

The background of the slide is an aerial photograph of the Tsukuba site, showing a dense urban area with various buildings, green spaces, and a large mountain range in the distance under a clear blue sky.

# **AIST as an Innovation Hub of Industrial Science & Technology for a Sustainable Society**

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President, AIST, JAPAN**

**Tsukuba site**

**<http://www.aist.go.jp/>**

## **What is AIST**

- **National institution for R&D of industrial technologies**
- **Established in 2001 unifying former 15 national laboratories**
- **Wide range of research with 6 research fields breaking the wall of traditional industrial technologies:**
  - Life Science & Bio-Technology
  - Information Technology & Electronics
  - Nanotechnology, Materials & Manufacturing
  - Environment & Energy
  - Geological Survey & Applied Geoscience
  - Metrology & Measurement Technology
- **Over 6,000 researchers and workers in 9 research bases spread all over Japan**
  - About 70% Concentrated in Tsukuba Center
  - About 15% Non-Japanese Researchers and Trainees
  - Three quarters of them from Asia, particularly from China, Korea and India

# Mission of AIST

- **Basic principle :**

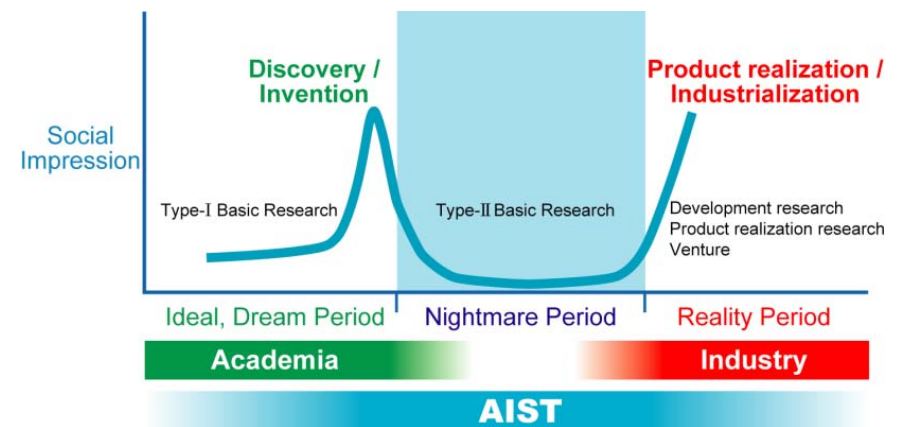
*Contribution to society through the advancement of industrial technology*

- **Mission:**

- *Contribution to a sustainable society*
- *Contribution to industrial competitiveness*
- *Contribution to local industrial development*
- *Contribution to industrial technology policies*

- **Full Research:**

*Coherent and concurrent research from basic research to product –realization research*



## **AIST's Activities toward Open Innovation** **- 3 Examples -**

- **Photovoltaics (PV)**

*Consortium on fabrication and characterization of solar cell modules with long life and high reliability*

