

# Analytical And Consensus Building Participatory Tools

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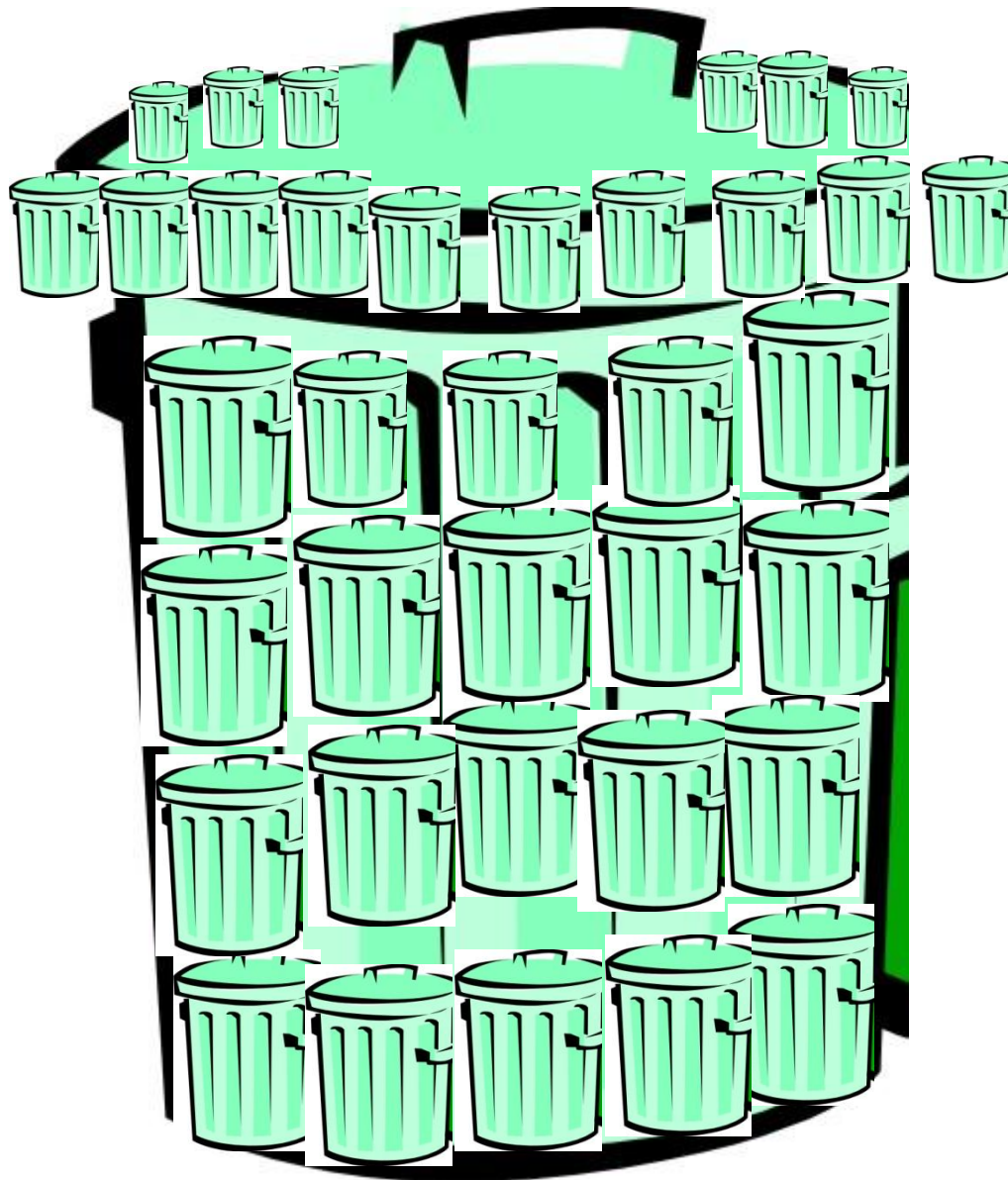
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➤ Adoption of preventive measures at household level and community level is instrumental for reducing flood damage and loss.

➤ The international commission of the Rhine (2002) estimates that long term precautionary adaptation by household at risks by flooding, such as installation of protective barriers can reduce monetary damage by as much as 80%

# Technology / Innovation





**Diffusion or adoption of new technology/knowledge is instrumental for Integrated Disaster Risks Management**

Advantages and disadvantages of the technology is unknown to the potential users

The idea in the new message contains **Uncertainty**



Its risky to make decision

# Tools

- There can be two types of disaster mitigation tools:

## Researcher's Tool

- Scientific tool

## Professional's Tool

- Implementable at Grass Root Level

# Tools

Researcher's  
Tool :

- **Self Efficacy**
- **Collective Efficacy**

Practitioner's  
Tool:

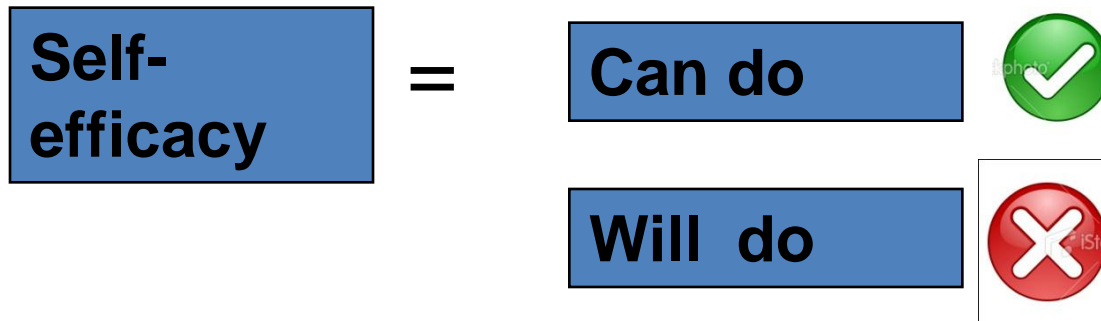
- **Yonmenkaigi System Method**

# Self efficacy

**Self Efficacy** : Perceived Self-efficacy is a judgment of capability to execute given types of performance. It is concerned with **perceived capability**.

