



Technology Development for Africa's Industrialization - NEDO's unique capability -

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**Makoto Watanabe
Executive Director**

**New Energy and Industrial Technology
Development Organization (NEDO)**

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1. Outline of NEDO



Missions:

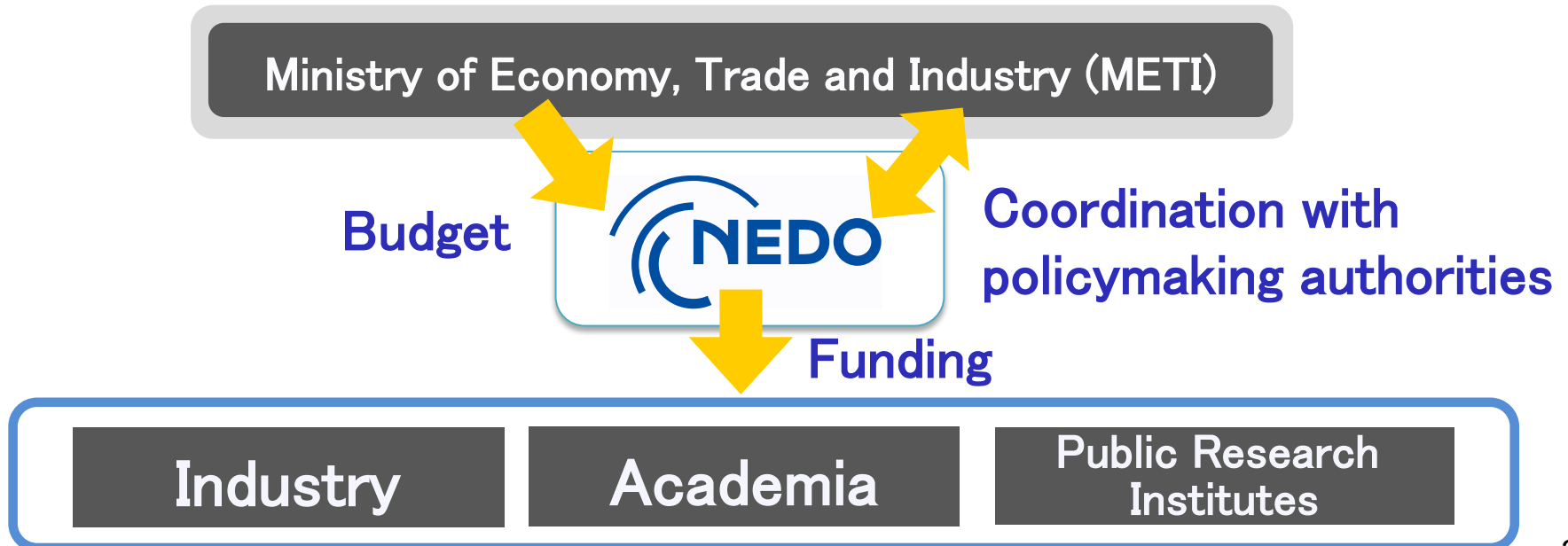
- Addressing energy and global environmental problems
- Enhancing industrial technology

History: Originally established in 1980

Personnel: About 900

FY2016 Budget: Approximately 130 billion yen
(1.28 billion USD)

