

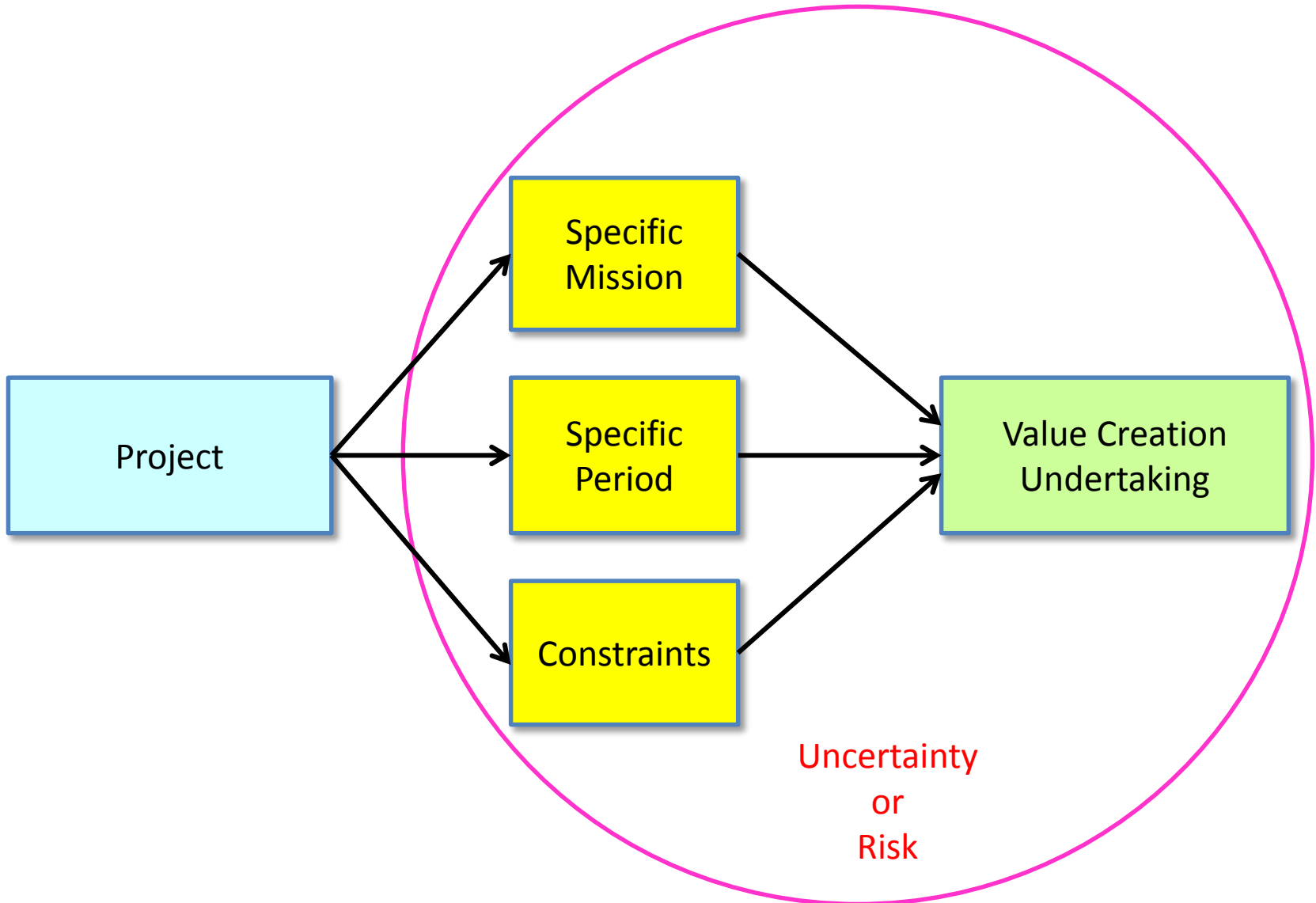
# Infrastructure Projects:

## Risk Response Planning, Tools & Monitoring

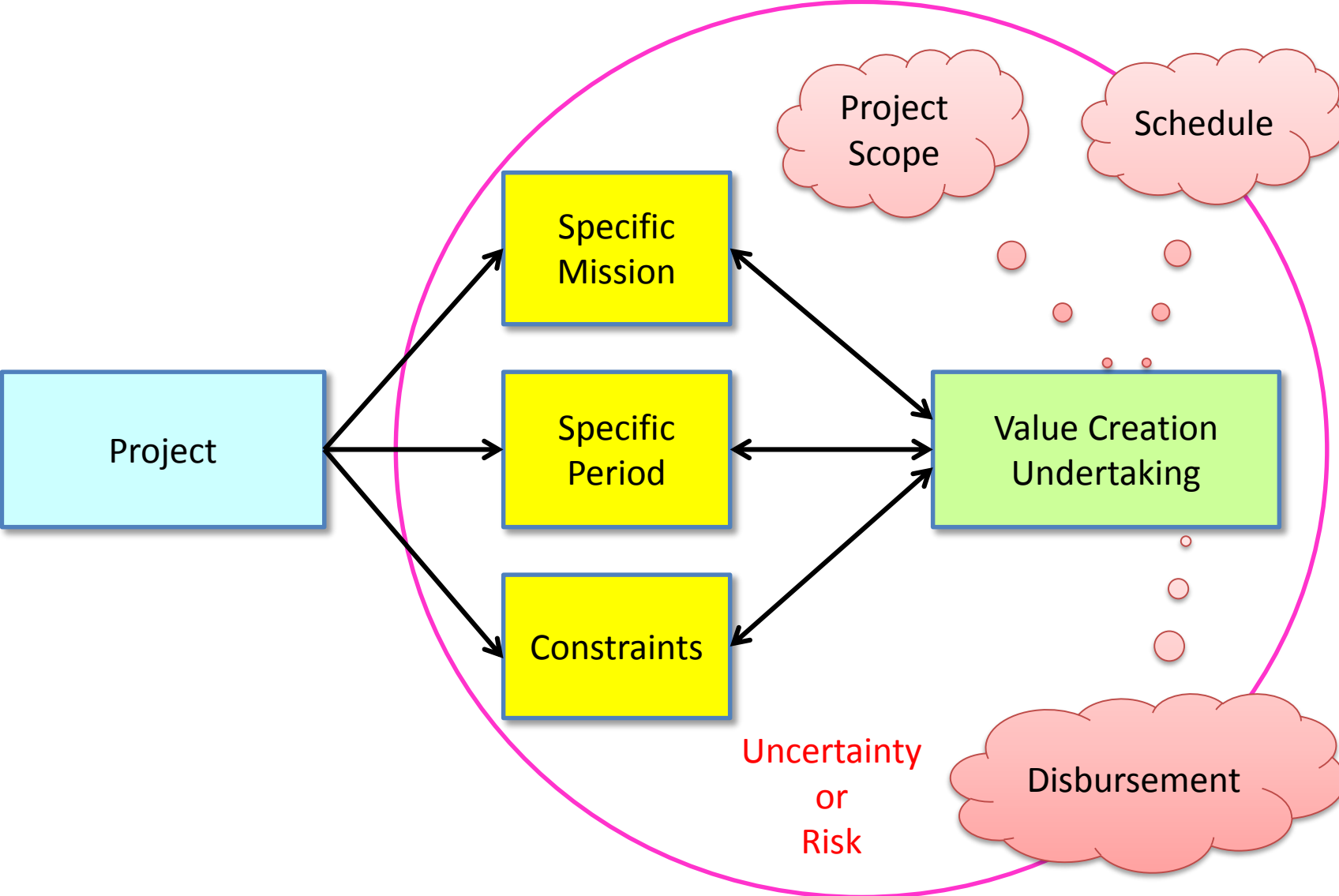
December 21, 2016

Mr. Toshio Fujinuma  
JICA Expert of Dawei Project

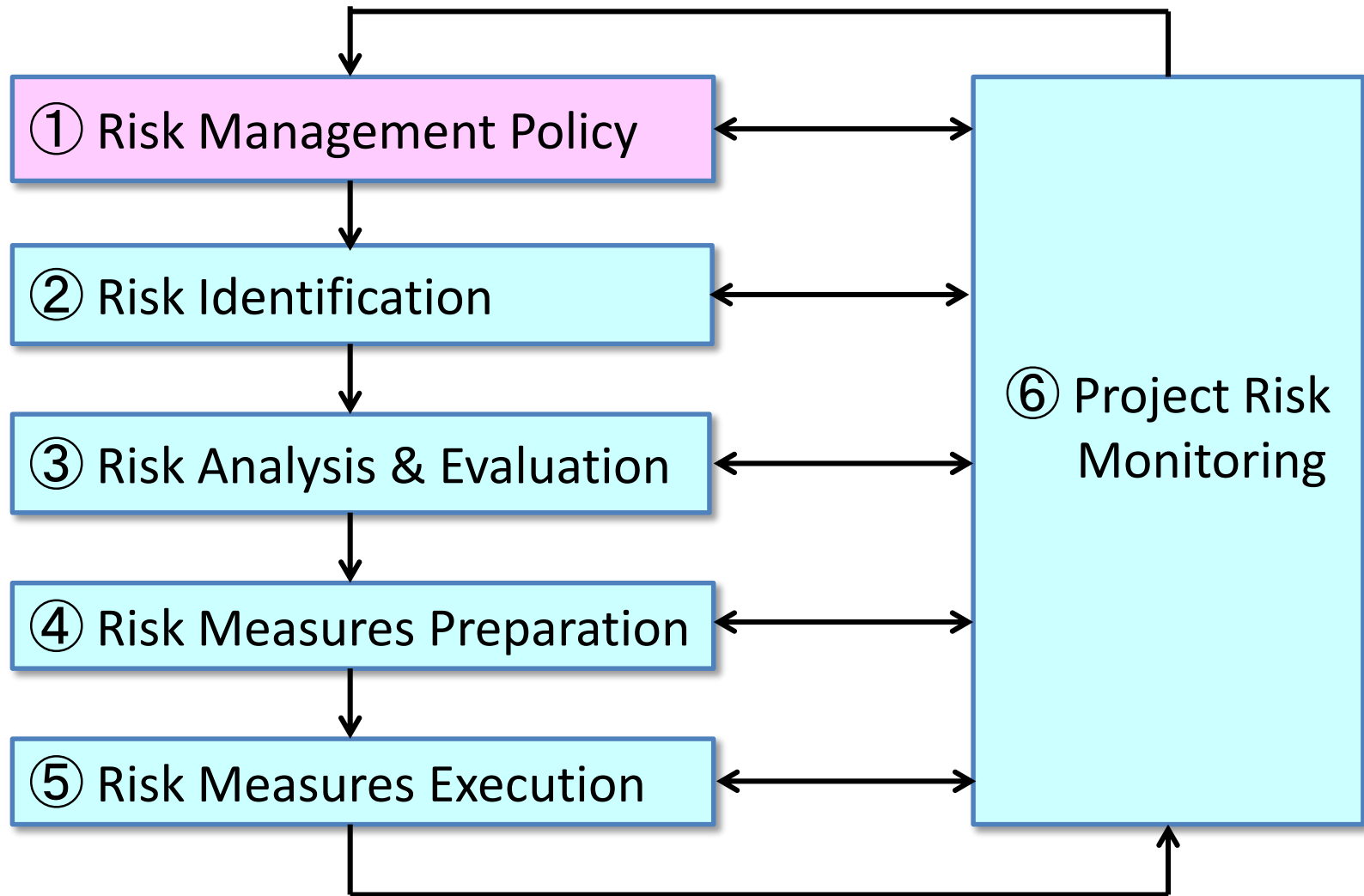
# What is a “project”?



# Basic Project Monitoring Indicators



# Risk Response Planning Process



# ① Project Risk Management Policy

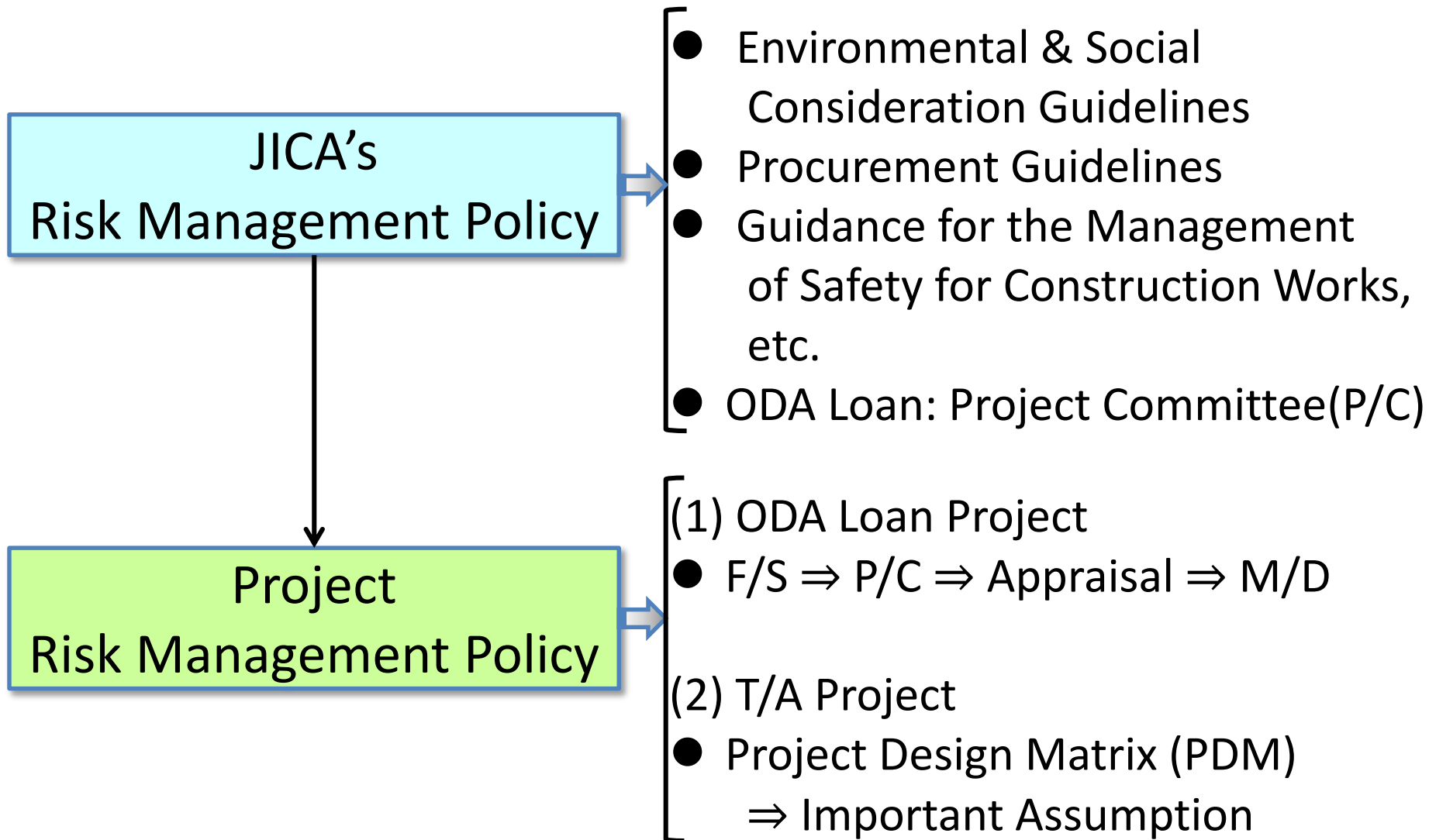
Organization's  
Risk Management Policy



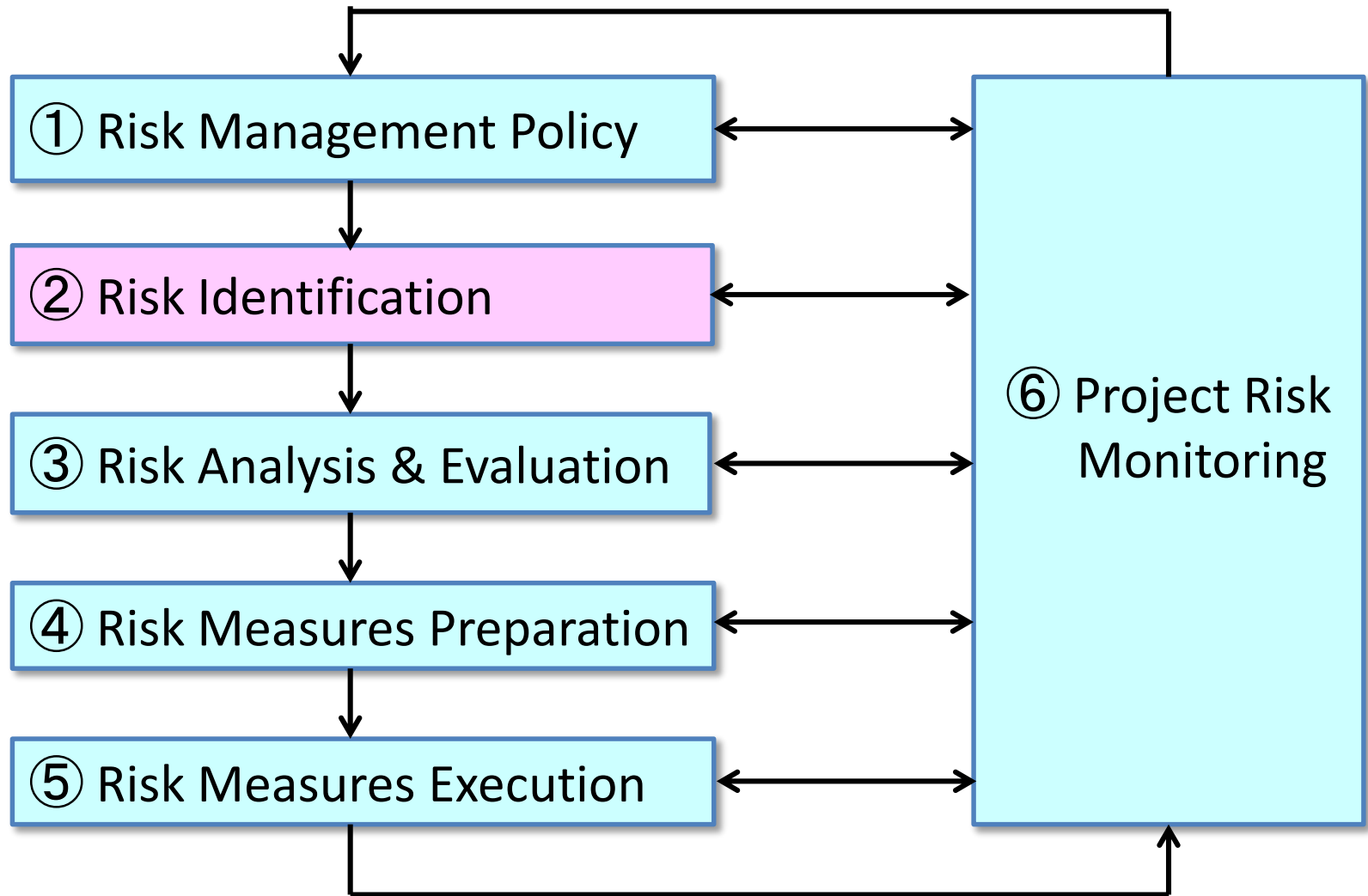
Project  
Risk Management Policy

- (1) Risk Basic Policy
  - Priority of Risk Items
  - Risk Allowance
  - Risk Management Training System
  - Personnel Networking
- (2) Risk Management System
  - Organization
  - Risk Control Method

