

# **Challenges to go beyond ‘good practices’: A case of RISTEX**

**Session 2**

**OECD/CSTP Workshop**

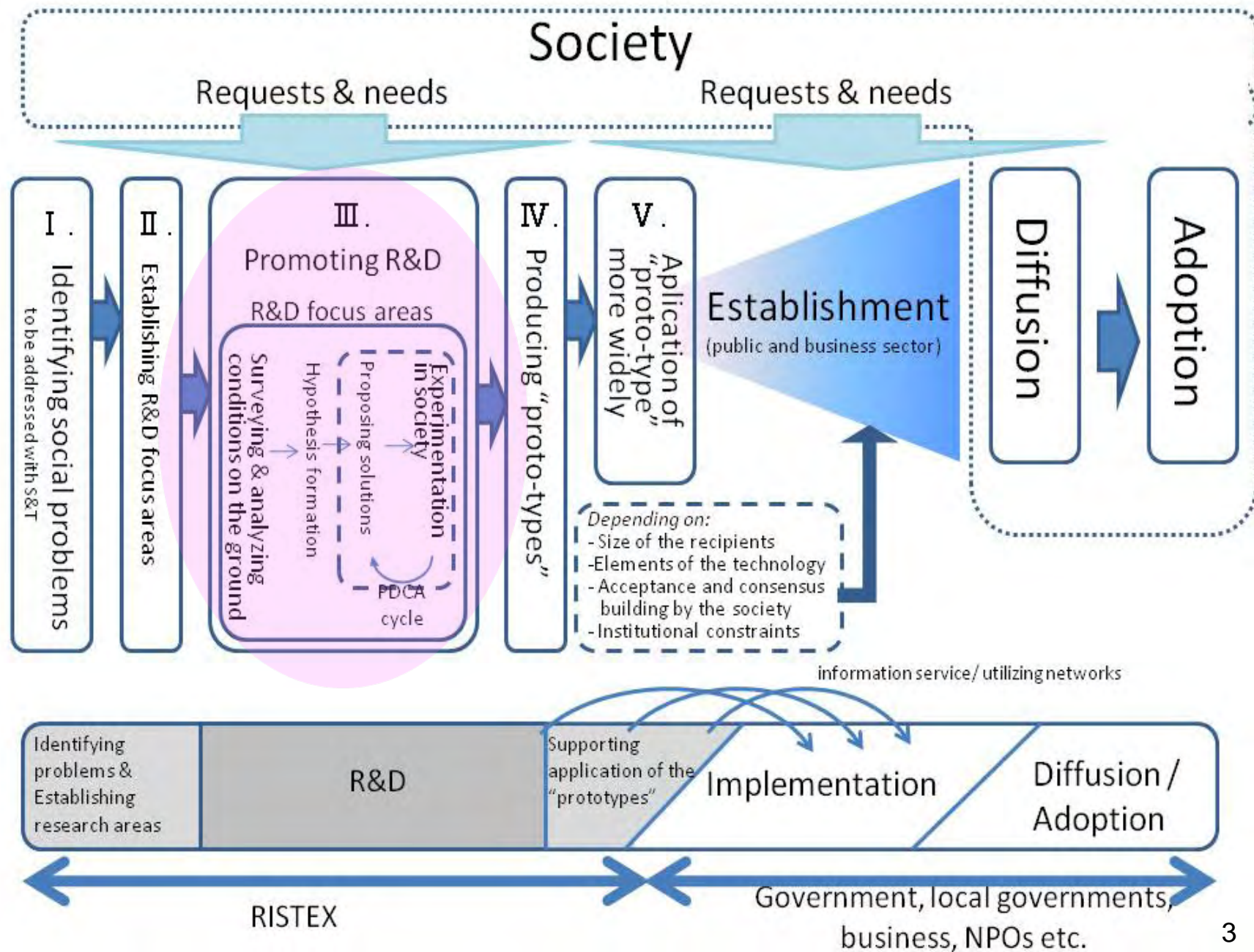
**9-10 November, Paris**

**Sawako SHIGETO**

**Research Institute of Science & Technology for Society**

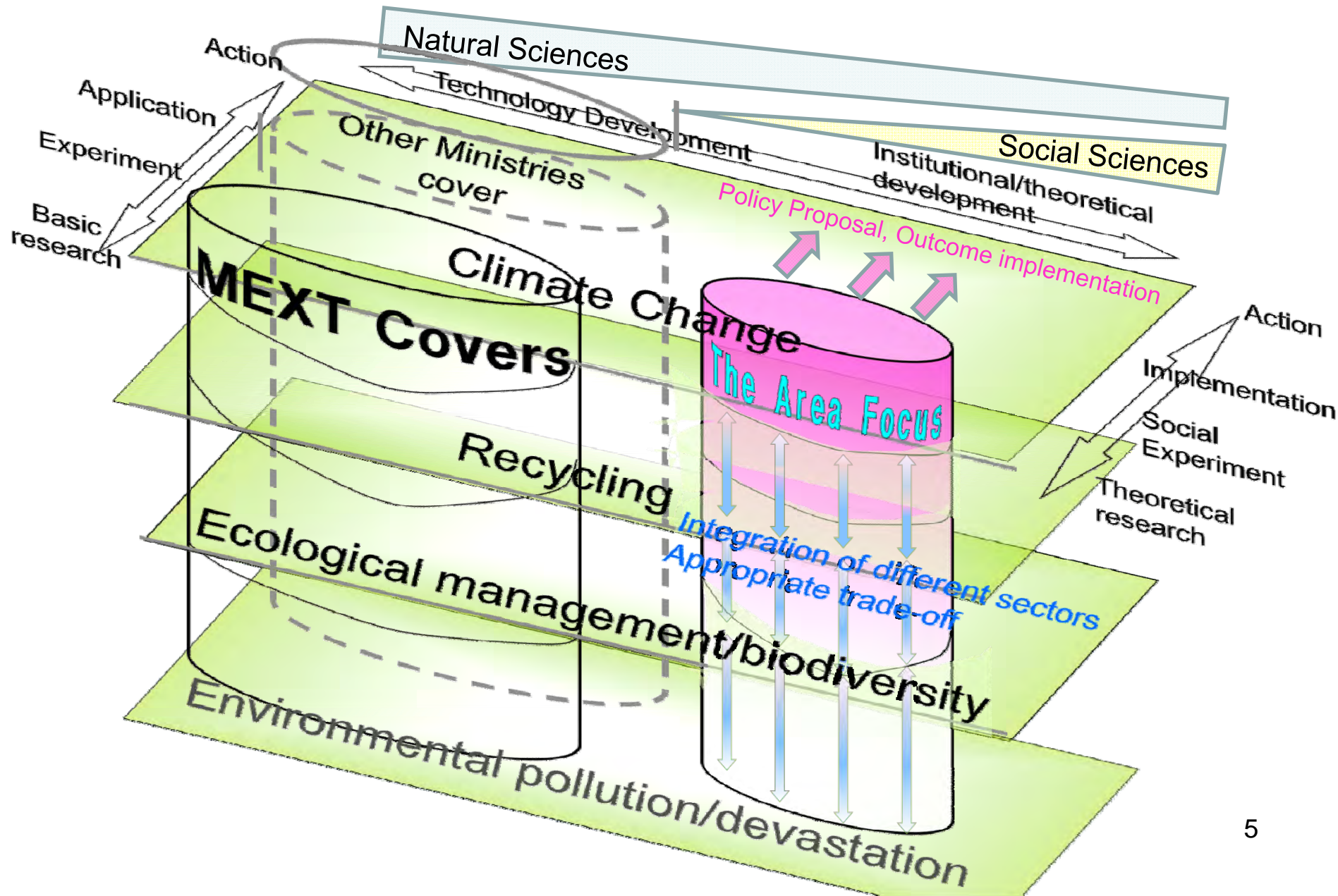