*“Self Efficacy is the belief in one’s capabilities to organize and execute the sources of action required to manage prospective situation”*

(Bandura, 1986)

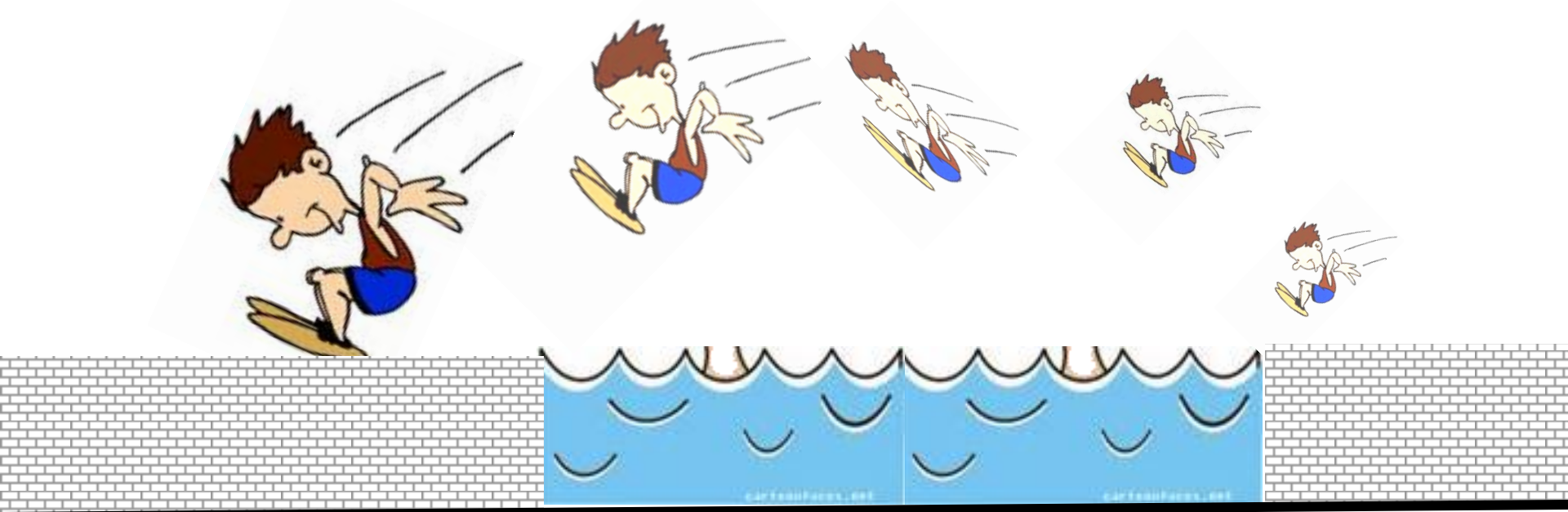


*“Can”* is a judgment of capability

*“Will”* is a statement of intention



# High Self-Efficacy



# LOW Self-Efficacy



## High Self Efficacy



*“The problem is too easy to solve”*

## Low Self Efficacy



*“The problem is too difficult to solve”*

**Attitude Development by Self Efficacy of Individual**

There's one reason people fail to reach their goals - They never take the first steps!



It doesn't matter if it's a small step - just take it!



POSITIVE POOCH!



## ***Bandura ( 1977) –***

Behavior and behavioral change depend on both outcome expectations or response efficacy and personal efficacy expectation.

➤ **Outcome expectations ( Response efficacy)** consists of belief about whether a particular act will lead to particular consequences .They are beliefs about consequences of an act.

➤ **Self Efficacy** refers to person's expectations regarding his capability to realize a desired behavior. It does not reflect a person's skill , but rather one's judgment of what one can do whatever skills one possess.

# During the Coping Process, a Person Considers -

- 1) Which coping strategies are available
- 2) The likelihood that some strategy will result in the expected outcome