# Examples of JICA's Project Risk Management Policy



# Risk Response Planning Process



# ② Project Risk Identification

## Methodology

- ① Checklist (➤ World Bank ORAF)
- ② 6W1H Analysis
- ③ Brainstorming
- ④ Tree Analysis
- ⑤ Interview
- ⑥ Documentary Review
- ⑦ Delfi Method
- ⑧ Site Observation
- ⑨ DAC 5 Evaluation Criteria
- ⑩ Logical Framework or Logframe (➤ JICA PDM)



# Project Risk Identification

## Classification of World Bank ORAF

1. Stakeholder Risk
2. Operating Environment Risk
  - (1) Country risk
  - (2) Institutional risk
3. Implementation Risk
  - (1) Capacity risk
  - (2) Governance risk
  - (3) Fraud and corruption risk
4. Project Risk
  - (1) Design risk
  - (2) Safeguard risk
  - (3) Program and donor risk
  - (4) Delivery quality risk

# DAC 5 Evaluation Criteria

Evaluation Criteria	Remarks
Relevance	Degree of compatibility between the development assistance and priority of policy of the target group, the recipient, and the donor.
Effectiveness	A measure of the extent to which an aid activity attains its objectives.
Efficiency	Efficiency measures the outputs -- qualitative and quantitative – in relation to the inputs.
Impact	The positive and negative changes produced by a development intervention, directly or indirectly, intended or unintended.
Sustainability	Sustainability is concerned with measuring whether the benefits of an activity are likely to continue (after donor funding has been withdrawn). Projects need to be environmentally as well as financially sustainable.

# JICA's Project Design Matrix (PDM)

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption / Risk
Overall Goal (Impact)			
Project Purpose (Outcome)			
Outputs			
Activities	Inputs		
	The Japanese Side	The Recipient Side	
			Preconditions

# JICA's Project Design Matrix (PDM)

<b>Narrative Summary</b>	<b>Objectively Verifiable Indicators</b>	<b>Means of Verification</b>	<b>Important Assumption / Risk</b>
<p data-bbox="21 291 573 411"><b>Overall Goal (Impact)</b></p> <p data-bbox="21 411 573 518">Long-term development effects</p>	Criteria to measure achievement toward the overall goal	Information sources for the indicators at left	Conditions required for the project effects to be sustainable
<p data-bbox="21 518 573 625"><b>Project Purpose (Outcome)</b></p> <p data-bbox="21 625 573 772">Direct effects of the project</p>	Criteria to measure achievement toward the project purpose	Information sources for the indicators at left	Factors which must be met so that the project can contribute to the overall goal
<p data-bbox="21 772 573 879"><b>Outputs</b></p> <p data-bbox="21 879 573 1029">Facilities, goods and services produced by the project</p>	Criteria to measure achievement toward the outputs	Information sources for the indicators at left	Factors which must be met so that the project can contribute to the project purpose
<p data-bbox="21 1029 573 1233"><b>Activities</b></p>	<b>Inputs</b>		Factors which must be met so that the project can produce outputs
	<b>The Japanese Side</b>	<b>The Recipient Side</b>	
Project activities to produce the outputs	Resources to be used for production of outputs	Resources to be used for production of outputs	<p data-bbox="1464 1233 1906 1308" style="text-align: center;"><b>Preconditions</b></p> <p data-bbox="1464 1308 1906 1409">Factors to be met to carry out the activities</p>

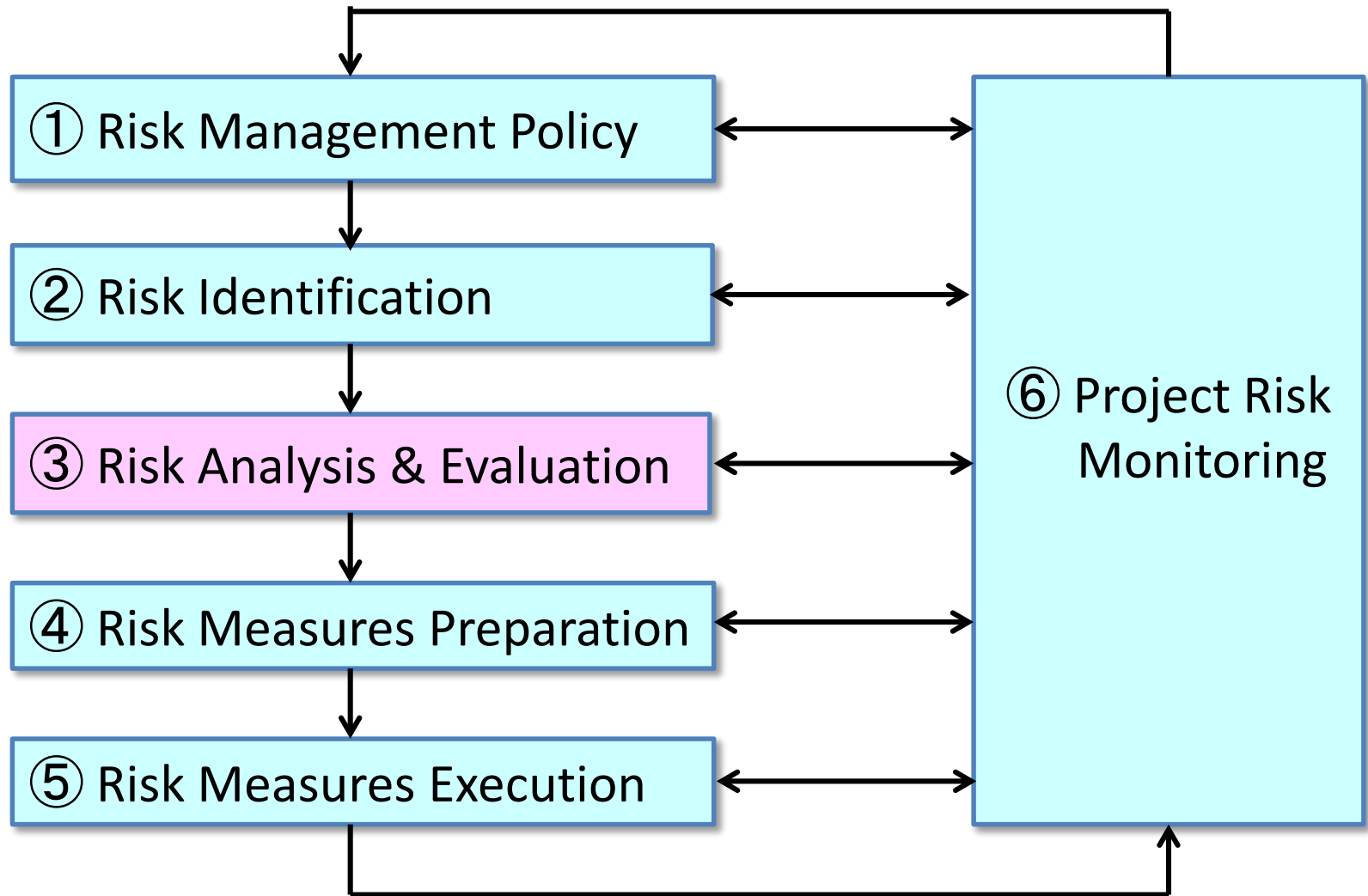
# JICA's Project Design Matrix (PDM)

- The Project Design Matrix (PDM) is *a summary table* which describes the causal relationships between four levels:  
Overall goal ➤ Project purpose ➤ Outputs ➤ Activities
- PDM also refers to as *vertical logic*.
  - The combination of these four levels and *important assumptions* systematically shows both the purpose of this project and the necessities for the achievement of project purpose and overall goal.

