

# **Success Factors of NEDO Projects by “NEDO Success Stories”**

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# Content of Presentation

1. NEDO's Role in R&D
2. Purpose of Study
3. Methodology : Analysis of Success Factors based on *NEDO Success Stories*
4. Case Studies
5. Results of NEDO Project Success Factor Analysis
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# 1. NEDO's Role in R&D



Ministry of Economy, Trade  
and Industry (METI)

Council for Science  
and Technology Policy



**Coordination** with policy making  
authorities



- Promotion of R&D
- Efficient project management



**Consortium**

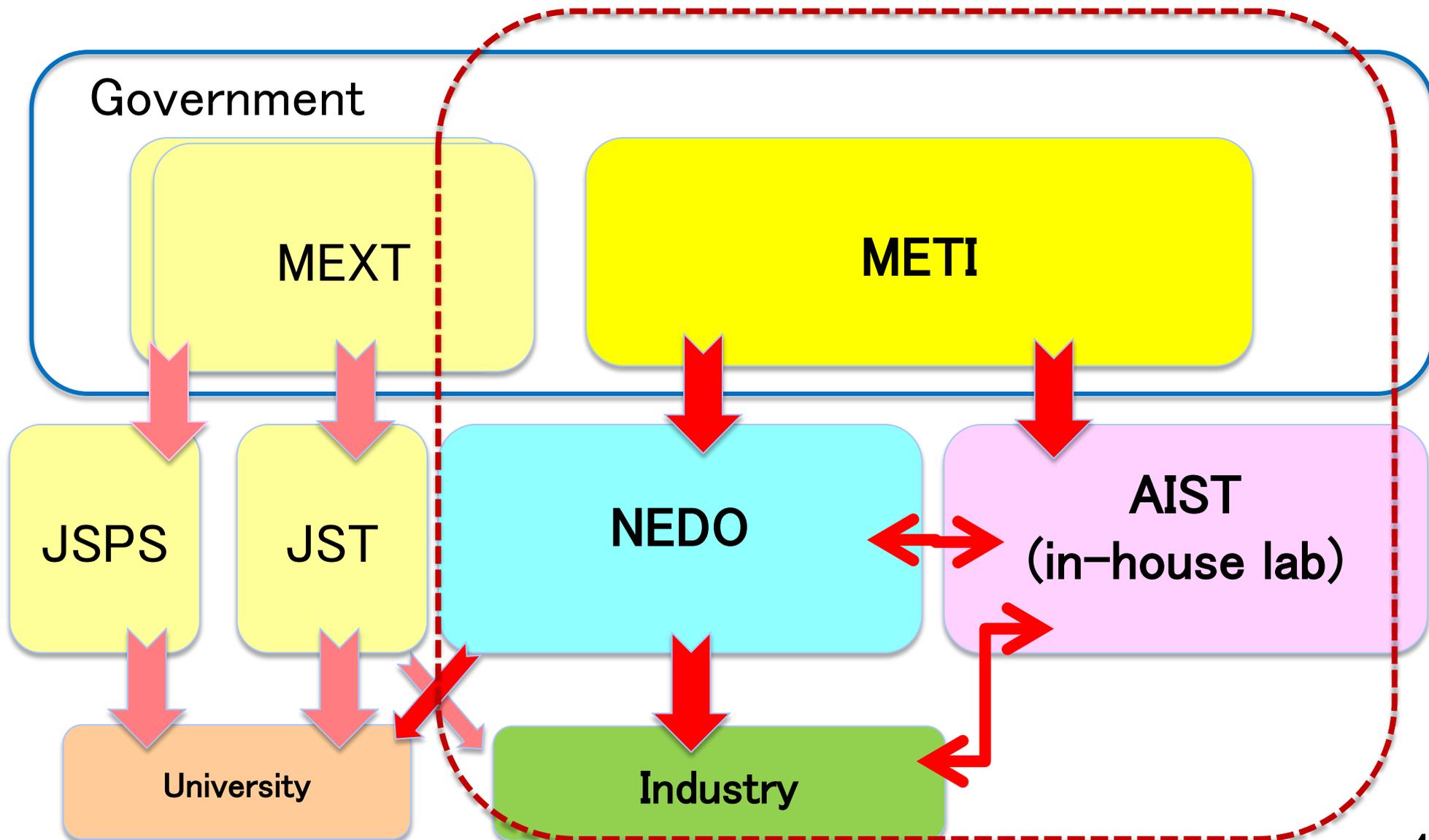
**Combined efforts** of industry,  
government, and academia

