筑波研究学園都市と筑波大学
Tsukuba Science City and University of Tsukuba

2010. 01. 29
日中大学フェア&フォーラム
B-2　大学とサイエンスパーク・ハイテクパーク(Ⅱ)

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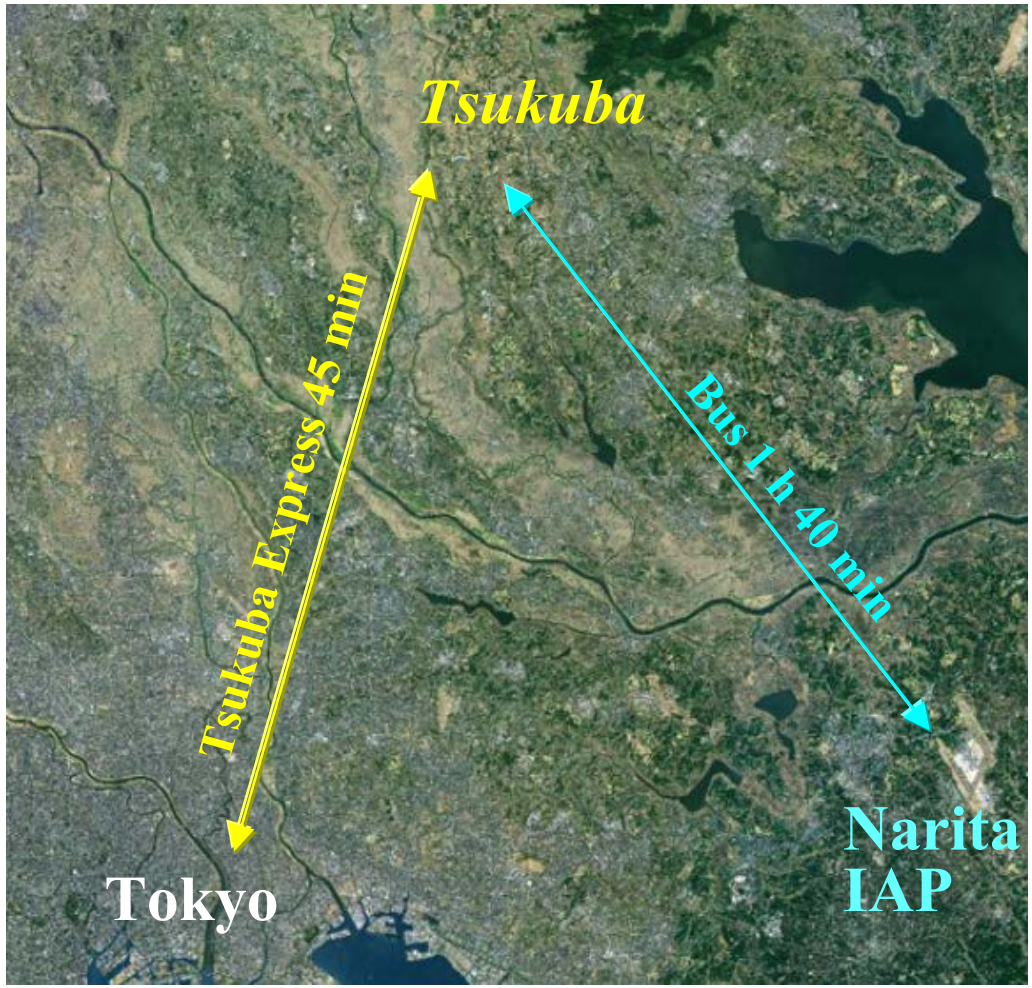
University of Tsukuba

Tsukuba Science City

Research Institutes : 172
- **Public Inst. and Univ. 24**
- **Private Company 148**
- **(No Factory !)**

Venture Companies : 146

Researchers : 13,000
- **Public Inst. and Univ. 8,500**
- **Private Company 4,500**
- **(Permanent employee only)**