**Japan Science and Technology Agency**

# **Position of the R&D Area in the RISTEX's Activity Cycle**



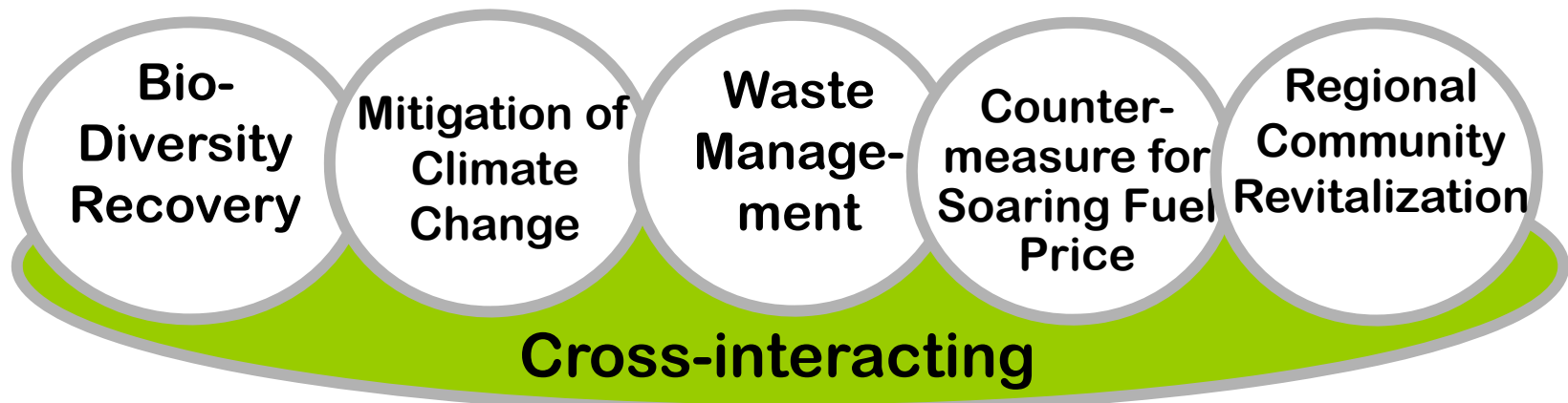
**About R&D Focus Area of  
“Community Based Actions  
against Global Warming and  
Environmental Degradation”  
(FY2008-2013)  
P.O.: Prof. Masayuki HORIO**