Chairman: Mr. Kazuo Furukawa

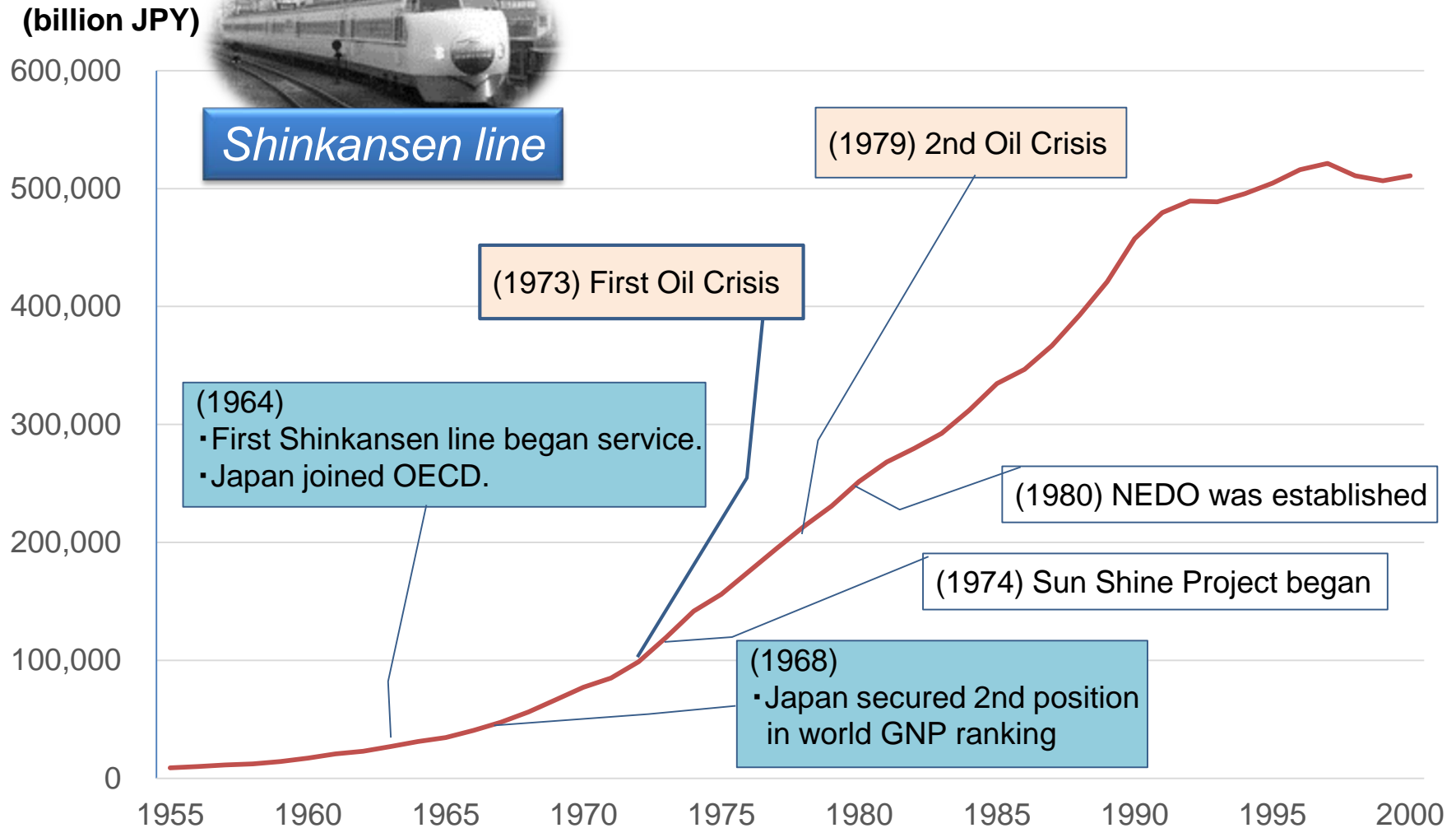


2. Economic development: the example of Japan's industrialization

2-1 Japan's GDP (FY1955-2000) & Technology Development

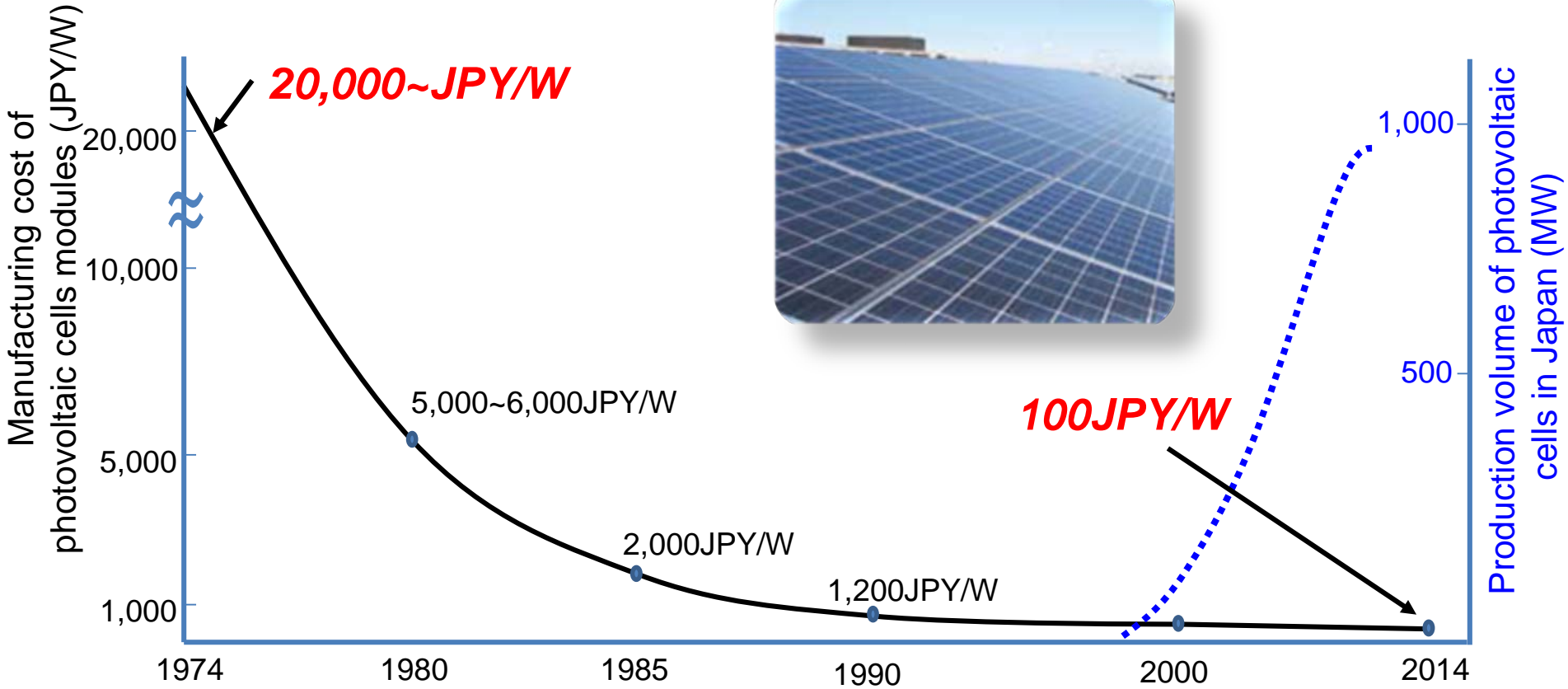


Shinkansen line



2-2 Example of Projects: Development history of PV in Japan