- **Tsukuba Innovation Arena (TIA nano)**

*Establishment of the state-of-the-art nanotechnology research platform*

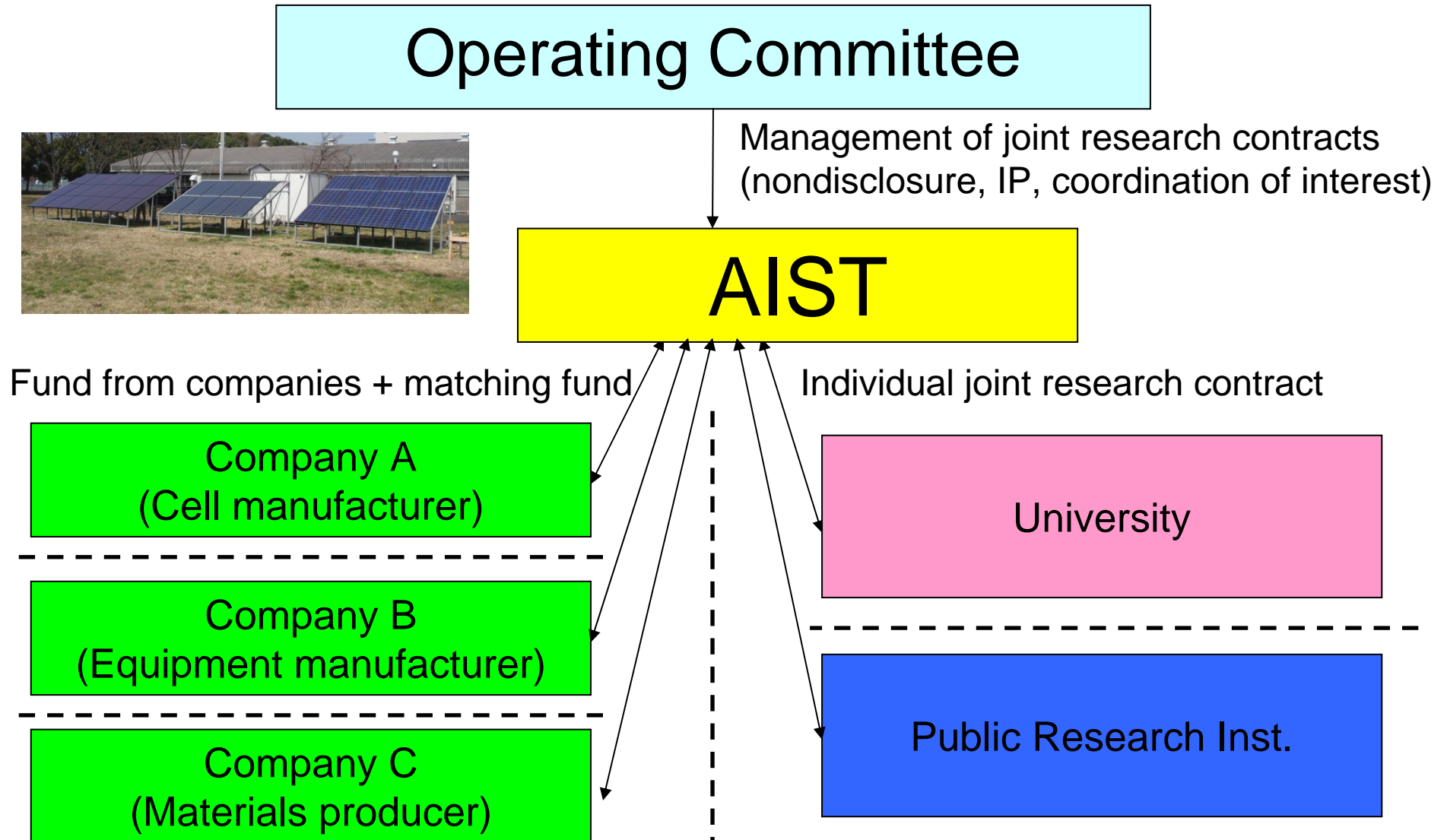
- **International Industrial Standard**

*Collaboration with Aisian partners for swift dissemination and utilization of industrial technologies*

# Consortium on fabrication and characterization of solar cell modules with long life and high reliability

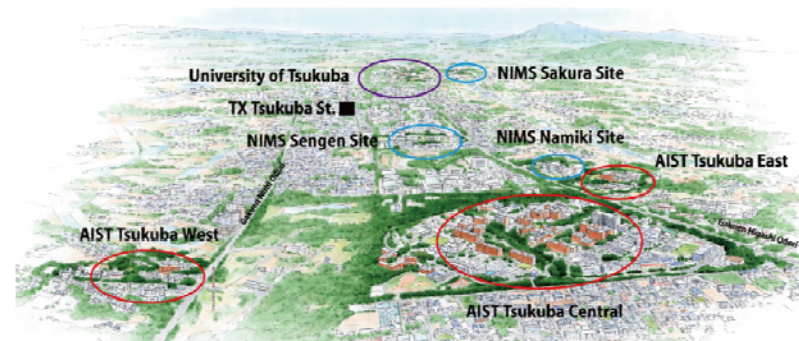
- Period: October 1, 2009 - March 31, 2011 (first phase)
  - Formation: AIST, 33 Private Companies, PVTEC, 9 Cooperative Organizations
  - Object Modules: Crystalline Silicon and Thin-film (Silicon and CIGS)
- 
- The Consortium will develop technologies for **increasing reliability and long-life of solar cell modules to reduce the cost of photovoltaic power generation.**
  - AIST will prepare a **platform for fabrication and evaluation of solar cell modules with practical size.**
  - Database of companies and network of human resources will be established.
  - The Consortium will **standardize components and create international standards for acceleration tests** in cooperation with PVTEC.
  - **Capacity building** of company researchers will be advanced.