# JICA's Project Design Matrix (PDM)

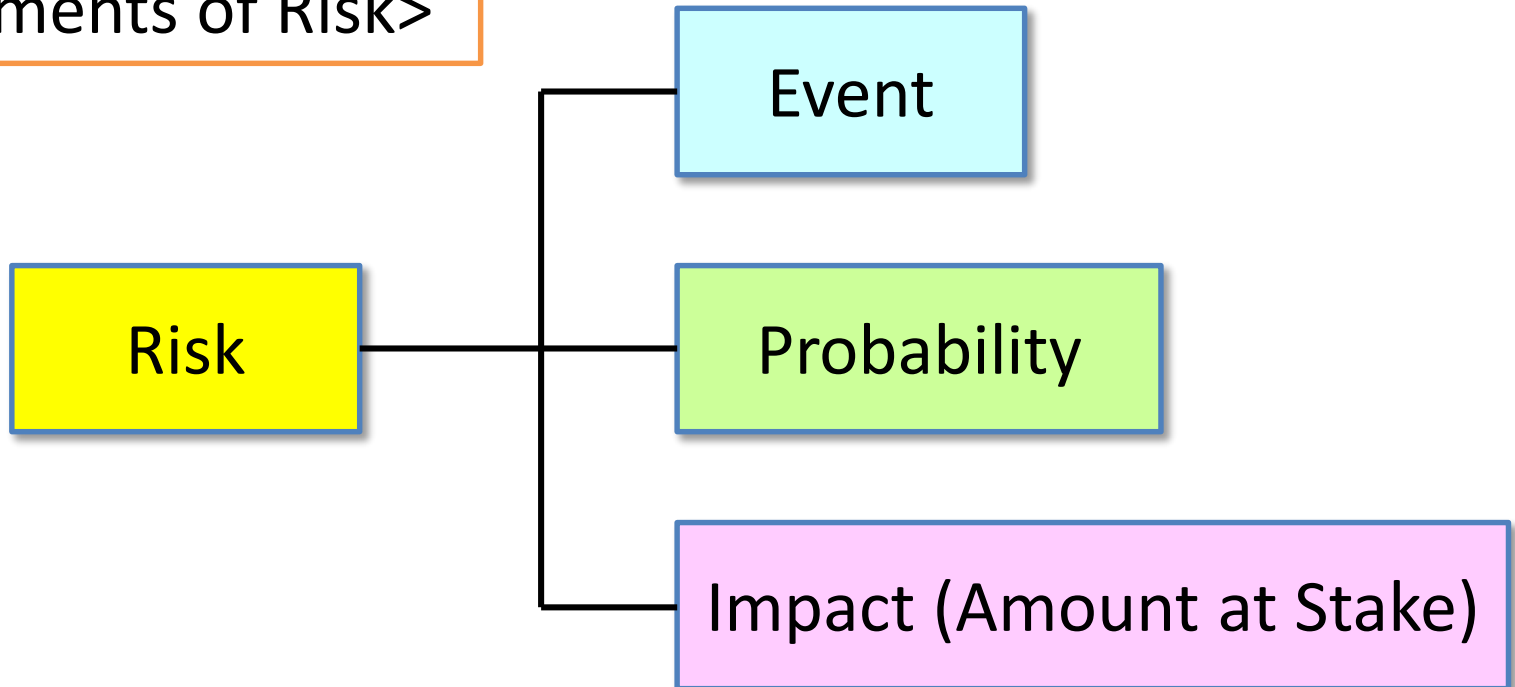
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# Risk Response Planning Process