Industry

Universities

Research institutes

# Simplified structure of R&D funding system in Japan

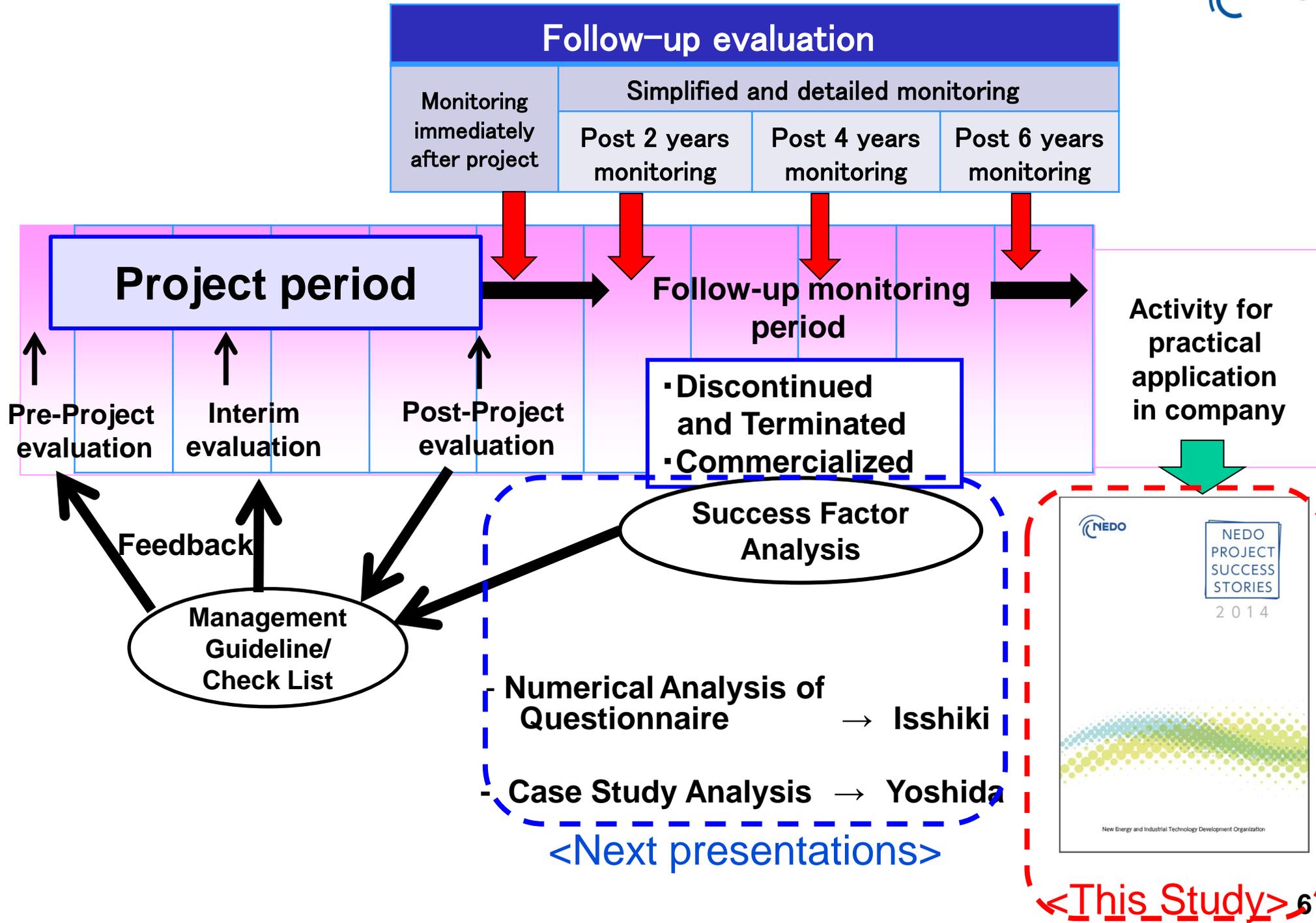


## 2. Purpose of study

- Improve the success rate of NEDO projects
- Improve NEDO project management
- Build the system for handing down the knowledge



# 3. Methodology



# “NEDO Success Stories”

## <Contents of NEDO Success Stories>

- Development background
- The development path / breakthrough
- Product overview, functions and benefits
- NEDO roles and management

Project participant's view



**Started in 2008.  
71 Success stories.**

## Analysis Methods of Success Factors

“Bean Count”: Each and every success factor is counted and categorized.

Material: *NEDO Success Stories 2014*

Business participants' comments concerning contributions to the commercialization of NEDO projects are counted.