# Structure of Consortium

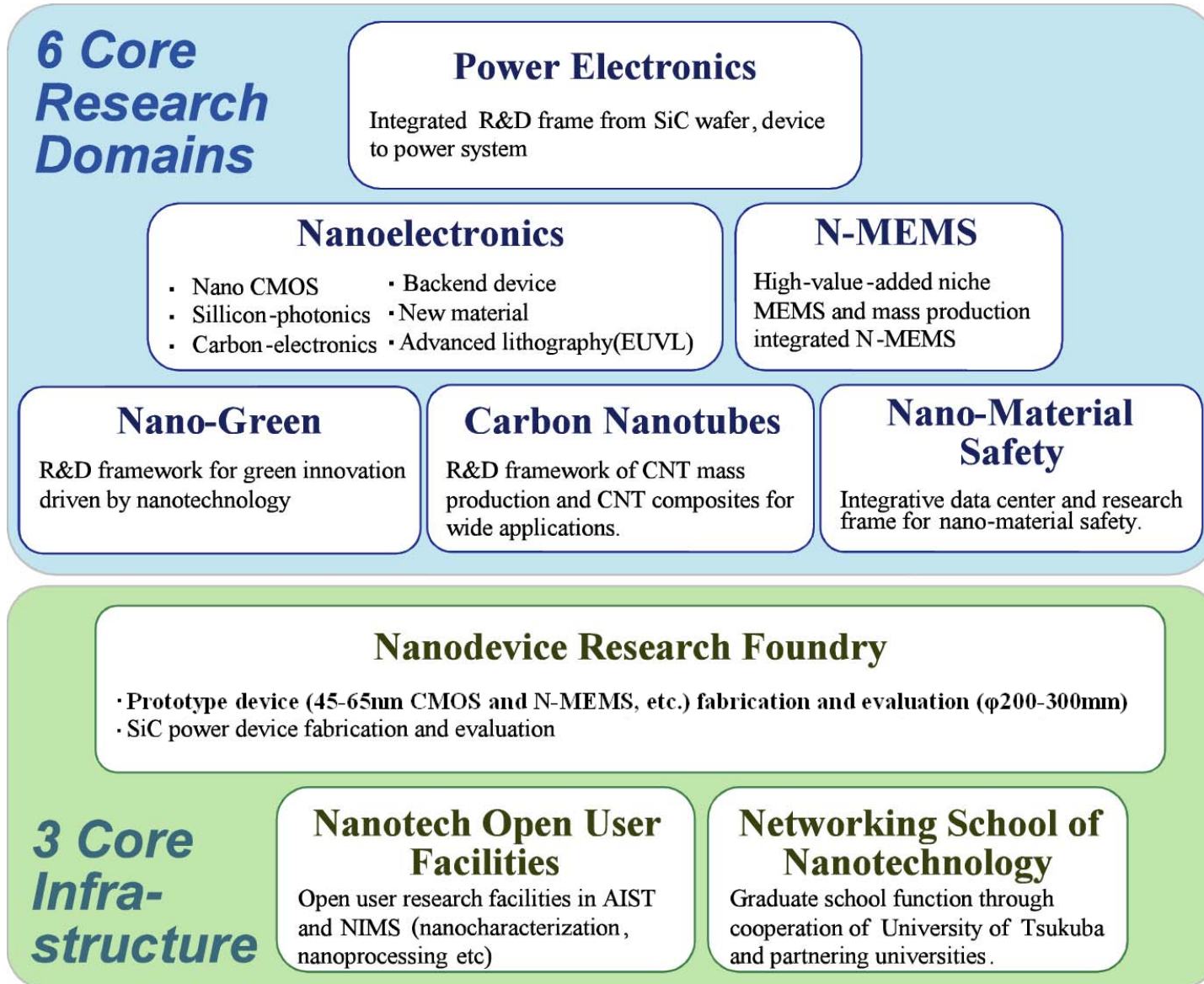


# *Tsukuba Innovation Arena (TIA)*

- ✓ Global center for nanotechnology innovation, a new research framework in cooperation of industry, academia and government
- ✓ Jointly organized by three prominent institutions in Tsukuba, AIST, NIMS (National Institute of Material Science) and Univ. Tsukuba
- ✓ Strongly supported by two ministries METI (Ministry of Economy, Trade and Industry) and MEXT (Ministry of Education, Culture, Sports, Science and Technology) reinforcing research infrastructure.
- ✓ Aiming to function as an open innovation research base and to accelerate nanotechnology innovations to the market in conjunction with education of the next generation.