History

- 1963　Government Decided to Build Science City in Tsukuba
- 1969　Construction began
- 1979　Construction almost finished
- 1985　Tsukuba Science Exposition held

Statistics of Tsukuba Science City

- Population ≒200.000
- Number of Institutes 172
- Number of Researchers ≒13,000
- Number of Foreign Researchers ≒3,500
- Number of Registered Foreigners ≒7,000
  - Best 5 nations:China, Korea, Brazil, Philippine, Thailand
- Number of Dr. ≒5,500
- Accumulated Investment ≒¥2.4 trillion

筑波大学
University of Tsukuba

- Founded in 1973

- Students 16,590 (as of May, 2008)
  - Incl. Postgraduate Students 6,379
- Faculty Members 1,651
- Administrative Staff 1,857

- Characteristics:
  - Overall university which covers a wide range of academic domains
  - Located in the center of Tsukuba Science City
  - Large number of students and researchers from other countries

筑波大学
University of Tsukuba

Technology Transfer

- By licensing of patents and know-how to private companies,
- By assigning the Intellectual Properties to private ones,
- By creation of spin-off companies,
- Through conducting cooperative researches with companies or other institutes, and/or giving it away by publishing in papers and presentations at conferences.

Statistics of University-Industry Cooperation in FY 2008

- University Spin-off : 5 New Spin-offs (76 Accumulated Total)
- University-Industry Cooperation Research : 295 (746 million yen)
- Inventions: Application for Patent 118, Licensed 14

National Institute of Advanced Industrial Science and Technology

Missions of AIST : Contribution to a sustainable society.
industrial competitiveness.
local industrial development.
industrial technology policies.

Revenue	99 billion Yen

Number of Staffs

Researchers	2,348
Tenured researchers	2,036
Fixed-term researchers	312
Administrative staff	690
Total number of employee	3,038

Number of Visiting Researchers

Postdoctoral researchers	500
From private companies	1,100
From universities	2,000
From corporation etc	850
From overseas	750

Lot area 2.5 x10^6 m^2, Total floor area 7.6 x10^5 m^2

Research Field : Composition of Research Staff

AIST

Life Science and Biotechnology : 18 %

For the Realization of a Safe and High-quality Life

Information Technology and Electronics : 17 %

R&D Targeted Toward the Human Life Pervasive Network

Nanotechnology, Materials and Manufacturing : 16 %

Innovative and Cross-disciplinary Basic Technology

Environment and Energy : 23 %

For the Realization of a Sustainable Recycling-oriented Society

Geological Survey and Applied Geosciences : 10 %

Geoscientific Data Infrastructure, Disaster Prevention, Geo- and Marine Resources and Environment

Metrology and Measurement Science : 16 %

Development and Dissemination of the National Measurement Standards

独立行政法人 物質・材料研究機構
National Institute for Materials Science

National Institute for Materials Science

Revenue 22 billion Yen

Number of Staffs

Researcher	420		
Engineer	56		
Administration	92		
Subtotal	568	Fixed-term employee	821

Mission of NIMS

Fundamental research and generic / infrastructural technology research and development

Dissemination of research results and promotion of their applications

Shared use of NIMS facilities and equipment

Training of researchers and engineers

Centers:

Advanced Nano Characterization
Computational Materials Science
Quantum Dot Research
Quantum Beam
Nanotechnology Innovation
Organic Nanomaterials
Nano Ceramics
Advanced Electric Materials
Optronic Materials
Magnetic Materials
Biomaterials
Fuel Cell Materials
Superconducting Materials
Photocatalytic Materials
High Temperature Materials
Structural Materials
Advanced Photovoltaics
Materials Reliability
Hybrid Materials
Sensor Materials

独立行政法人 物質・材料研究機構
National Institute for Materials Science

Exploratory Nanotechnology R.L.