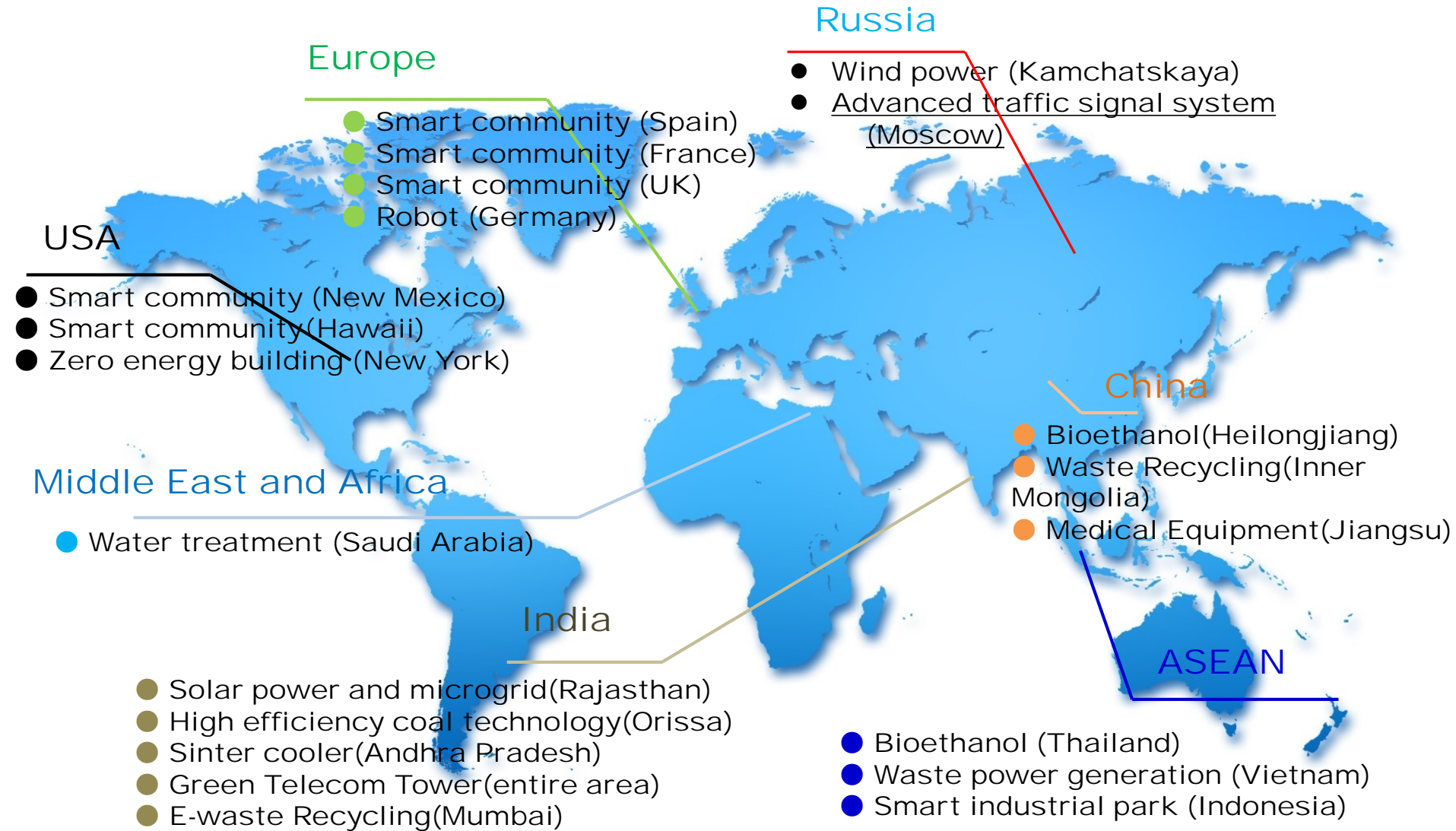
- Japan has contributed **the cost reduction of Photovoltaic cell modules to 1/200** through the 40-year National “Sunshine Project” since 1974.(NEDO has been leading the Sunshine Project for 35years.)
- Japan’s production volume was ranked **number one in the world for 1999-2007**.