**Outcome  
Expectancy  
/ Response  
Efficacy**

- 3) Whether he can use the coping strategy effectively



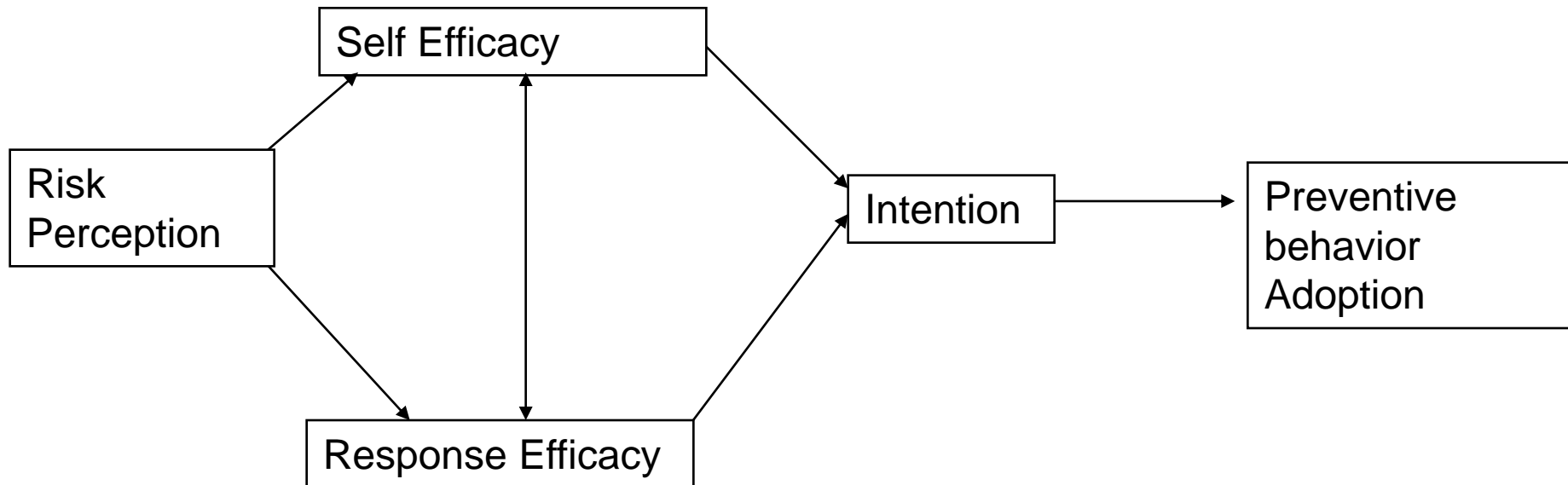
**Self Efficacy**

## Research Question – 1

How self-efficacy influence individual intention to adopt preventive measure or coping behavior?

# Objective – 1

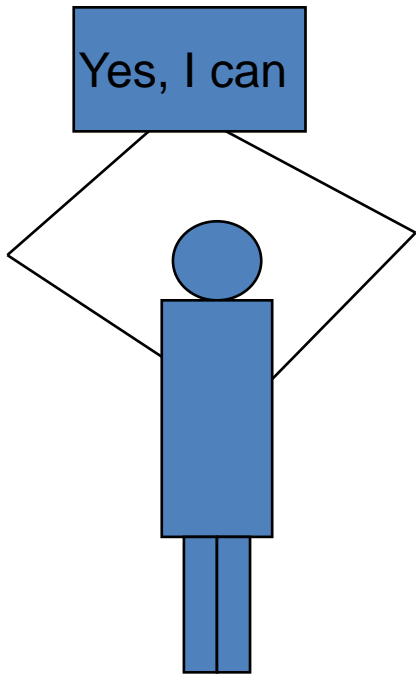
To find out the role of self efficacy in the process of preventive measure adoption and to find out the relation between risk perception, response efficacy and self efficacy in the process of adaptive behavior?



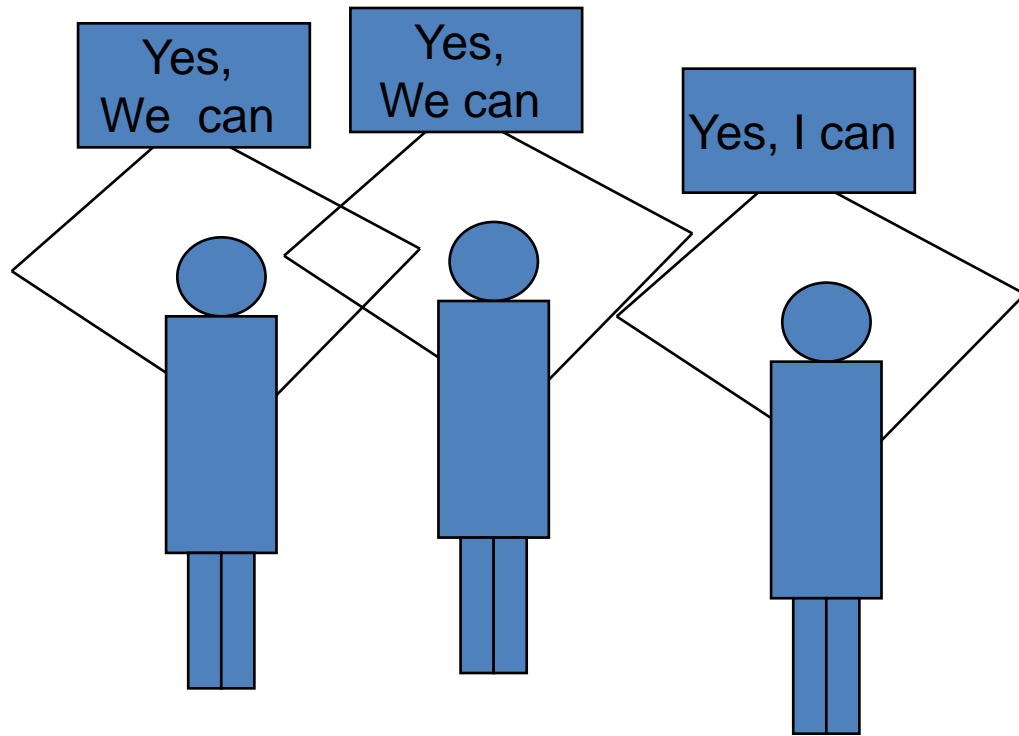
# Dimensions of Perceived Efficacy

( Self efficacy, Group Efficacy/ Collective Efficacy)

- People do not live their lives autonomously
- Many of the outcomes they seek are achievable only through interdependent efforts. Hence, they have to work together to secure what they can not accomplish on their own.
- People's Shared beliefs in their collective power to produce desired results is a key ingredients of collective agency
- A group's attainments are the product not only of shared knowledge and skills of the different members, but also of the interactive, coordinative and synergetic dynamics of their transactions. Therefore, perceived collective efficacy is not simply the sum of the efficacy beliefs of individual members, rather it is an emergent group level priority. A group operates through the behavior of its members.