Exploratory Materials R.L. for
Information Tech.
Biotechnology
Energy and Environment
Reliability and Safety

Station

High Electron Microscopy
High Magnetic Field
Beam Line
Materials Database
Materials Manufacturing and Engineering
Materials Analysis

Inter-Institute Collaborations in Tsukuba Science City

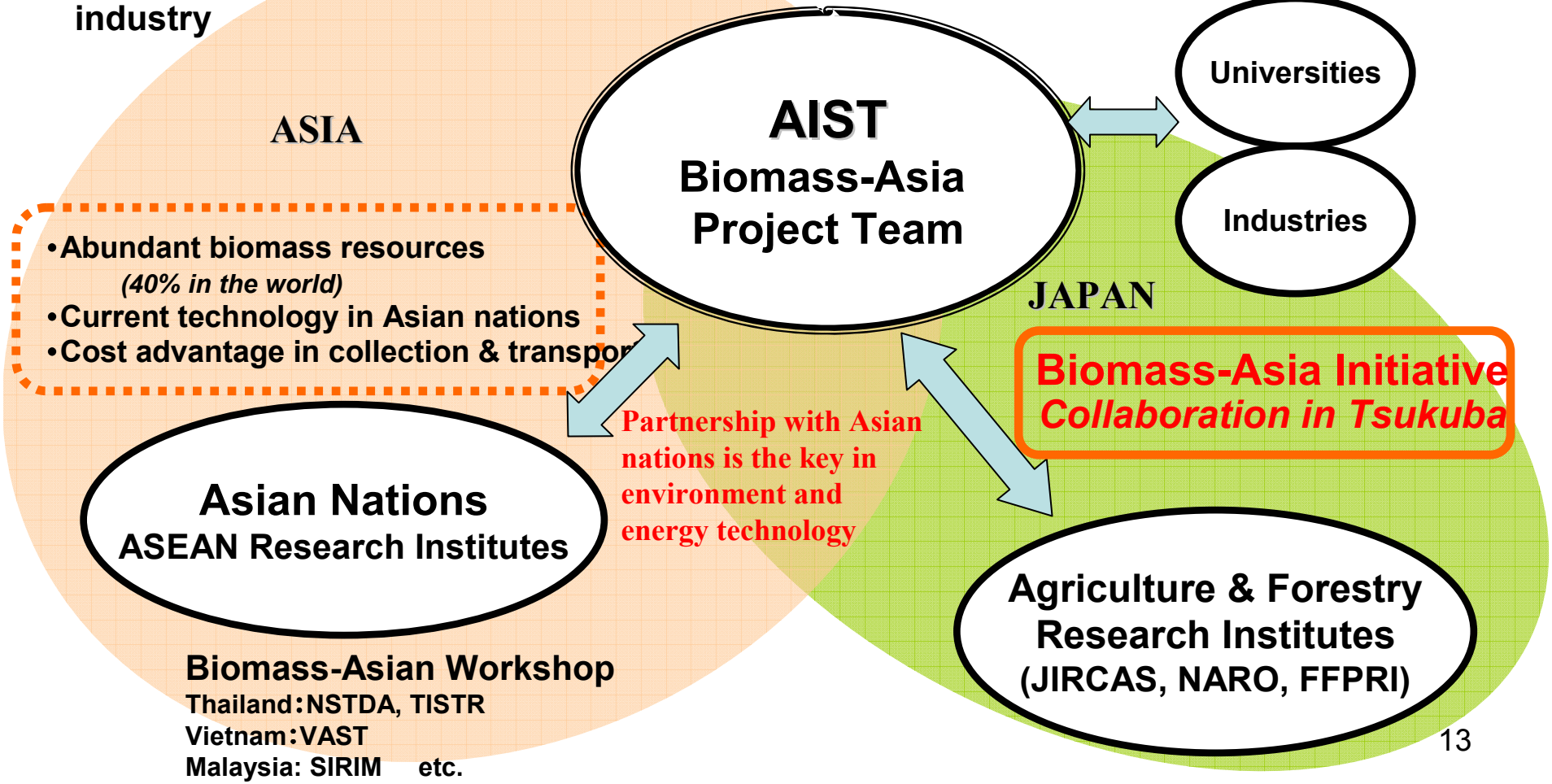
- 研究所・組織間の協力協定
  - 産総研・物材機構・筑波大学の協力協定
  - 連携大学院（筑波大学）など
- 研究者間の共同プロジェクト
  - 多数