# Field that the Area focus



# Problems to be solved

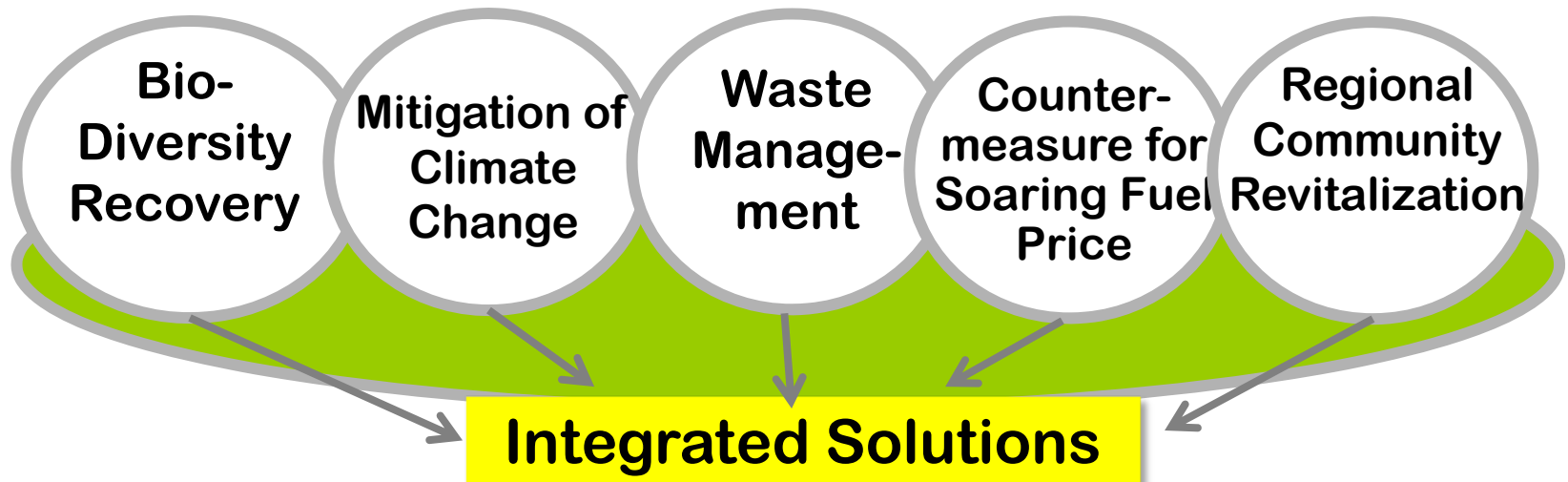
- Climate change and environmental degradation
- Decline of local community, especially in rural areas
- Immoderate modernization based on fertile fossil energy supply
- Incompetence of sciences, technologies and social systems for overcoming problems above due to the severance among them





# **Integrated actions w/ appropriate technologies**

- Since problems have arisen from the same root, i.e., the extremely rapid development during the last 50 yrs, an integrated approach to solve the issues simultaneously should be intended.
- Appropriate technologies together with advanced ones are appointed to search for sure solutions.



# Guideline for R&D proposal

**R&D Proposal is requested to be novel**

- (1) in their approach for tackling climate change and environmental degradation issues;**
- (2) in their approach for tackling problems at the regional level with people;**
- (3) in quantifying the effect;**
- (4) in developing regional independence with effective collaboration with a variety of stakeholders and local actors;**
- (5) in collaboration of researchers from both natural and social sciences sharing a unified goal and methodology and practices in the field.**



# How quantify and structure the project effects?

Technological Effects  
for GHGs reduction  
( $\text{OOt/yr}$ )

$\times$

Social coefficient (0~1)  
=evaluated by  
feasibility/application speed

$\parallel$

Actual reduction  
( $\Delta\Delta \text{ t/yr}$ )

Technical scenario:  
free from the present  
institutional system

Socio-economic  
scenario:  
•Legislative actions  
•Economic and political  
actions  
•Consensus building