**Self-Efficacy**



**Collective- Efficacy**

Perceived collective efficacy resides in the minds of members as beliefs in their group's capability

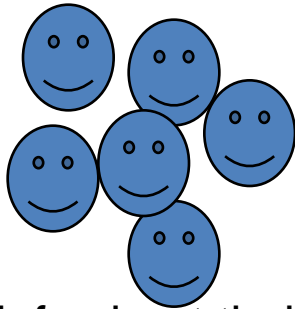


# Collective- Efficacy

in

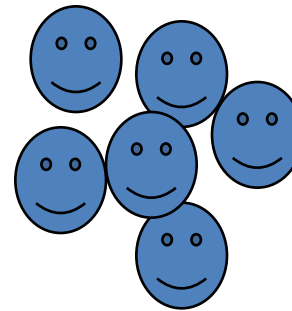
## Disaster risks Management/ Preparedness Context

### Group Efficacy



People beliefs about their collective power or capacity they can perform with the help of power or capacity of relatives, neighbors, religious and social organizations

### Institutional Efficacy



People Beliefs about their collective power or capacity can be achieved by the joint effort of local community and local government and non-governmental organizations

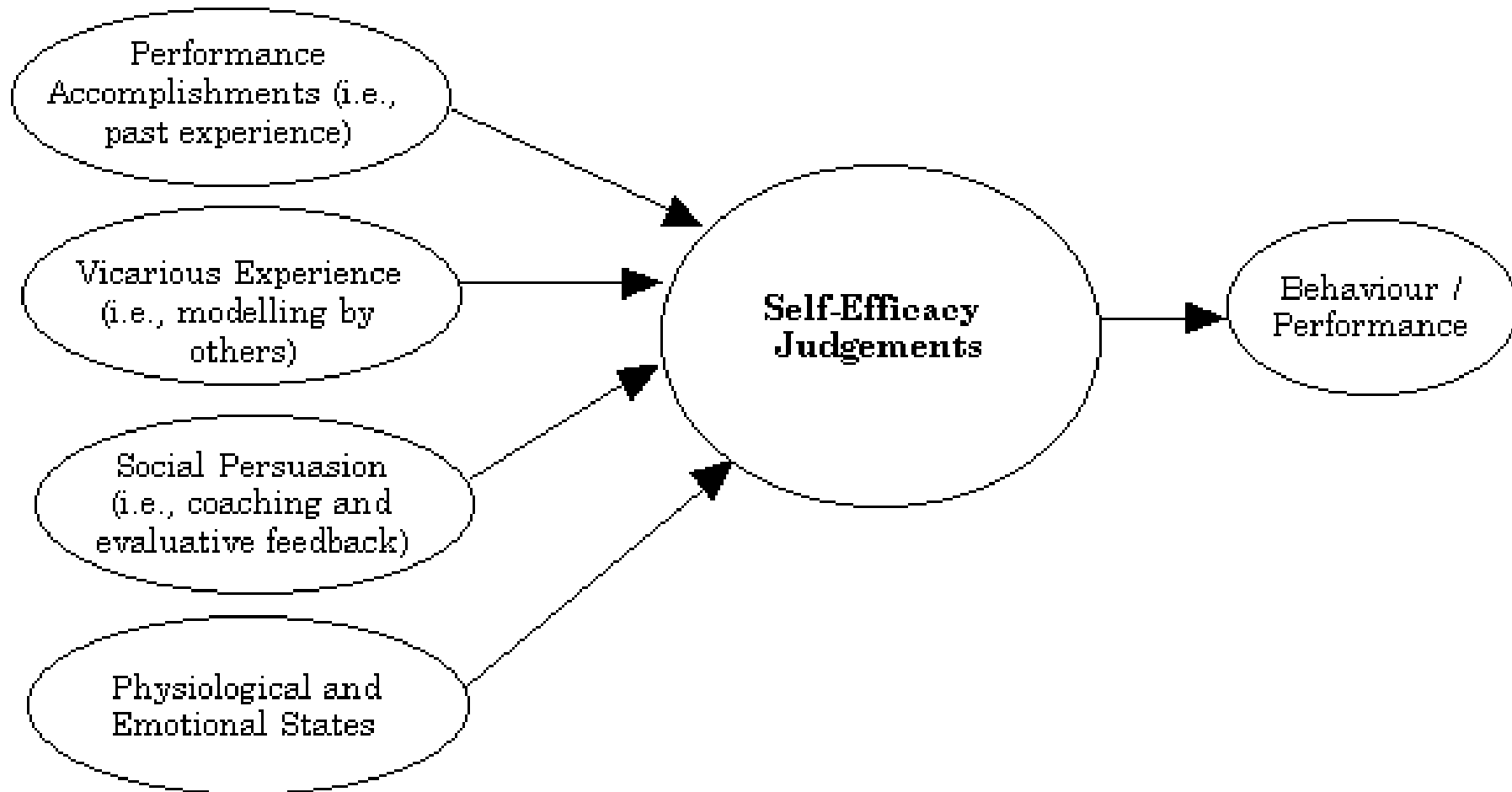
# ???