- 協力に基づく組織(with local governments)
  - 筑波学園都市協議会
  - つくば研究支援センター
  - つくば医療産業懇談会
  - つくばWAN
  - つくばサイエンスアカデミー

Biomass-Asia Initiative

Inter-Institute Collaboration in Tsukuba

1. Environmentally-friendly development of bio-energy and biomaterial industry
2. Reducing CO_2 emission by biomass utilization
3. Encouraging sustainable primary industry, and creating new biomass-based industry



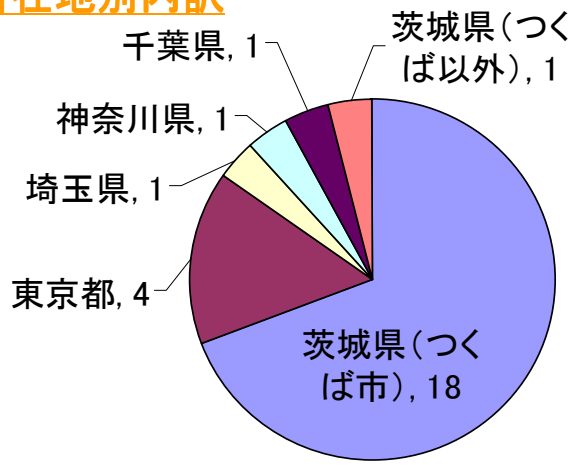
Collaborative Activity in University of Tsukuba

- 連携大学院:
  - Cooperative Graduate School

多種の機関と連携した大学院教育

現在、26の機関と連携

所在地別内訳



国	気象研究所
国	国立感染症研究所
国	国立国際医療センター研究所
特	日本原子力研究所東海、那珂事業所
（独）	建築研究所
（独）	国立環境研究所
（独）	産業技術総合研究所
（独）	食品総合研究所
（独）	森林総合研究所
（独）	土木研究所
（独）	農業・生物系特定産業技術研究機構
（独）	農業環境技術研究所
（独）	農業工学研究所
（独）	農業生物資源研究所
（独）	物質・材料研究機構
（独）	防災科学技術研究所
（独）	メディア教育開発センター
（独）	理化学研究所
（財）	東京都医学研究機構
民	アステラス製薬（株）御幸が丘、東光台センター
民	エーザイ（株）筑波研究所
民	（株）電通　電通総研
民	東陶機器（株）総合研究所
民	凸版印刷（株）
民	日本電気（株）筑波研究所
民	日本電信電話（株）アクセスサービスシステム研究所

Tsukuba Center Inc. was
established by investment of
the Ibaraki Prefectural Government,
the Development Bank of Japan, and
seventy six private companies in Tsukuba Science City in 1988.

TCI is promoting the establishment of new business based on the cooperation of R&D organizations in Tsukuba Science City.

TCI is providing services that benefit regional development by supporting exchanges and cooperation of researchers from R&D organizations .

TCI is acting as a base for supporting the establishment of venture businesses and is promoting the cooperation between R&D organizations.

TCI also provides information on R&D in Tsukuba.
See,
http://www.tsukuba-tci.co.jp/index.html

Current Issues on Tsukuba Science City in Japan

1. Increasing of inter-institute collaborations

- **but, still not enough number**

2. No Factories in private company area:

- Many research institutes but no factories,
  - Because of the environmental regulation in Tsukuba area.

3. Promotion of Venture Companies,

- **but, Shortage of venture funds, Engels for marketing, management and funding**
- Tsukuba Venture Fund (0.5 billion yen) alone.