•Establishment of  
regional independence  
•Education and human  
resource developments

# Roadmap sheet to be filled

Technology Scenario				成長行きの場合を基準とし、CO2削減量、および、2005年比削減率(%) 【参考参照】								
技術要素【注1】 ※適宜項目を追加してください。	プロジェクト期間についての積算方式	CO2削減量 ※プロジェクト終了年を記載 して下さい	【単位】	プロジェクト波及についての積算方式	～2020	【単位】	～2030	【単位】	～2040	【単位】	～2050	【単位】
項目			[t-CO2]			[t-CO2]		[t-CO2]		[t-CO2]		[t-CO2]
			[t-CO2]			[t-CO2]		[t-CO2]		[t-CO2]		[t-CO2]
			[t-CO2]			[t-CO2]		[t-CO2]		[t-CO2]		[t-CO2]
			[t-CO2]			[t-CO2]		[t-CO2]		[t-CO2]		[t-CO2]
			[t-CO2]			[t-CO2]		[t-CO2]		[t-CO2]		[t-CO2]
総合効果	プロジェクトによるCO2削減量 計		[t-CO2]	プロジェクト波及によるCO2削減量 計		[t-CO2]		[t-CO2]		[t-CO2]		[t-CO2]
2005年比CO2削減率【A】	プロジェクトによる削減率		%	プロジェクト波及による削減率		%		%		%		%
Socio-Economic Scenario				プロジェクト波及についての積算方式								
項目					～2020	【単位】	～2030	【単位】	～2040	【単位】	～2050	【単位】
社会的実現係数【B】	プロジェクト期間についての 社会係数の算出式	プロジェクト期間についての 社会係数		プロジェクト波及についての 社会係数の算出式					プロジェクト波及についての 社会係数			
総合的削減率【A】×【B】	プロジェクトによる削減率		%	プロジェクト波及による削減率		%		%		%		%

**The Total Effect = Tech Effect \* SE Effect (0-1)**

# **Project Management Strategy**

# Area Management

R&D Focus Area

Open application and selected by the Management team

Area Director



Area Advisors

Responsible for  
area management

Specialists advising  
Area Director

R&D  
project

R&D  
project

R&D  
project

R&D  
project

...

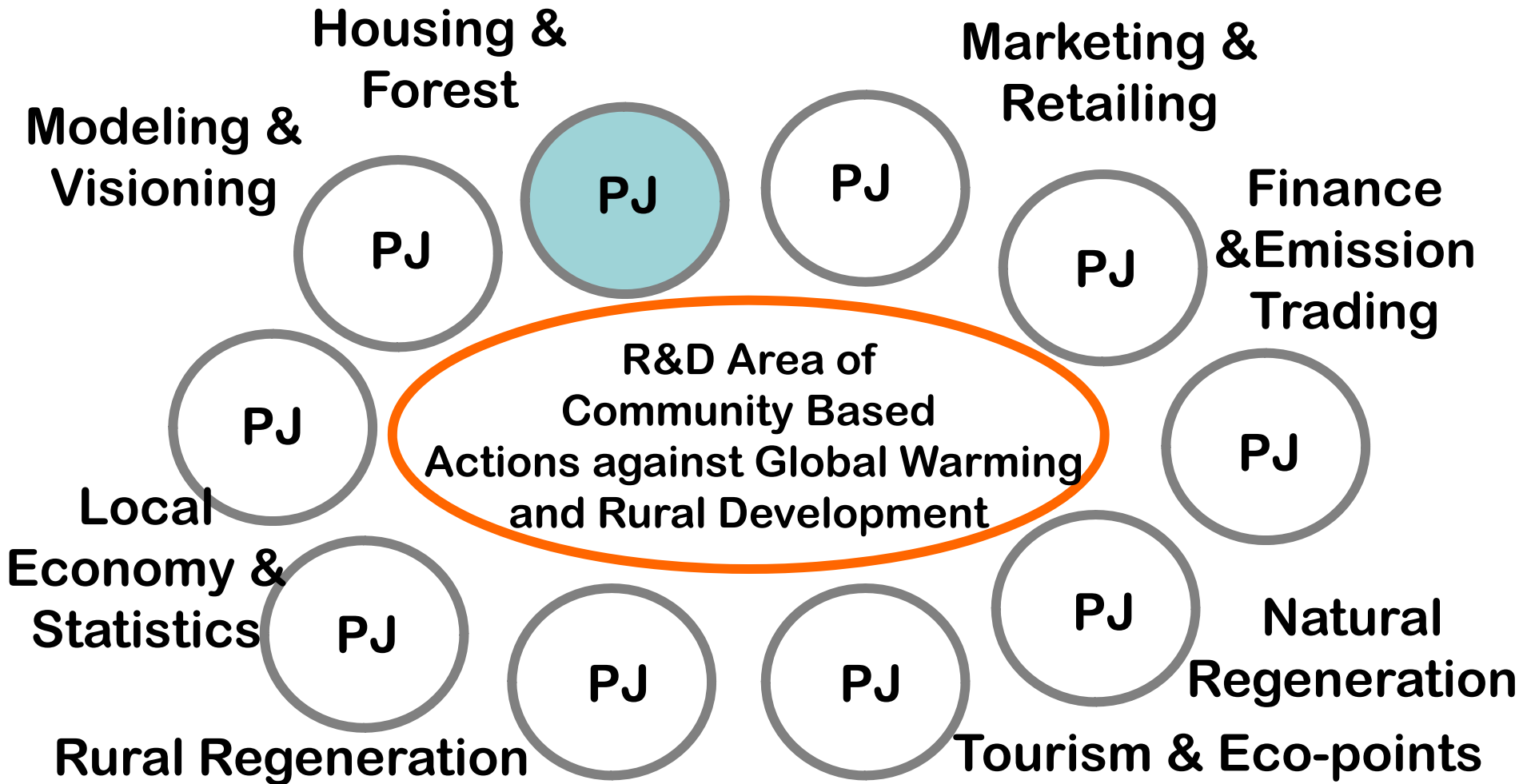
Research team:

University researchers, government, public-profit corporations, schools, industry, NPOs etc.

Joint efforts by all stakeholders including those working on solutions to the problems and the researchers

The RISTEX's basic area management framework

# Project Management

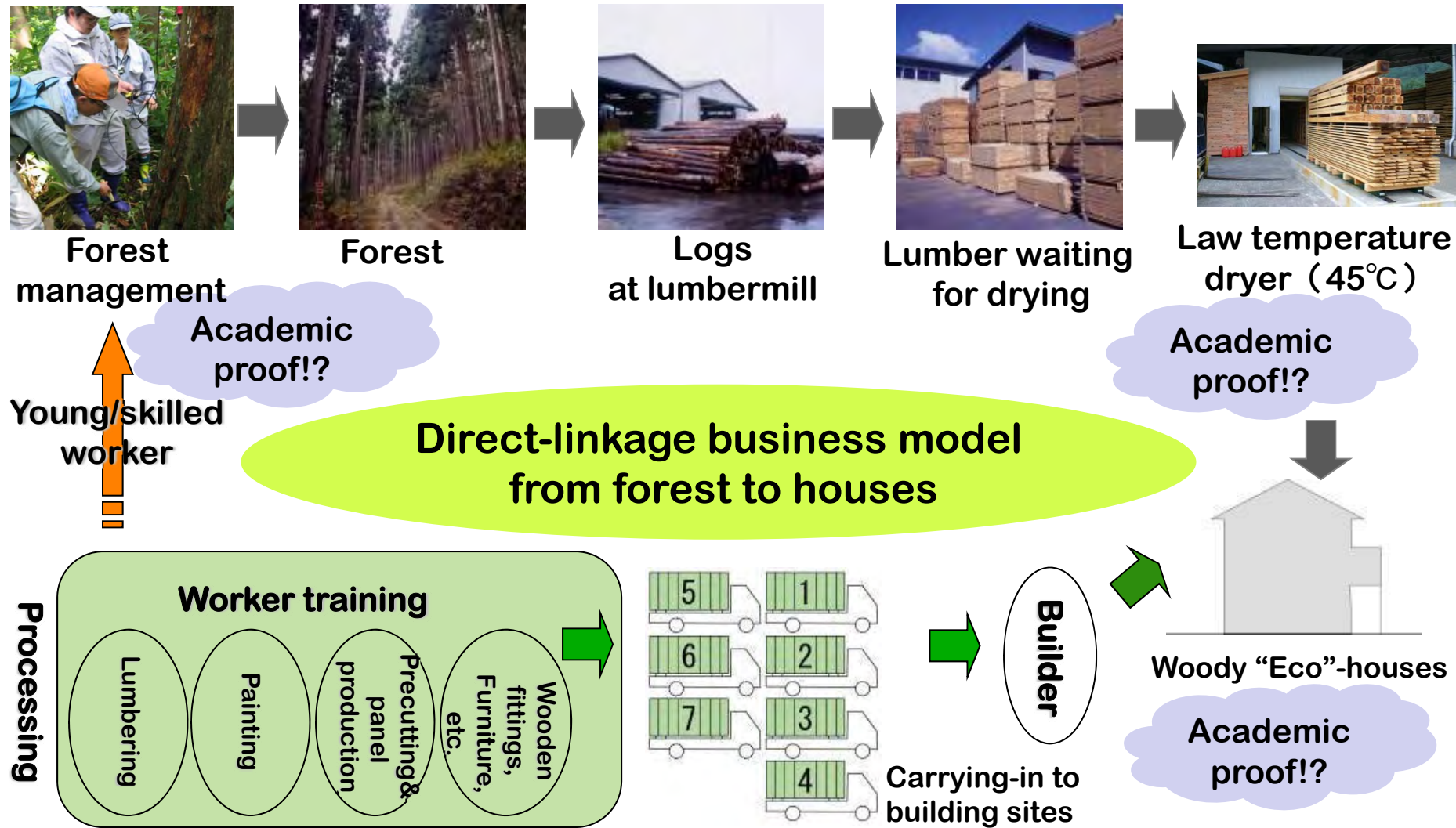


Each project challenges an integrated social solution.