- What I can do alone to prevent flood risks ?
- What we all (neighbors, religious and political groups) can do to prevent flood risks?
- What we can do by the help of local Government to prevent flood risks?

# Objective – 2

- To find out the perceived self -efficacy and collective-efficacy of the community for flood risks reduction

# How do self-efficacy expectations develop?



Sources of Self-efficacy Information

# How do self-efficacy expectations develop?

- ❑ **Performance Accomplishment:** People learn through experience . Self-efficacy expectations increase through successive mastery of behavior while repeated failures lower them.
- ❑ **Vicarious Experience :** Other people serve as a frame of reference. Self Efficacy appraisal are specially sensitive to vicarious information if people have little prior experience with certain behaviors and if the criteria for evaluating performance diverse or vague.
- ❑ **Social persuasion :** is another means to insert or to increase efficacy expectations in individuals. People who are persuaded verbally are more likely to mobilize more effort than if they remain convinced of their incapability.
- ❑ **Emotional states** of people can influence self efficacy as well. If people have too much arousal, they are less inclined to expect success than if they have moderate levels of arousal. For example, having trembling hands during a driving test might cause a person to think that they are very nervous and unable to drive well.

PROFESSIONAL'S TOOL

YONMENKAIGI SYSTEM METHOD  
(YSM)

Participatory Disaster Risk Mitigation  
Technique Through Collaborative  
Action Plan

# Objective

***The primary objective of the YSM is to develop a collaborative action plan for a community in a workshop with a disaster risk context.***

# First Application

- **Yonmenkagi System Method (YSM)** is utilized for developing collaborative action plans for disaster reduction activities at the community level.
- The Yonmenkaigi Sytem Method was initially designed and used for collaborative action-plan development for a small group in community-citizen vitalization initiatives called Machizukuri, in a mountainous municipality of Chizu Town, Tottori, Japan (1996, 2005, 2006, 2008, 2010).
- Now, YSM has been applied to both rural and urban areas in Japan as well as Indonesia (2009), and Korea (2009).



# Basic Characteristics of YSM in Kyoto, Japan

- The YSM workshop provides a platform of face to face communication for participants to become aware of the concerns of others, to discuss the current state of their community and to collaboratively develop an implementable action plan.
- In this workshop method, the process of making collaborative action plans is systematically developed.
- In the YSM, participants serve the roles of both planners and executors as subjects of the action plans.

# Basic Characteristics of YSM in Kyoto, Japan

Application	Disaster mitigation and prevention
Objective	Collecting visions and hopes of residents for proactive disaster reduction planning
Who Decides Theme and Scenario	Facilitator suggests guidelines and participants determine the theme and scenarios.
Participants	Self-governed Community Association for Disaster Reduction (as representatives of residents)
Facilitator	Specialists
Typical Size	One Team (8 to 16 people); Four Groups (2 to 4 people each)
Outcomes	Developing an action plan for disaster reduction for the local community

# YSM

- The Yonmenkaigi system serves as a means to move from risk awareness to action plan development for disaster reduction.



# Participants / Stakeholder Identification

## **General (Japan):**

1. Top Management
2. Public Relations & Communication
3. Human Resources
4. Physical Resources

## **Mumbai (Dharavi):**

1. Government
2. NGO
3. Community
4. Civil Bodies

# Process of YSM

The process of the Yonmenkaigi System Method consists of four main steps:

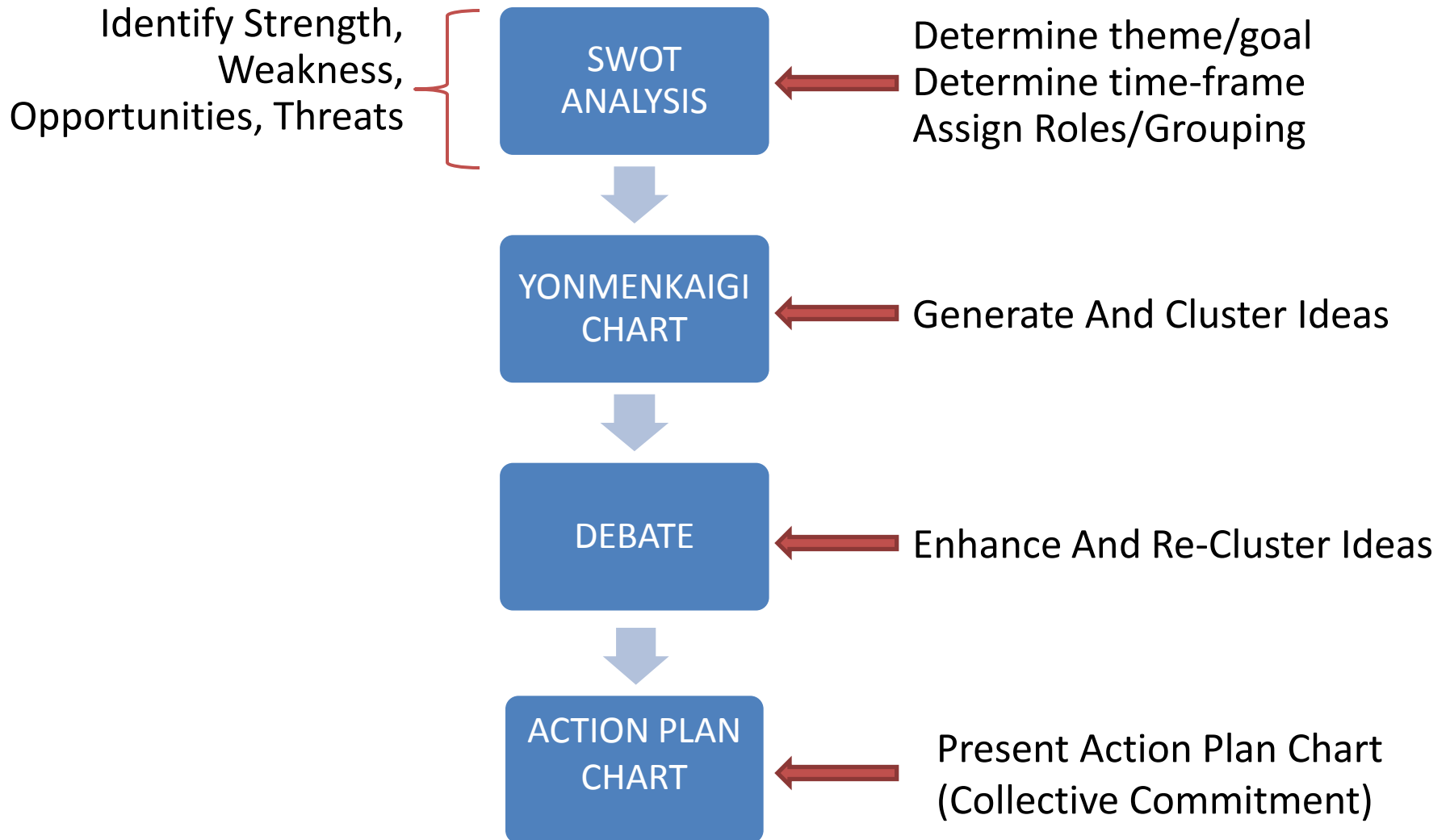
- *carrying out a SWOT analysis,*
  - *completing the Yonmenkaigi Chart,*
  - *debating and*
  - *presenting the action plan chart*
- 
- The fundamental principle of YSM is consensus.
  - All steps in YSM could start only if each step get consensus from all participants.

# Role of Facilitator

***In summary the roles of the facilitator during the YSM Workshop are:***

1. To help the workshop participants understand their common objectives, potentials and problems
2. To encourage the workshop participants in deliberating their ideas
3. To assist the workshop participants in achieving the consensus on the action plan
4. To guide the process of YSM workshop

# Process of YSM



# SWOT Analysis

<b>Strength</b>	<b>Opportunities</b>
<b>Weakness</b>	<b>Threat</b>

The SWOT analysis helps to understand the situation of current and future condition regarding the community, and the participants know each other's ideas and views with an opportunity to share their information, which eventually leads to a holistic and more detailed view of future action plan.