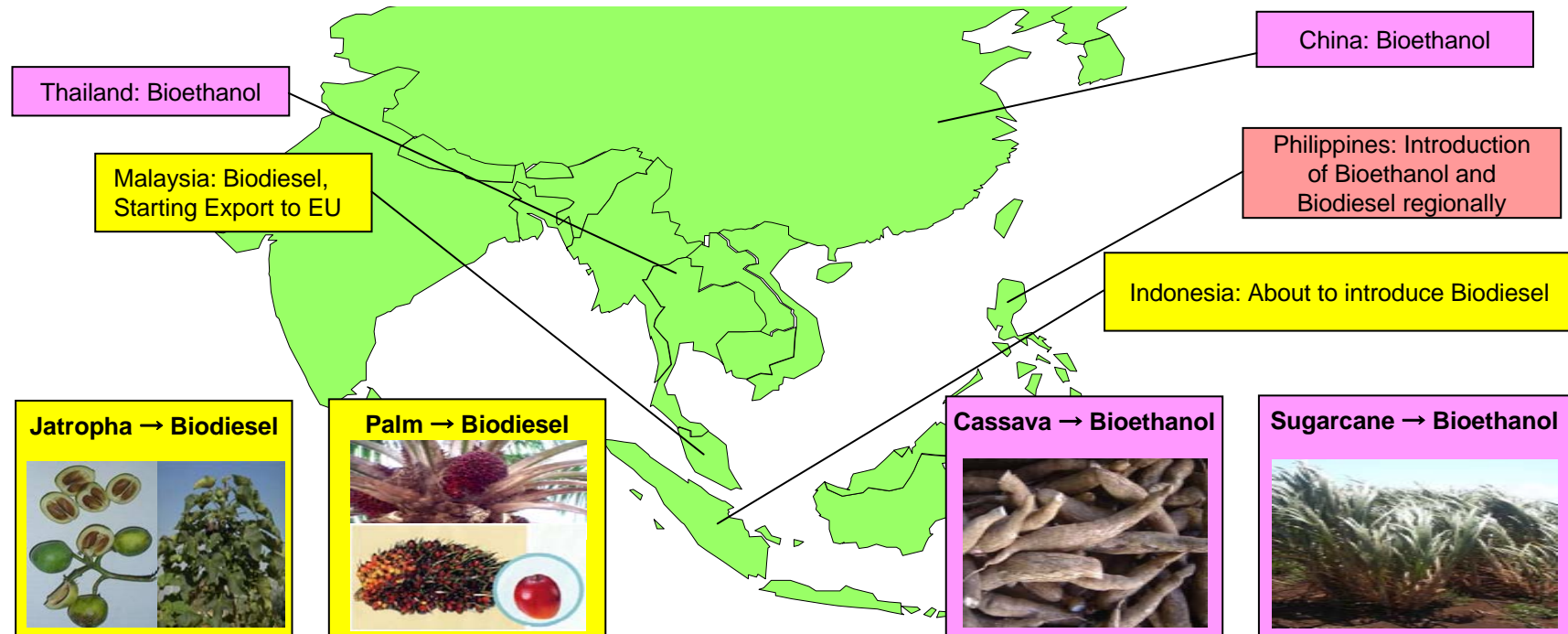
# Core competence of TIA



## ***International Standards***

- **Acquiring international industrial standards for swift dissemination and utilization of industrial technologies**
- **AIST's support for the ISO and IEC activities as a member of the international committees, and by proposing various industrial standards.**
- **AIST also has been positively cooperated in R&D with Asian public research institutes in order to jointly propose new standards to ISO and IEC.**
- **Some specific examples are:**
  - **Performance/reliability of solar cells**
  - **Properties & chemical composition of biodiesel fuels**
  - **Effectiveness/durability evaluation of photo-catalysts**

# Biomass Resources in East Asia and Standardization of Biodiesel Fuel (BDF) in ERIA Project



## Contributions to ERIA Energy Project: AIST leads two working groups

“Benchmarking of Biodiesel Fuel Standardization in East Asia” “Sustainability Assessment of Biomass Utilization in East Asia”

- Standardization of biofuels popularization in East Asia and to ensure the Japan’s initiative in reduction of CO<sub>2</sub> emissions
- Establishment of EAS-ERIA BDF Standards:2008

Recommended standards in East Asian countries of low level BDF blending with diesel fuel

Approved by Japan Automobile Manufacturers Association (JAMA) and Petroleum Association of Japan

Specified in the Joint Statement of the Second Energy Ministers’ Meeting in the East Asia Summit, (Aug., 08) to be inferred when making the

- Publication of Biodiesel Fuel Trade Handbook

To disseminate benchmarking of biodiesel fuel quality standards and to establish management methods and quality control of biodiesel in actual market

- For BDF standardization, AIST will open an analysis center to promote common analysis methods

Thank you very much  
for your attention