Upgrading Life in Shelter”



5/9-
 “Closing Relief Operation”

Revising Organizational Structure March 25



Fukushima



Mass Media

Off limit to Mass Medias
EOC

Controller

Administration

Public Relations

Police

Relief Goods

Relief Operations

SFD

Logistics

Victim Support

Fire

TEPCO

Two Head Quarters



National Government





Two command and control
system co-existed

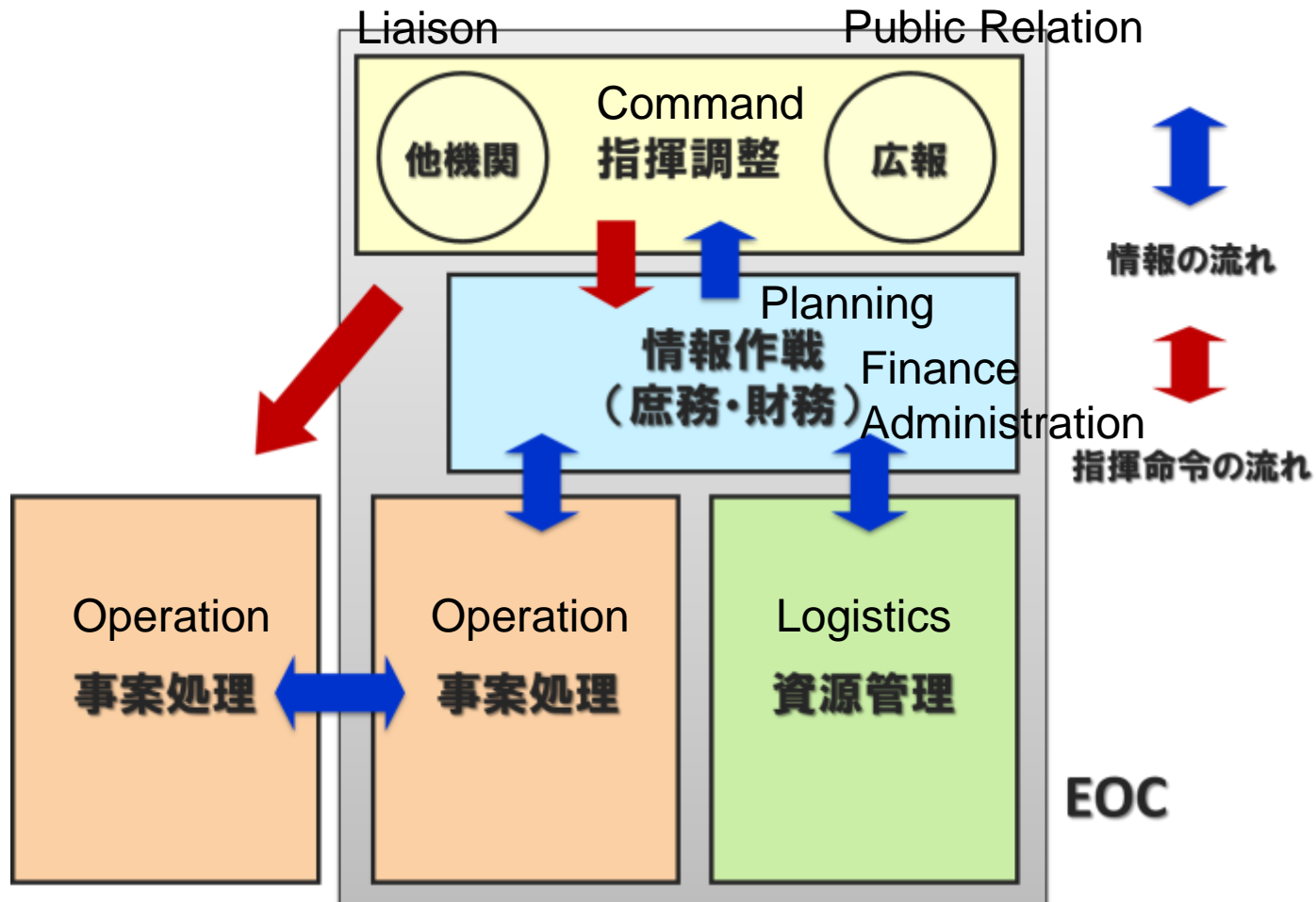
Design of Emergency Operation Center for having Common Operational Picture

Basic Understanding about EOC design

- All the responder would work in ONE ROOM
- Space layout based on ICS concept, and same functions stay closer
- Same structure
 - EOC (Emergency Management Center) とDOC (Department Operation Center)、ICP (Incident Command Post)
- Unified Command

ICS concept

Functions and Information Flow



Standardized Space Design for EOC