# **Project Example:**

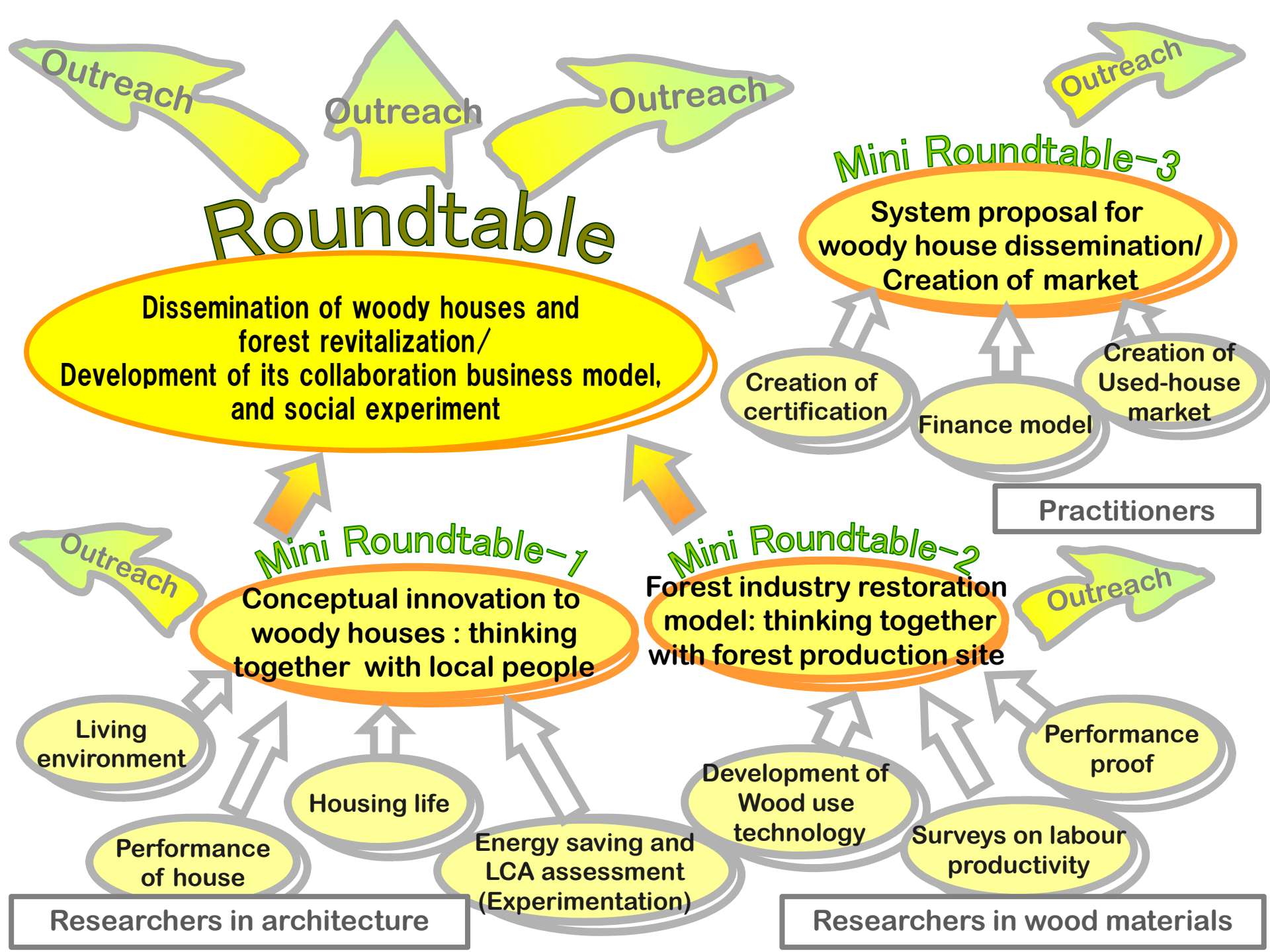
**“From Forest to Houses Co-realization  
of Carbon Abatement and Comfortable Life  
to 2050”  
(FY 2009-2013)**