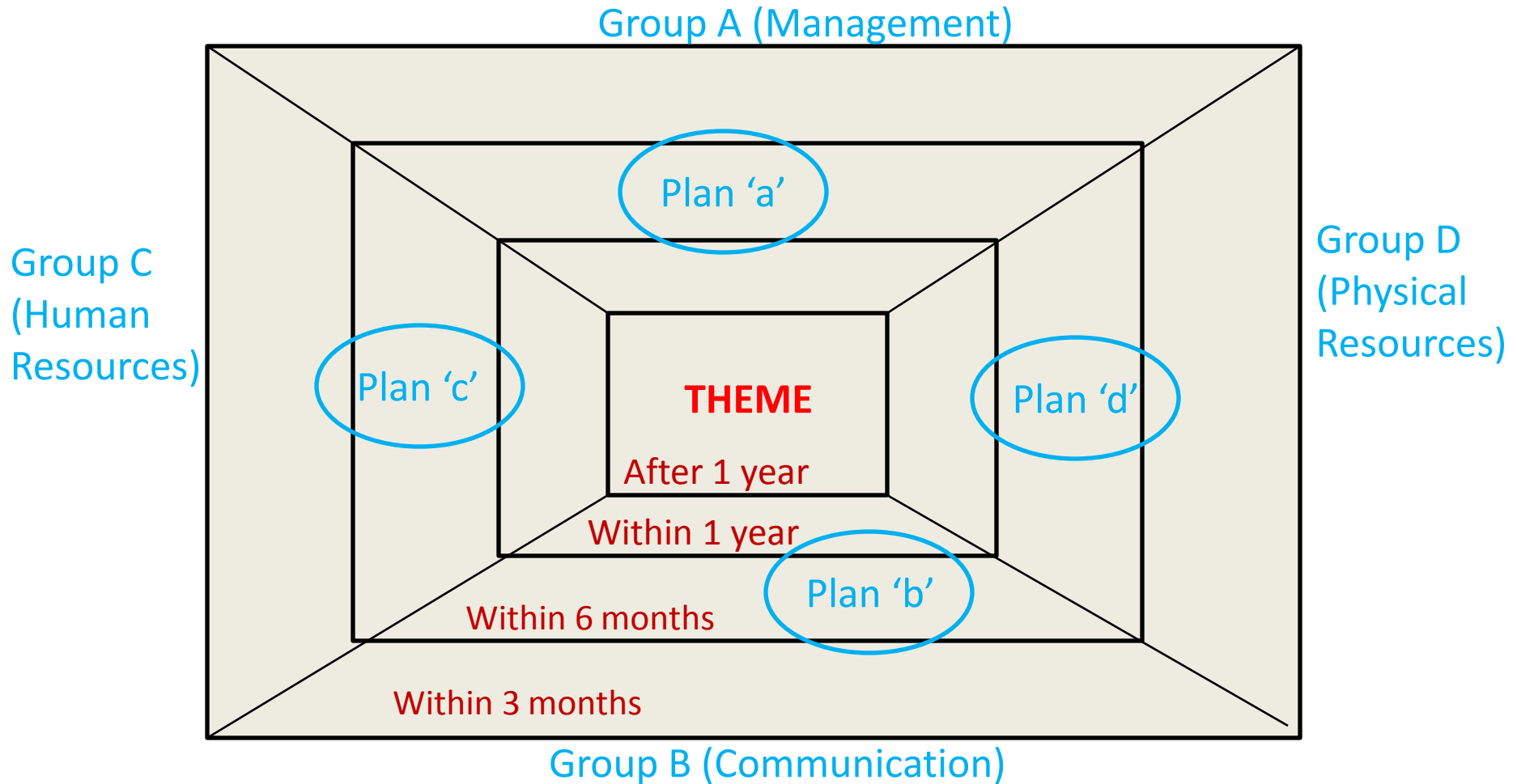


Each participants write their ideas about the SWOT factors using **four types of colour cards**, corresponding to the four SWOT categories of Strengths,Weaknesses, Opportunities, Threats.

Participants then determine the theme/goal of the action plan and the time-frame for conducting the same.



# Typical Pattern of Yonmenkaigi Chart



# Debate

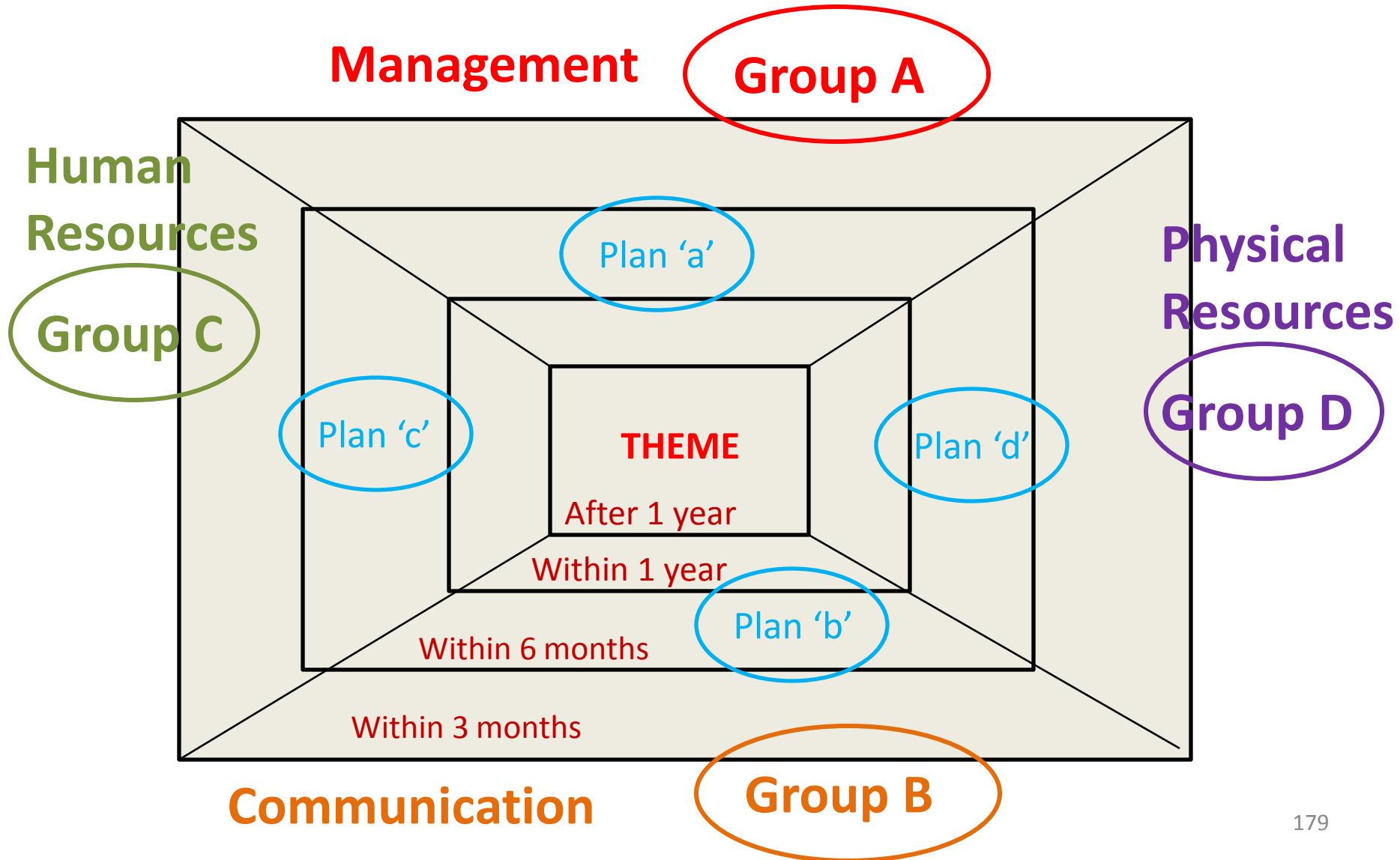
Once each group completes the articulation of its action components, debating among groups is carried out to enhance the collaborative action plan.