# ③ Risk Analysis and Evaluation

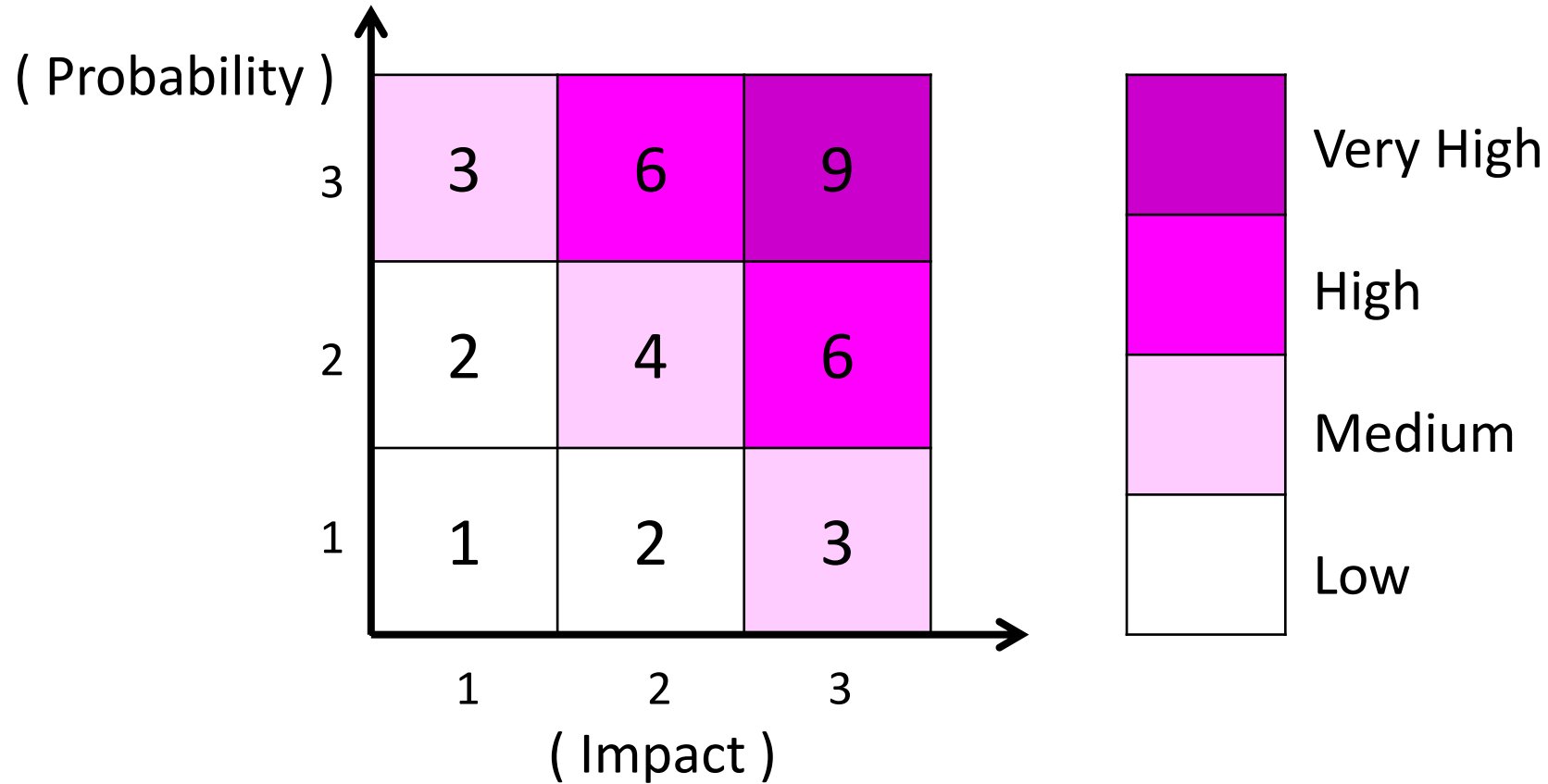
<Elements of Risk>



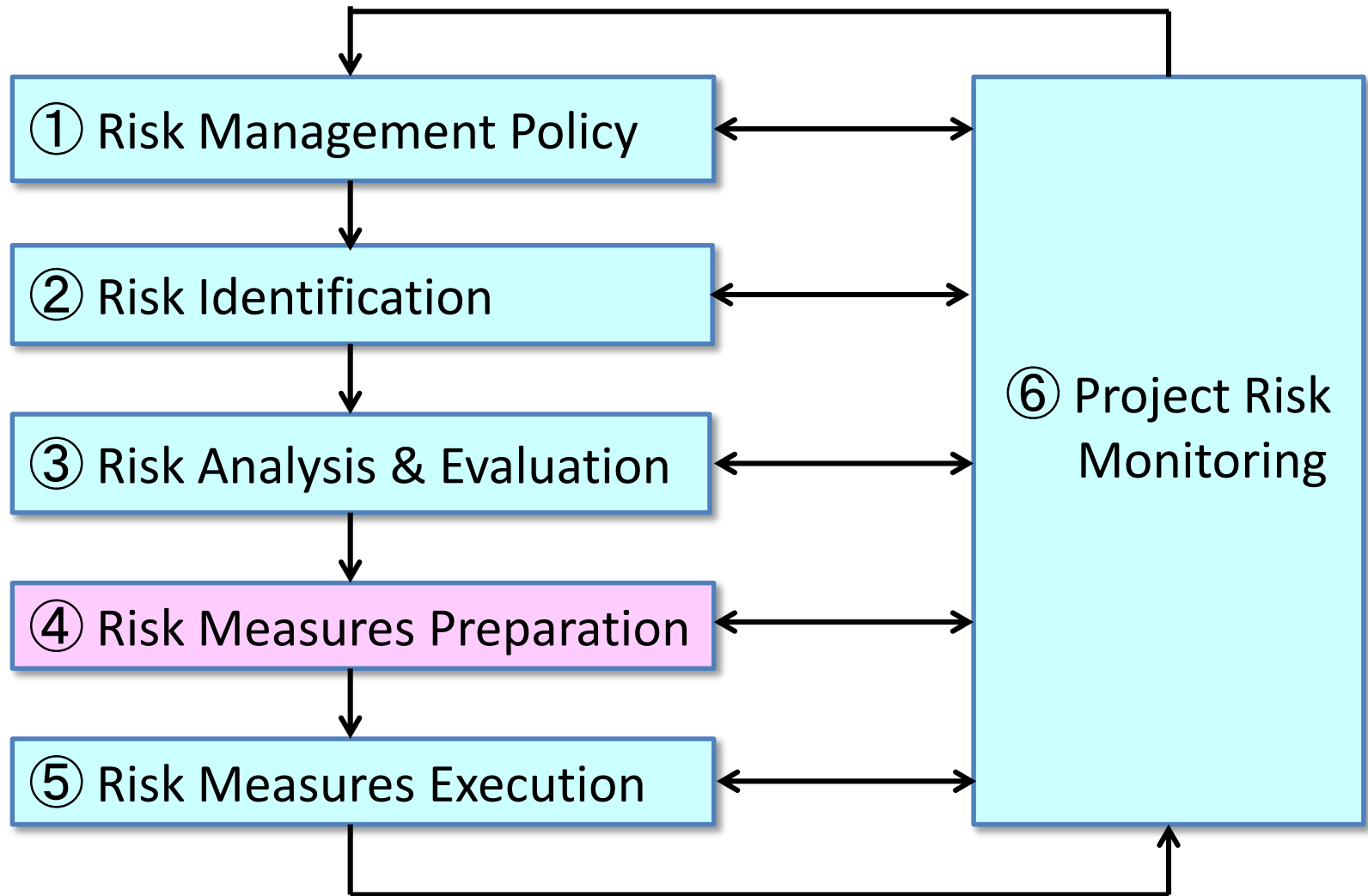


# ③ Risk Analysis and Evaluation

Example of Risk Probability-Impact Matrix

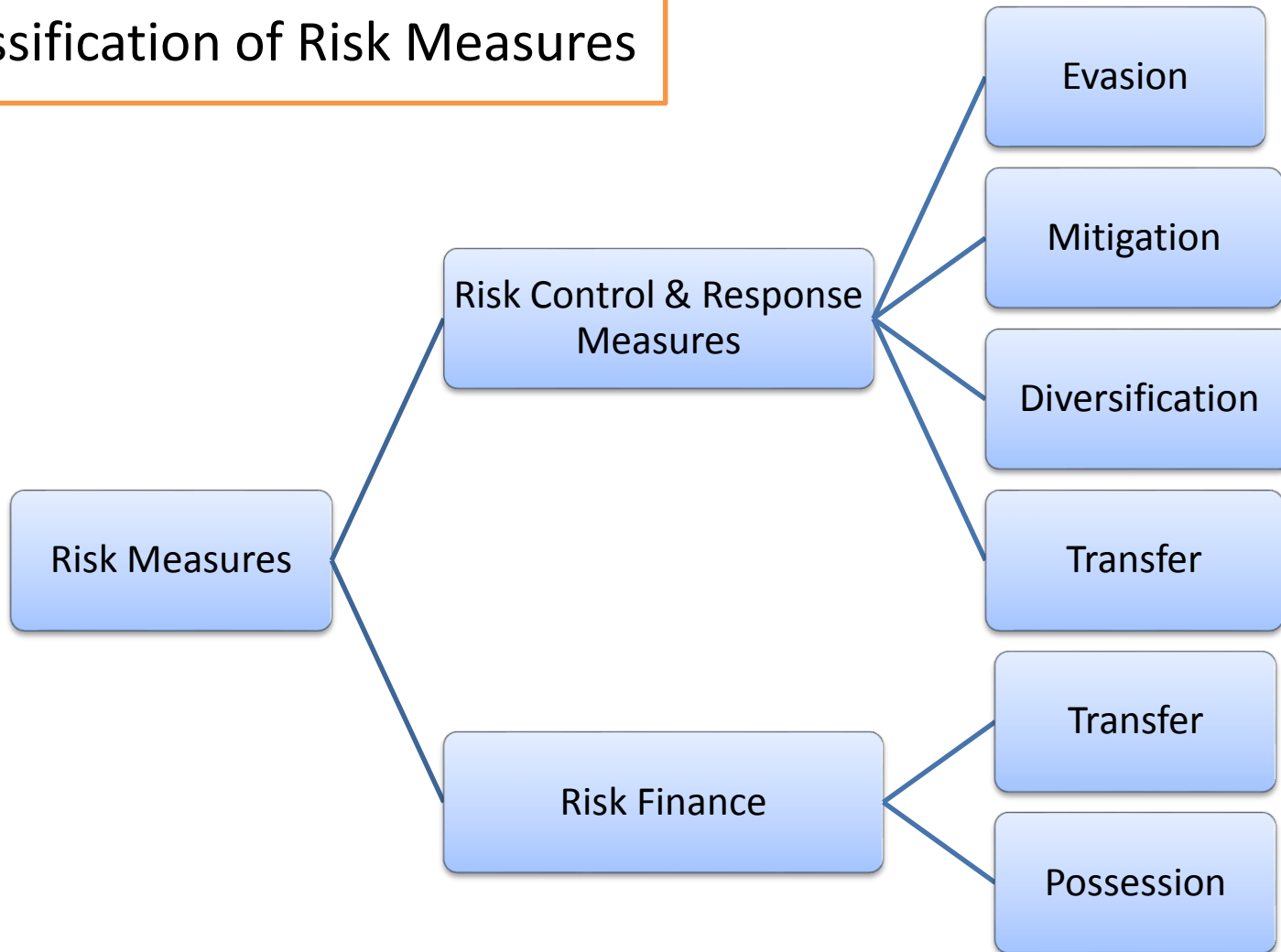


# Risk Response Planning Process



# ④ Risk Measures Preparation

## Classification of Risk Measures

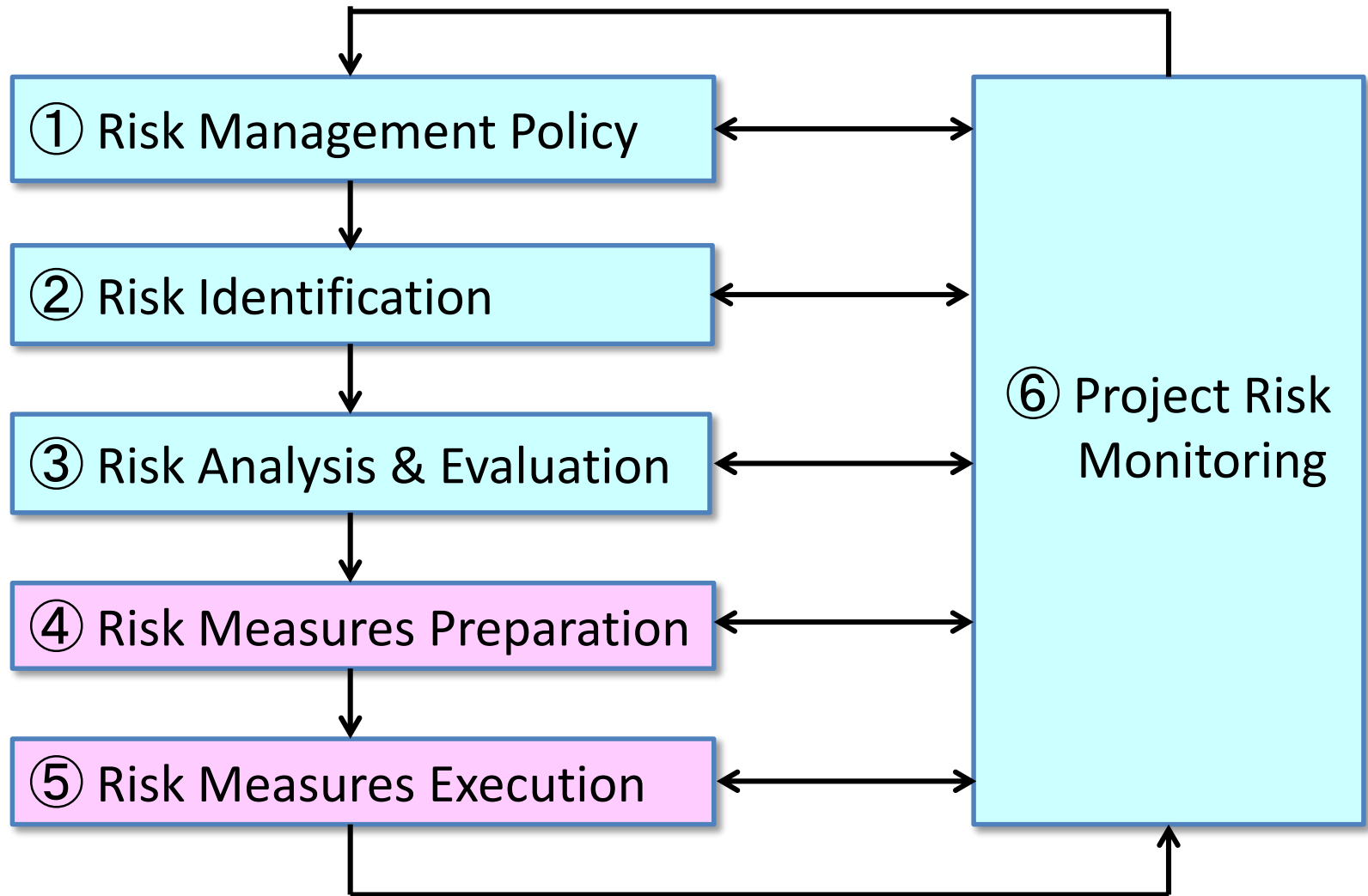


# Example of Risk Management Framework

No.	Risk Event	Cause	Influence	Rating			Control Measures	Response Measures	Org. in Charge
				Probability	Impact	Risk Evaluation			

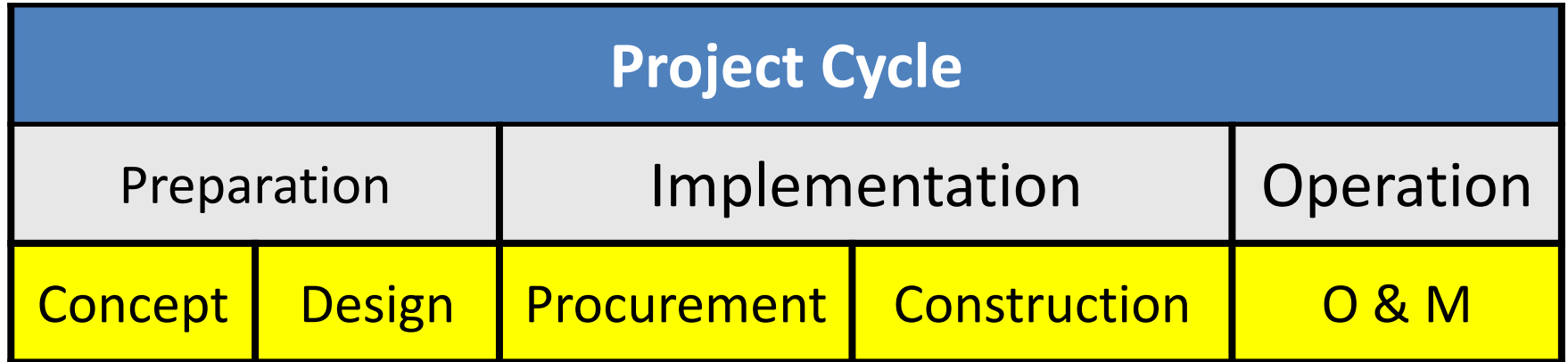
No.	Risk Event	Rating			Control and Response Measures	Org. in Charge
		Probability	Impact	Risk Evaluation		