# Social entrepreneur: “Tennen Jutaku” (Natural Houses)

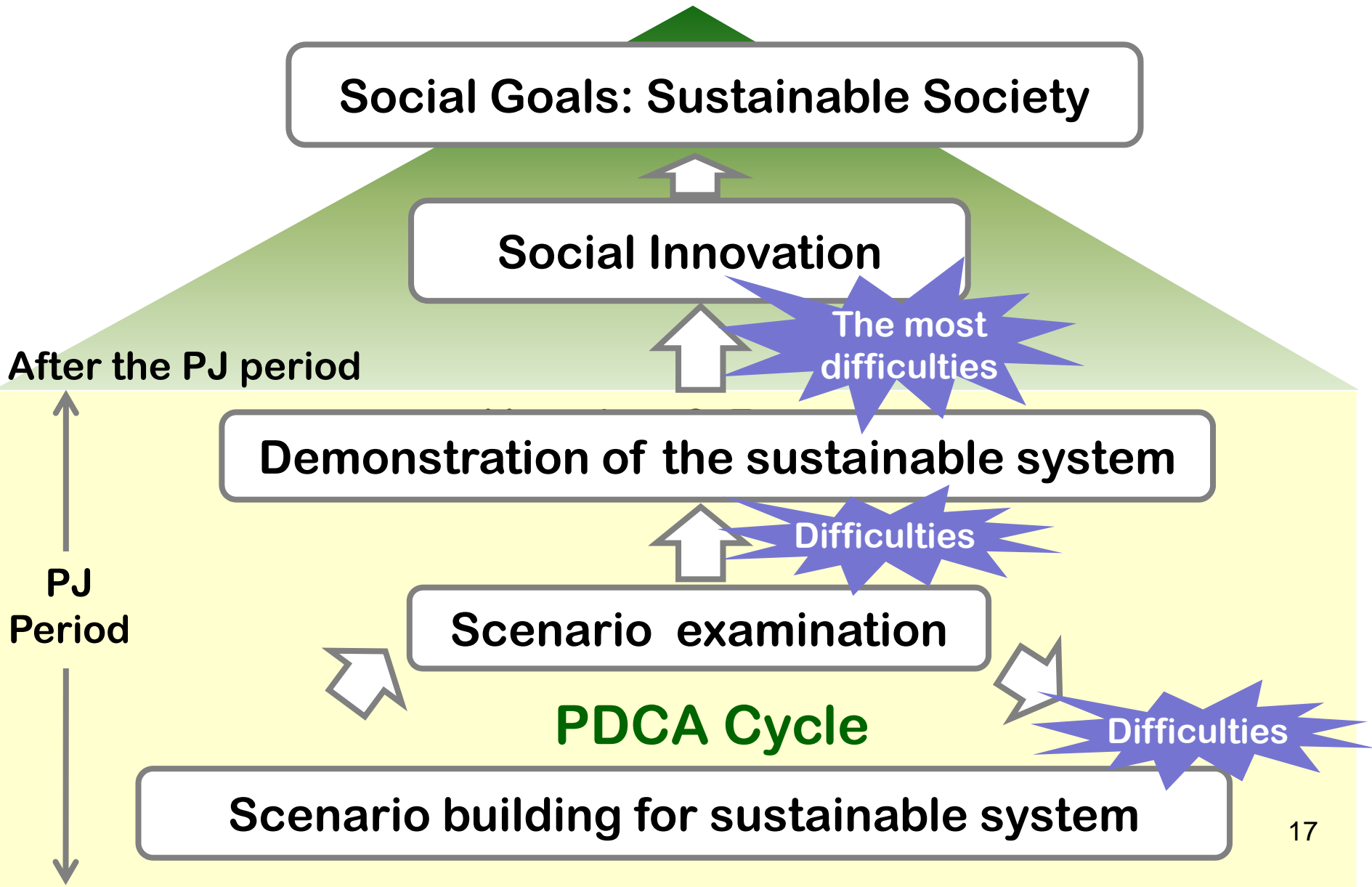


Empirically good, but no academic proof

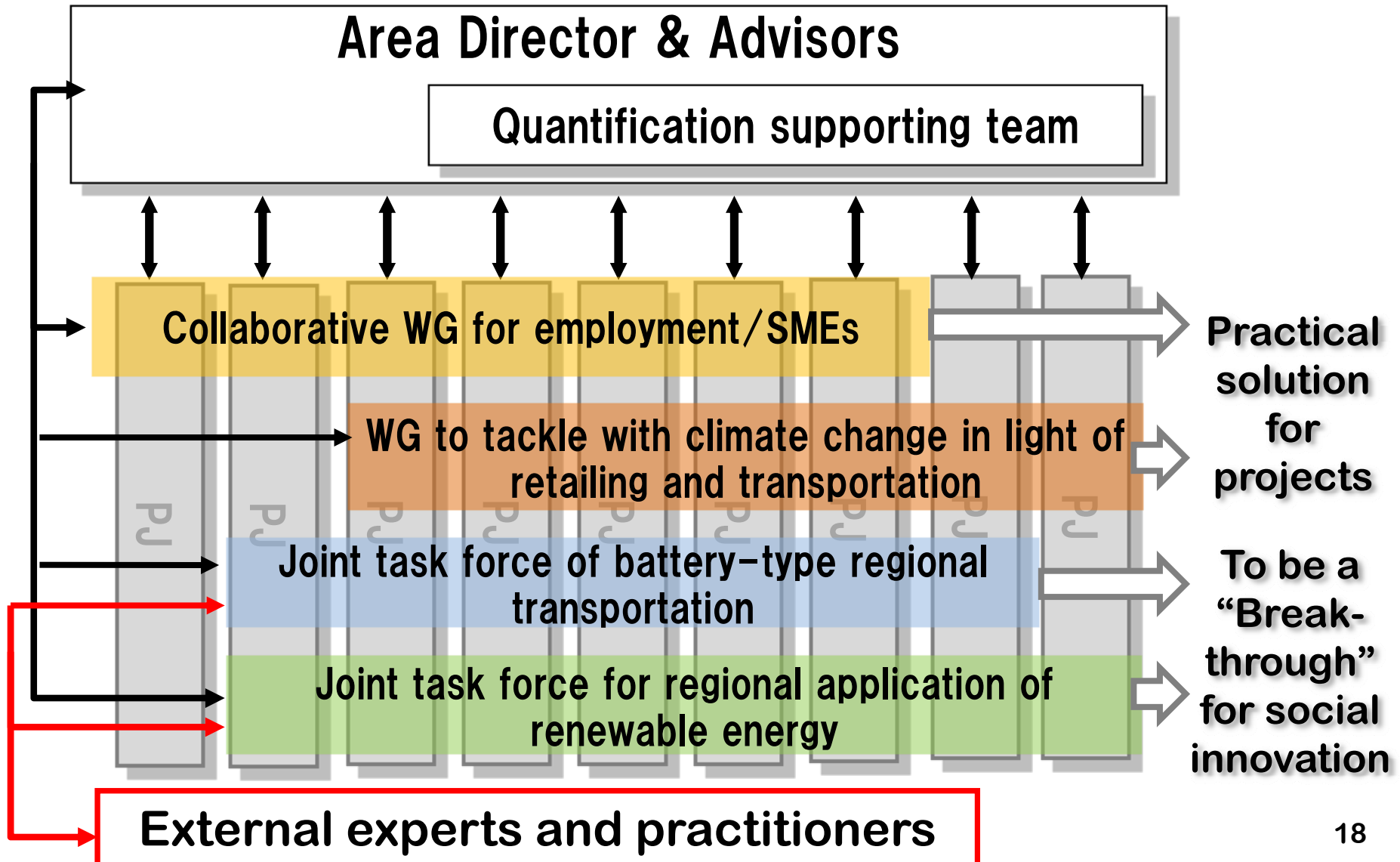




# Towards Social Innovation & Social Goals



# To overcome the difficulties



# Current strategies of TFs

## Task force for regional utilization of renewable energy

**Target Dissemination:** Micro hydro power and other distributed power

**Potential:** High

**Situation:** Very limited use

**Why:** Legislative restrictions, Cost, Conflict of interests, etc.

### Breakthrough?

⇒ Publication of a 'Practical' manual for people



# Current strategies of TFs

## Task force of battery-based regional transportation

**Target Dissemination:** Electric community bus / battery assisted train

**Potential:** High

**Situation:** Not at the practical level

**Why:** Belief for high-tech vehicles, Legislative restrictions, Cost, Battery and charging, etc.

### Breakthrough?

⇒ Development of a niche vehicle and service system package for local / rural communities



Image

# To conclude

- The R&D Area of “Community Based Actions against Global Warming and Environmental Degradation” focuses technologies that have potential to lead social innovation to have the significant impacts to achieve 80% CO<sub>2</sub> reduction till 2050.
- For that purpose, bridging to the social problem solution is needed with collaboration works among a variety of stakeholders and researchers both in natural science and social sciences.
- The RISTEX defines the basic Area management framework, and how to operate is the Area Director’s responsibility.
- Therefore, the case presented is one of experiments of RISTEX to lead social innovation.

# **To go beyond....**

**We have to find a “breakthrough”.  
Otherwise we repeat “good practices” forever,  
and cannot step forward  
to social innovation and social goals.**

**In this context, what we expect to social  
innovators and social entrepreneurs ?**



**Thank you**