3. Overseas expansion of Japan's technology



3-1 International Demonstration Projects



3-2 Example (1) : Energy Saving Environmental Friendly Desalination Technology in South Africa



Overview of Verification Plant

- Mixing seawater with discharged water from sewage reuse process



Verification Plant in Kitakyusyu
(2011-2014)

Benefit

- (1) reduce **consumption energy** by more than **30%**
- (2) reduce **cost** by more than **30%**
- (3) reduce **environmental impact**.

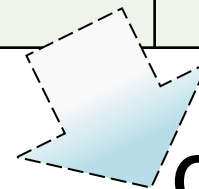
Transfer to South Africa



South Africa:
eThekweni Municipality



Capacity	6,250m ³ /d
Period	2016-2020



Commercialization

3-3 Example (2) : Ultra-Low Head micro hydro power in Kenya and Ethiopia

Summary of NEDO's Feasibility study

- Rural electrification project for communities by micro hydropower in Ethiopia and Kenya.
 - ⇒ Technical and business surveys to introduce ultra-low-head micro hydropower (ULH-MHP) system in off-grid communities.

Results

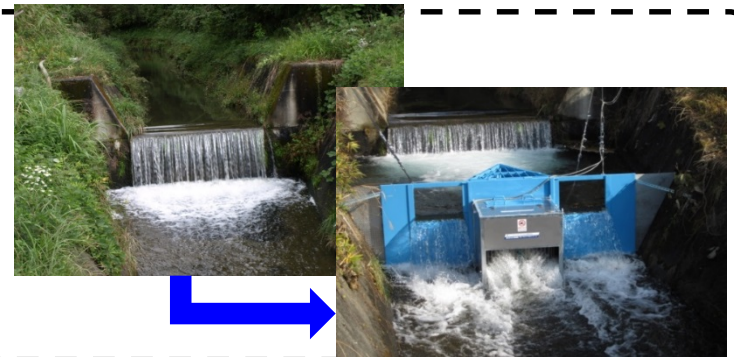
- The potential of ULH-MHP with heads less than 5 m was **1,552 places** in Kenya.
- **130,000 ton** of CO2 reduction was estimated if the system were introduced for these 1,500 places.
- The payback period is **4.4 years** by free cash flow.



LCET

Adopted NEDO results

- Applying technologies of JAG Seabell co., Ltd.
- The system can generate at head of less than 3m and small canals.



4. For Africa's industrialization

For Industrialization, developing countries need to nurture their own industry.



Technology & Market Development

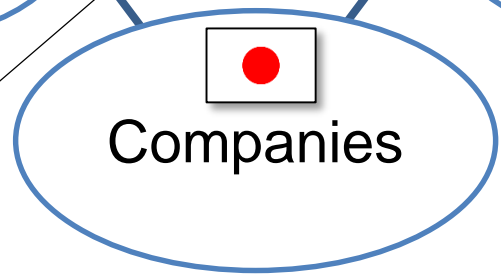


Ownership of African countries

Government

Companies

Technology Development For Industrialization



MOU between NEDO and UNIDO



Thank you very much for
your kind attention!

For more info ⇒

<http://www.nedo.go.jp/english>