# Risk Response Planning Process



# ④ & ⑤ Risk Measures Preparation and Execution

<Examples of Tools for Risk Measures of JICA Projects>



Procurement Guidelines

Environmental & Social Consideration Guidelines

Guidance for Management of Safety for Construction Works

M/P

F/S

D/D

Bidding Documents

Contract Documents

Contract Documents

SEA

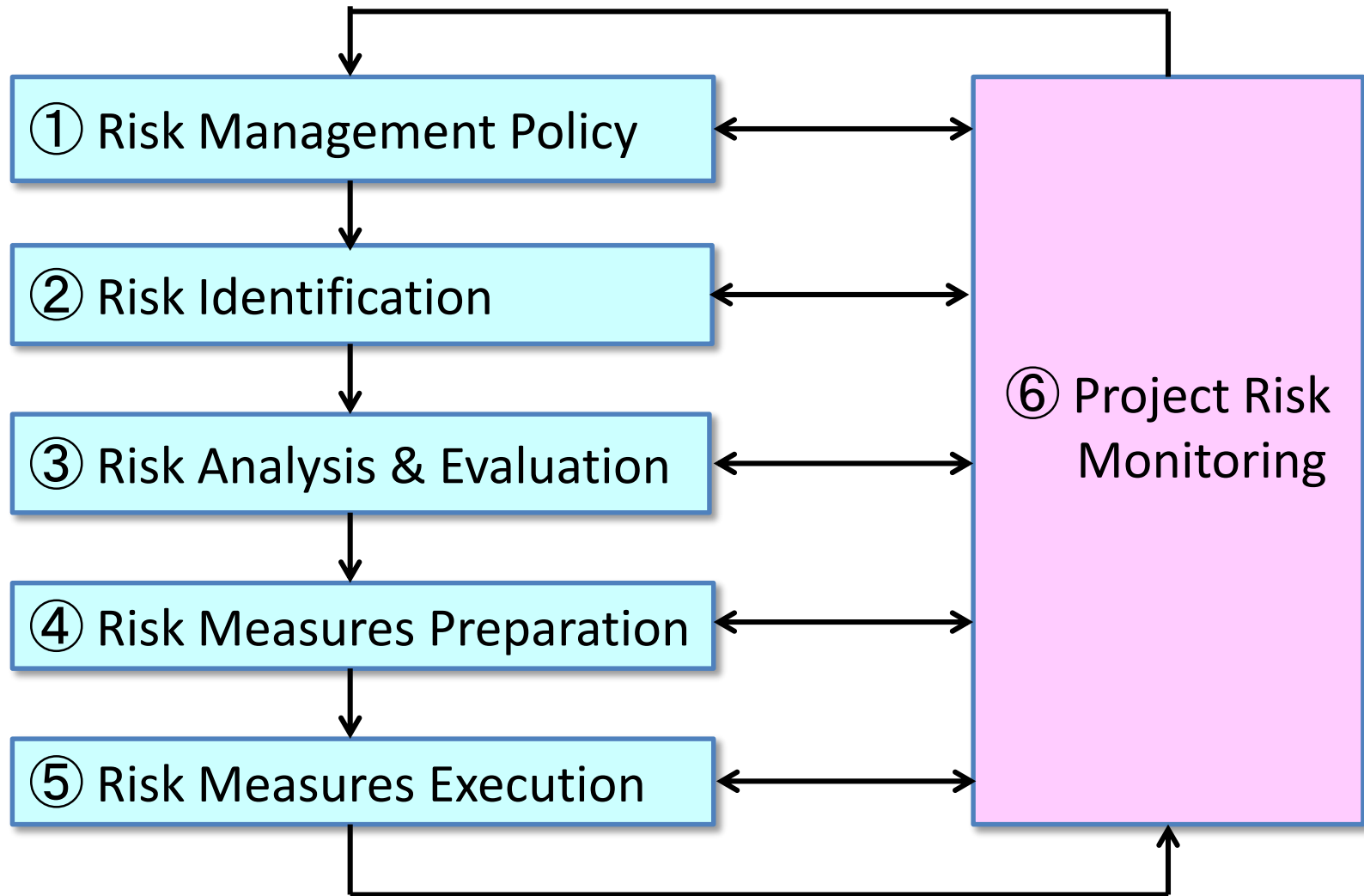
IEA

EIA

Consultant Service Contract

RAP

# Risk Response Planning Process

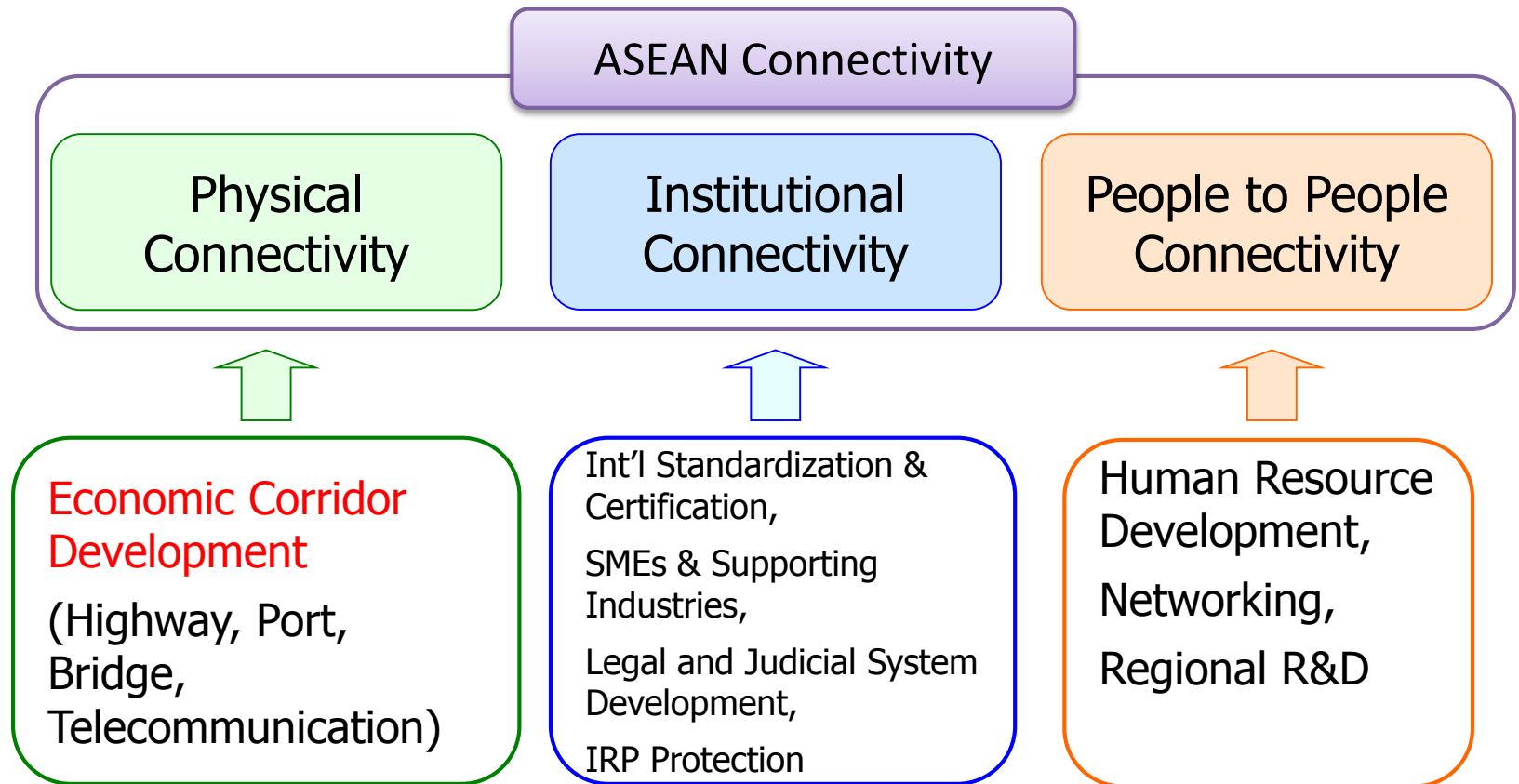


# ⑥ Project Risk Monitoring

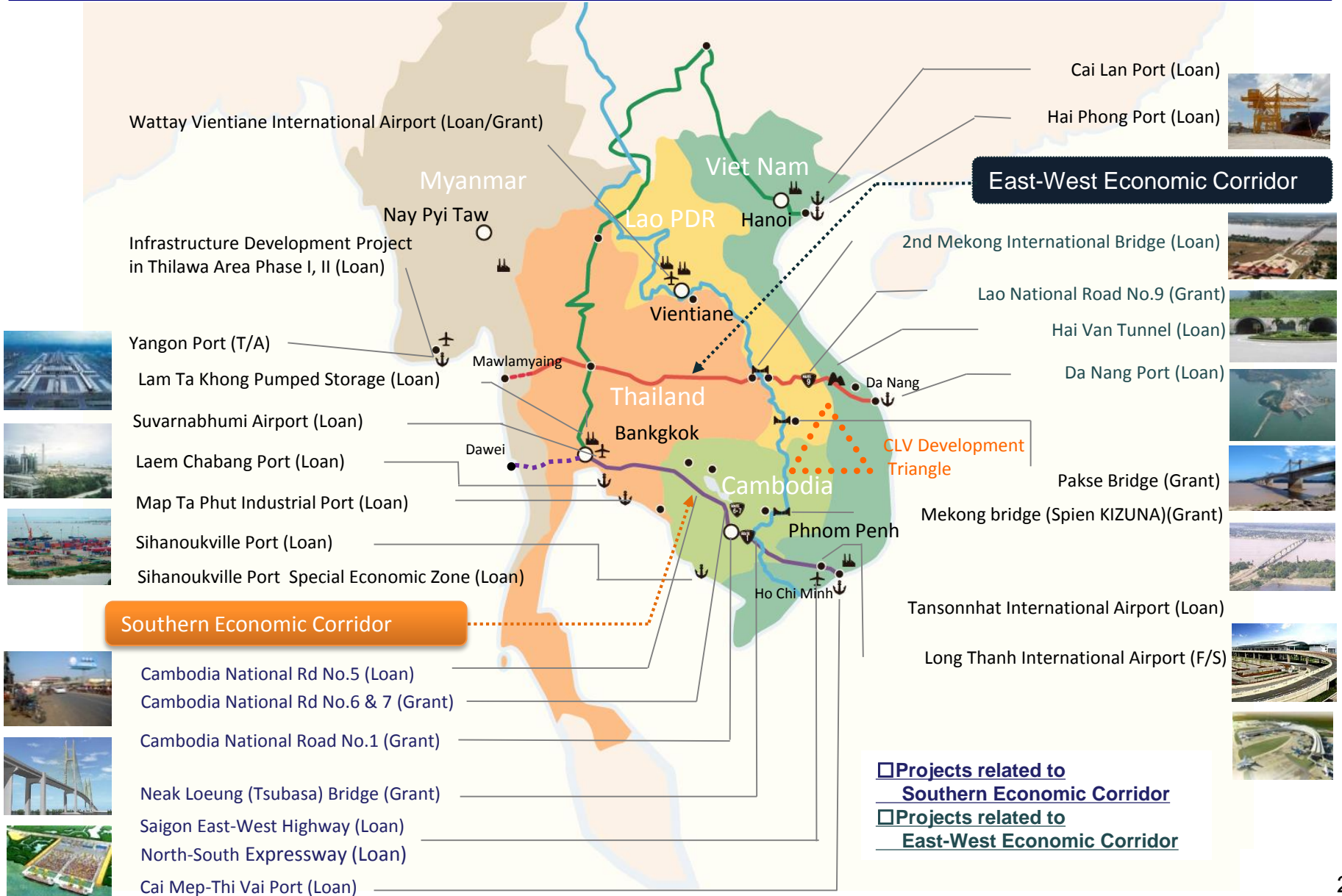
- Site visit and direct observation
- Stakeholders
  - ✓ Contractor
  - ✓ Consultant
  - ✓ Executing agency, Borrower
  - ✓ Mass media
  - ✓ Local people, NGO, etc.
  - ✓ Other donor agencies
- Natural and Social Situations, etc.
- Basic Project Monitoring Indicators
  - ✓ Scope
  - ✓ Schedule
  - ✓ Disbursement & Project Cost



# New Aspects of Project Risk in AEC



# JICA's contributions to **Physical Connectivity (Transport)** in Mekong Region



# Case: 2<sup>nd</sup> Mekong Int'l Bridge Construction Project

Item	Data at Appraisal Stage
1. Project Scope	(A) Civil Works 1) Main bridge: Length 1,200 m, Width 12 m, 2 lane 2) Approach Bridge: (Lao) 200 m (Thai) 250 m 3) Connecting Road: (Lao) 2.0 km (Thai) 1.7 km 4) Border Facilities: Both in Thai and Lao side 5) Change-over Facilities: Thai side (B) Consultant Services (1,111.5 M/M)
2. Project Period	Dec. 2001 – Jun. 2006 (55 months)
3. Traffic Demand	Traffic estimation in 2009 (Traffic on both ways, vehicle/day) <Truck> 517 <Bus> 117 <Car> 225 <Total> 859
4. Relocation of Local Residents	12 families
5. Project Cost	10,136 million Yen (Lao: 4,991 Thai: 5,145)
6. Loan Amount	8,090 million Yen (Lao: 4,011 Thai: 3,977)
7. Executing Agency	(Lao) MPWT (Thai) DOW
8. Borrower	(Lao) Lao PDR (Thai) Kingdom of Thailand

# Exercise: Risk Control & Response Planning on 2<sup>nd</sup> Mekong Int'l Bridge Project

- Please discuss and consider the risk of the Project.
- Then, please make the **Project Risk Management Framework**.