The Yonmenkaigi System Method offers two types of debating:

- ✓ **general debating**
- ✓ **inverse debating**

Role	Management	Communication
General Debate	Group A	Group B
Inverse Debate	Group B	Group A
Rules	<ul style="list-style-type: none"><li>•Defend Own Group</li><li>•Criticize the Other Group</li></ul>	

# General Debate & Inverse Debate



# An example of Yonmenkaigi Chart



Before Debating...



After Debating...

# Action Plan Chart

Finally, participants develop an action plan chart based on debating result.

Action plan components are rearranged by a time frame and the roles of the four groups, management (M), PR & information (I), soft logistics (S), and hard logistics (H).

In this phase, participants decide and prioritize the action plans based on a time scale.

	3 months	6 months	1 year	Beyond 1 year
Group A				
Group B				
Group C				
Group D				

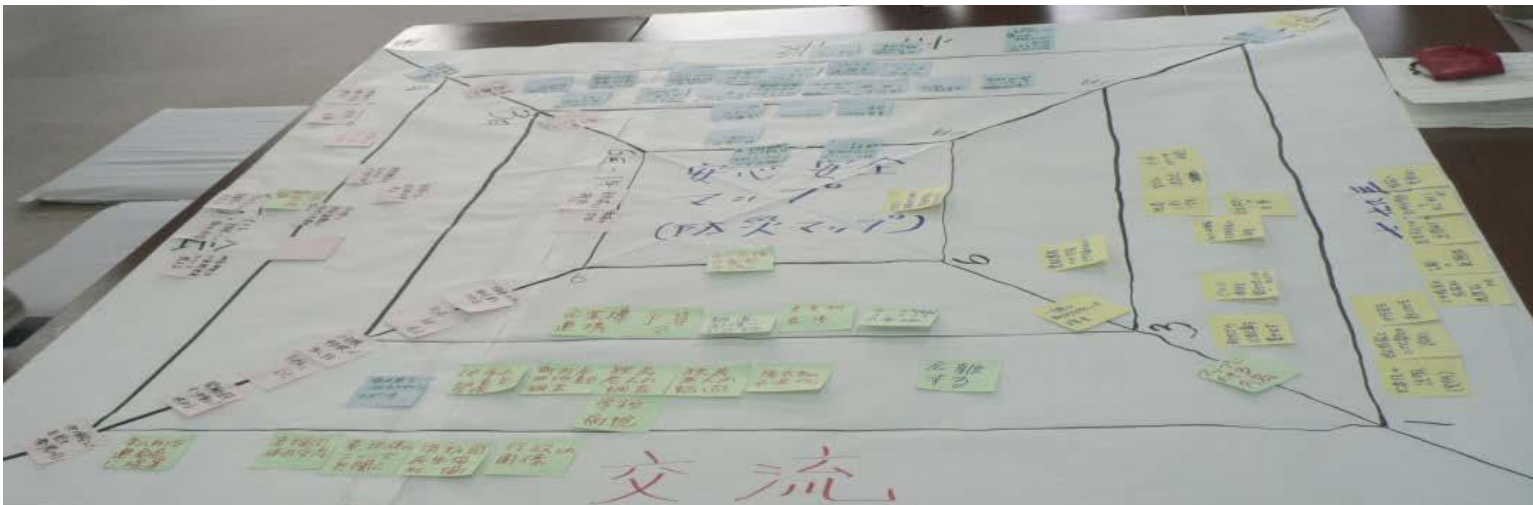
Based on the **Action Plan Chart**, the participants are requested to make a presentation by roles and timelines of their entire action plan to an audience who has not been directly involved in making the plan.

# Case Studies of YSM

# YSM in Shuhchi Community, Kyoto, Japan



**Debating Process in Shuhachi Community YSM workshop**



**The Yonmenkaigi Chart After Debating in Shuhachi Community YSM workshop**

# YSM in Shuhchi Community, Kyoto, Japan

## Partial Contents of the Action Plan Chart prepared in Shuhchi Community:

	Within 3 months	Within 6 months	Within 1 year	After 1 year
Management (M)	Open the Shuhachi-bosaikai meetings	Request cooperation from the Shuhachi community	Open the Shuhachi-bosaikai and chonai-kai meetings	Check and distribute the hazard map
PR & Information (I)	Request to the Shuhachi community for help in making the hazard map.	Recruit volunteers	Contact the mass media	Collect opinions after distribution
Software Logistics (S)	Cooperate with the survey	Request for contents of the hazard map	Town-watching in the Shuhachi community	Join the Shuhachi-bosaikai
Hard Logistics (H)	Benchmark the hazard map with other communities	Survey the contents of the hazard map	Decide on the contents of the hazard map and the company which will produce the map	Examine new education tools for disaster reduction



# Some More YSM Case Studies

YSM has also been applied in the following places:

1. Indonesia
2. Kemiren Village
3. Sindumartani Village
4. Kepuharjo Village

**YSM in Shuhachi Community**



**YSM in Kemiren Village**



**YSM in Sindumartani Village**



**YSM in Kepuharjo Village**



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Thank You