# Example Cases from the *NEDO* *Success Stories 2014*



**PV**



**Wind Power**



**Fuel Cell**



**Gas Turbine Power  
Generator**



**Clean Diesel Engine**



**Blu-ray Disc**



**Perpendicular Magnetic  
Recording (HDD)**

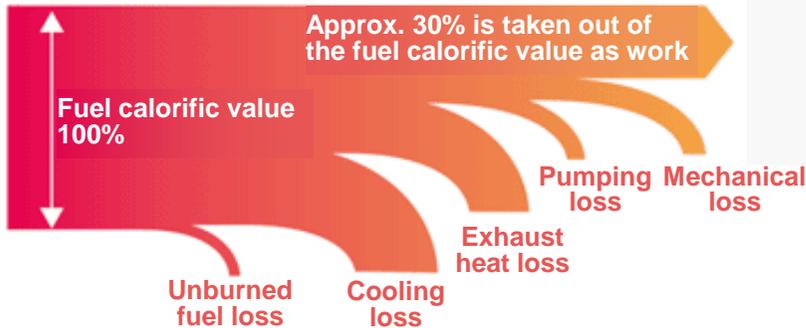
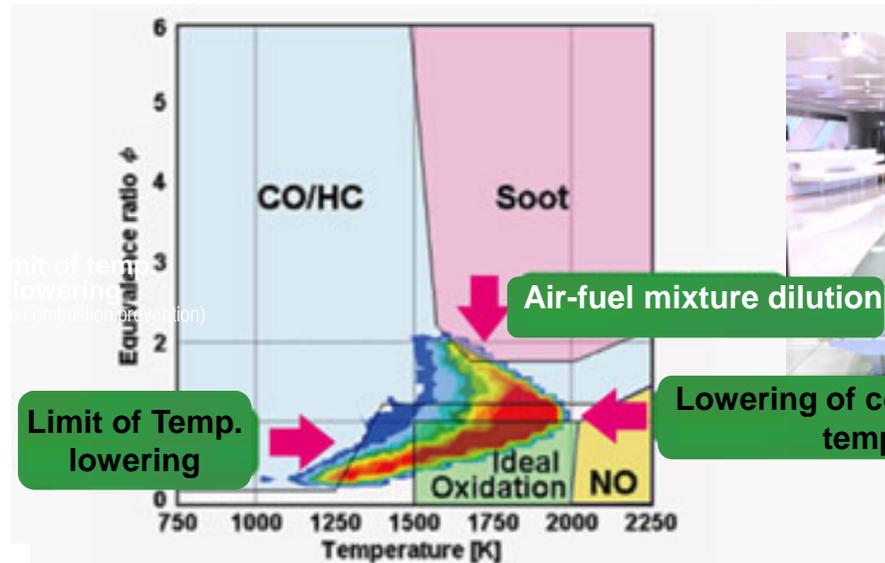


**X-ray CT Equipment**



**Robot Suit HAL**

# 4. Success Cases [Clean Diesel Engine]



Back to the basic

Aggressive goal :  
20% increase in fuel efficiency

## Success Factors

- Simulation technology developed with Hiroshima University
- Prototype served as a bridge between laboratory and the enterprise division.

# Success Cases [Blue-ray Disc]



## Seeds

**FY1995  
Blue LED  
on sale**

**NEDO Project  
(1998 to 2002 / 9 companies )**

**FY2003  
Blue-ray  
on sale**

## Needs

**BS Digital HD Broadcasting Starts in 2001.  
The volume of one DVD is insufficient  
for recording a 2 hour movie in high quality.)**

**The 9 participating companies  
collaborated and engaged in R&D.**

## In preparation for commercialization

Committee on Intellectual Property (IP) and International Standardization Committee are set up during Project period.

## Important factor of success

The three basic parameters (spot size, wavelength, and lens numerical aperture) are set at the very beginning



## 5. Results of NEDO Project Success Factors Analysis

List of Success Factors	
①	Challenges towards high risk R&D
②	Collaborative setting for working together with other companies (even competitors)
③	Collaboration with universities, especially mechanism clarification
④	Incorporation of users as the receiver of the output and player of commercialization
⑤	Advice from external expert through NEDO committees
⑥	Demonstration experiment using the prototype

## Sheet of Analysis (Bean Count)

Project	①	②	③	④	⑤	⑥	Remarks
A			○		○	○	
B	○	○	○				
C		○		○		○	
D	○	○	○		○		
E			○		○	○	
F	○		○				
G	○		○				
H				○	○	○	
I		○	○	○			
J	○		○			○	
K			○		○		

# Results of NEDO Project Success Factors Analysis

(Aggregation of comments from 71 stories in *NEDO Success Stories 2014*)

(Multiple answers)

	Success Factors	No. of Cases
⑥	Demonstration experiment using prototype	48
①	Challenges towards high risk R&D	41
②	Collaborative setting for working together with other companies (even competitors)	37
③	Collaboration with universities, especially mechanism clarification	35
④	Incorporation of users as the receiver of the output and player of commercialization	23
⑤	Advice from external expert through NEDO committees	19

## 6. Summary

The following success factors are identified from the *NEDO success stories*.

- 1) Demonstration experiment using **prototype**
- 2) Challenges and **aggressive goals**
- 3) Collaboration with even competitors that generate **synergy effects**
- 4) Collaboration with universities, **mechanism clarification**
- 5) Incorporation of **user**
- 6) **Advice** from external expert