# Exercise: Risk Response Planning on 2<sup>nd</sup> Mekong Int'l Bridge Project

- Please see the summary of the Ex-post evaluation report of the project, and continue our discussion.

# New Aspects of Project Risk in AEC:

## Risk $\Rightarrow$ Opportunity

- Roads are **major mode of transport**. In most DMCs, roads and highways carry more than 80% of passenger kilometers and a significant percentage of freight ton kilometers.
- Roads are **multifunctional**. They provide the infrastructure for private passenger transport, public transport, goods transport, commercial road haulage services, and emergency services (e.g., ambulances, police vehicles, and fire trucks).
- Roads provide **convenient rights of way** for electricity, gas, water, drainage systems, and telecommunications.
- Road transport is **pivotal to development**.
  - ✓ It **connects** people to resources and opportunities.
  - ✓ It **enables diversification of production**, links resources and markets, stimulates trade and, in the process, boosts economic growth.
  - ✓ It **catalyzes access** to employment opportunities as well as to educational, health, and agricultural services



# Exmample: Roadside Station in Japan

- Traditional road construction and improvement policy
  - ⇒ Smooth traffic circulation
- Development of highway network
  - ⇒ Long distance driving
- Motorization
  - ⇒ Woman drivers, aged drivers
- Improvement for road safety
  - ⇒ Necessity of resting facilities for drivers
- ◆ Trunk Highway
  - ⇒ “Service Area”, “Parking Area” (Opening 24 hours)
- ◆ Ordinary National Highway
  - ⇒⇒⇒ “Roadside Station” (“Michi-no-Eki”) (Opening 24 H)

# What is a “Roadside Station”?

- **“Roadside Station”** was launched 20 years ago to create a safe, comfortable road traffic environment, and unique, lively spaces that showcased the uniqueness and individuality of a region.
- **“Roadside Station”** is established by a city, town or village and has been registered with the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) Road Bureau.

# Basic Functions of Roadside Station



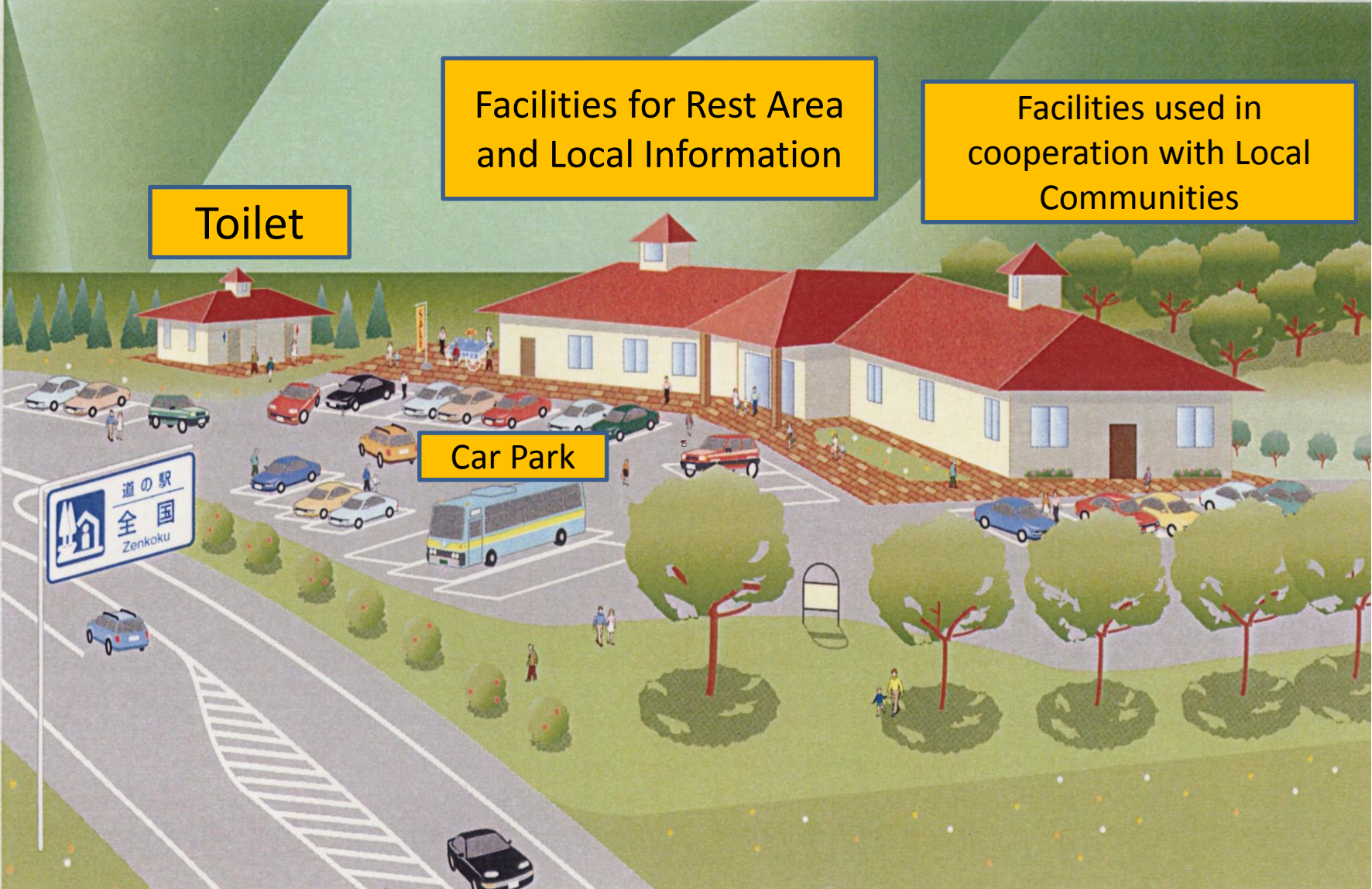
A “Roadside Station” has three distinct features:

“**Refreshing**” – Rest facilities that include free 24-hour parking and restrooms.

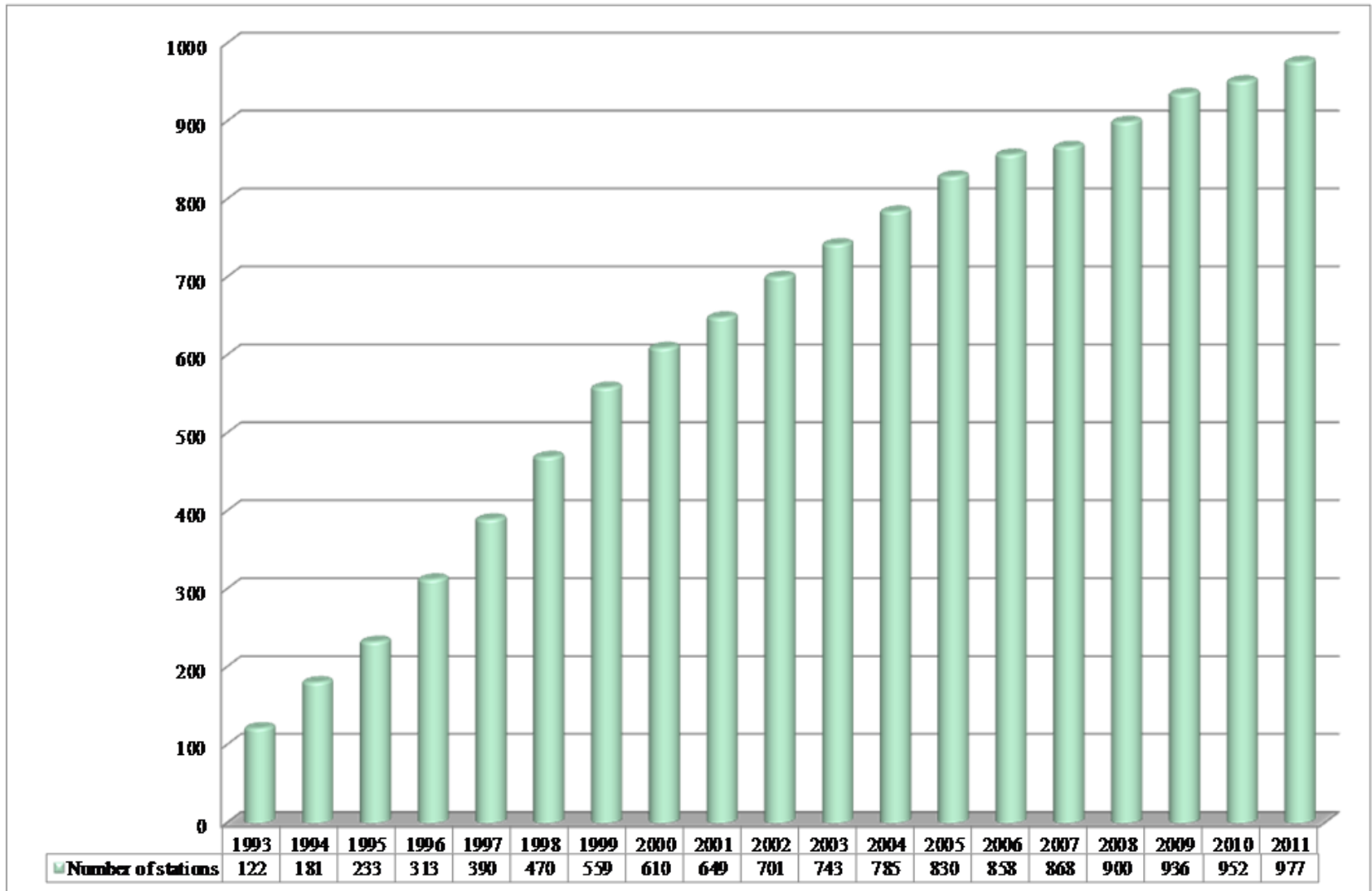
“**Information**” – Where road, tourist and emergency care information is readily available

“**Community**” – Regional cooperation where cultural centers, tourist attractions, recreation and other local development facilities promote interaction with the region.

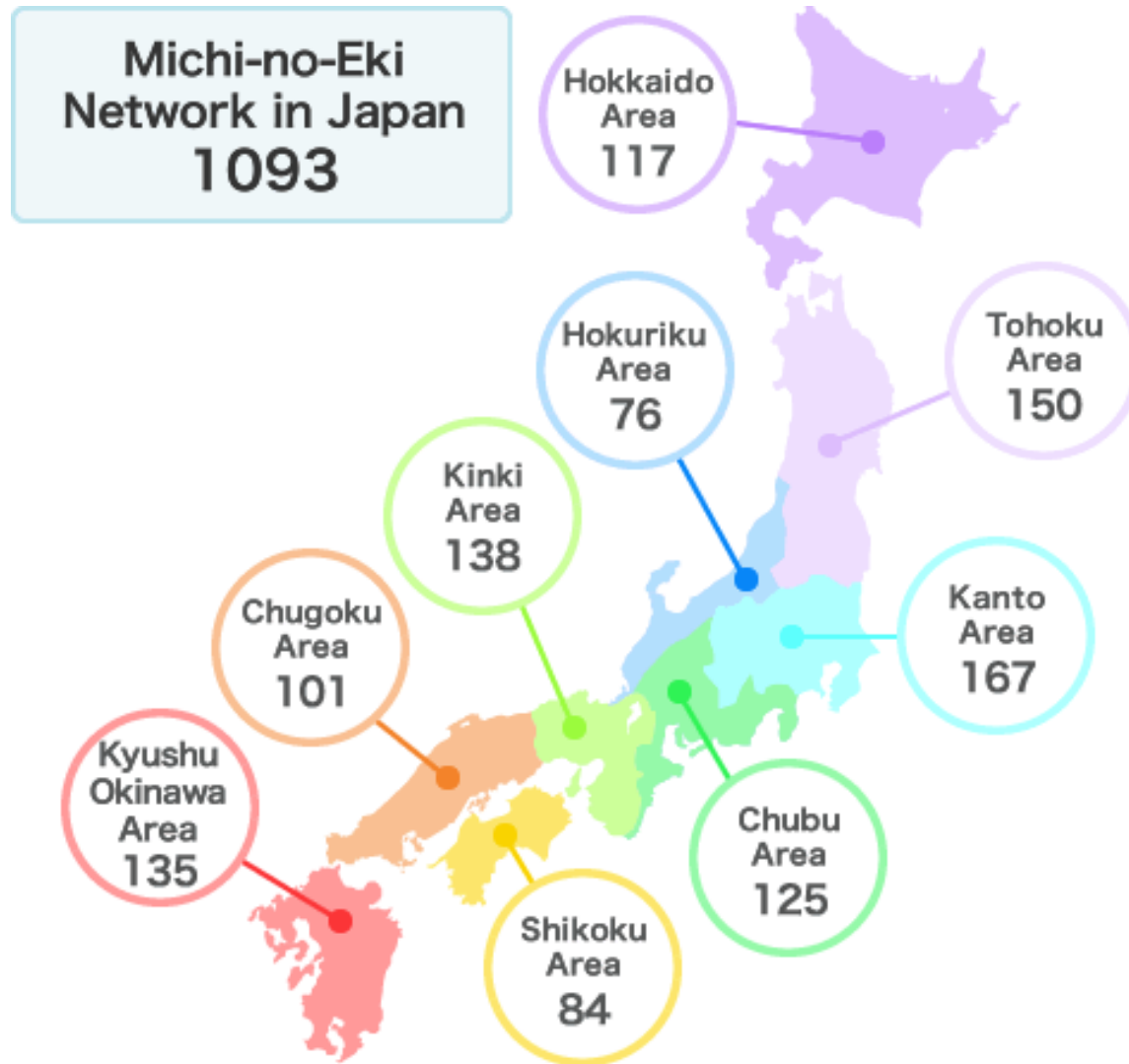
# Basic Facilities of Roadside Station



# Changes in the Number of Designated Roadside Stations



# Roadside Station Network



Thank you very much  
for  
your kind attention and cooperation.