

Perspective of Industry-University Collaboration in Japan



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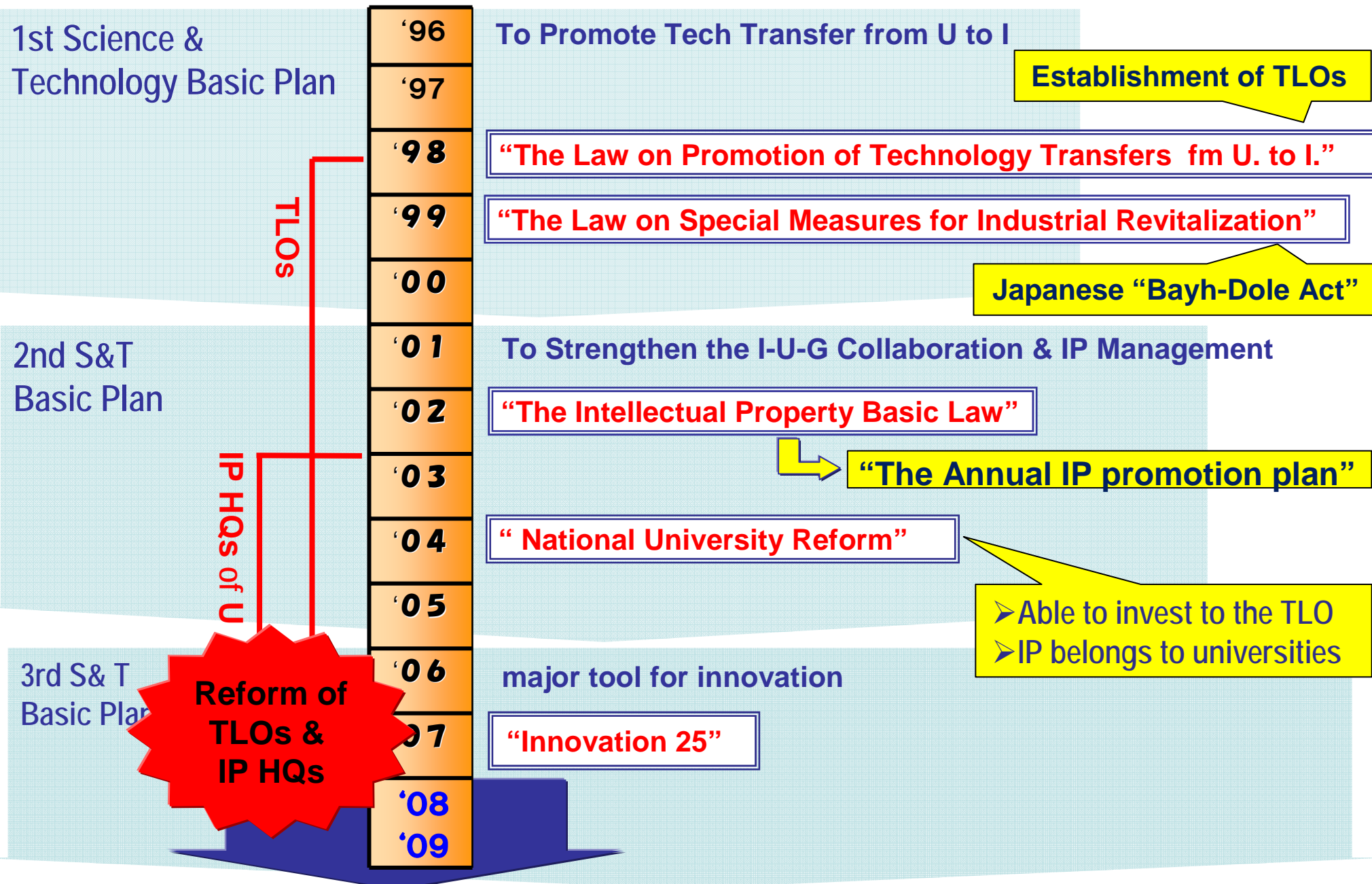
Director, Research Environment and Industry Cooperation Division

Ministry of Education, Culture, Sports, Science and Technology

(MEXT)

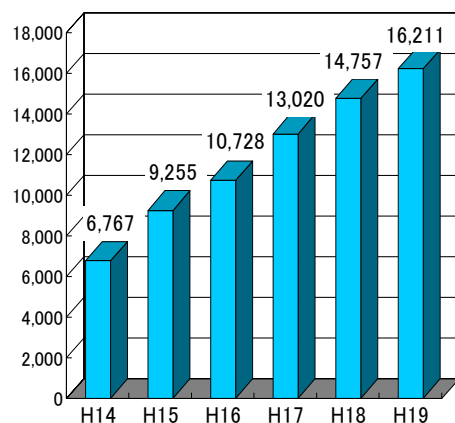
13. Jan. 2009

Development of the I-U-G collaboration policy -to the Next Decade-



Improvement of I-U Collaboration & U's IP activities

of Joint Researches

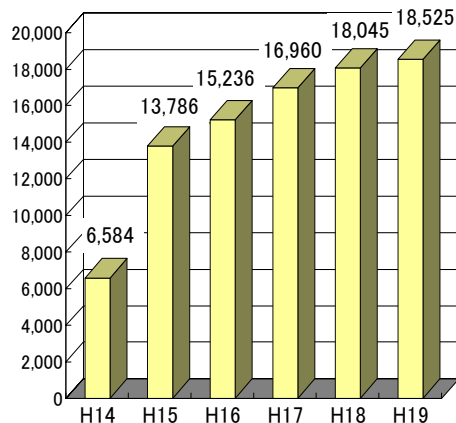


H15→H19 : 1. 8 times (approx.)

of Joint researches

	H16	H17	H18	H19
National Universities	9,378	11,362	12,405	13,654
Public Universities	412	493	697	766
Private Universities	938	1,165	1,655	1,791
Total	10,728	13,020	14,757	16,211

of Sponsored Researches

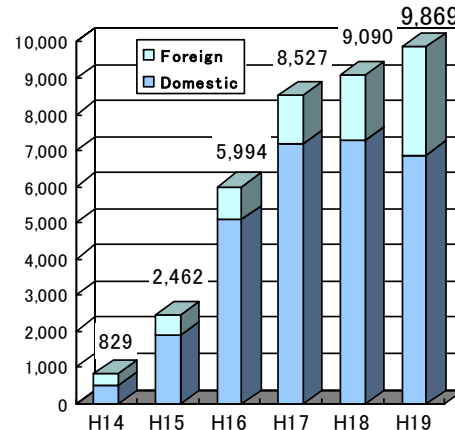


H15→H19 : 1. 3 times (approx.)

of Sponsored Researches

	H16	H17	H18	H19
National Universities	7,827	9,008	10,082	10,584
Public Universities	1,169	1,156	1,187	1,162
Private Universities	6,240	6,796	6,776	6,779
Total	15,236	16,960	18,045	18,525

of Patent Applications

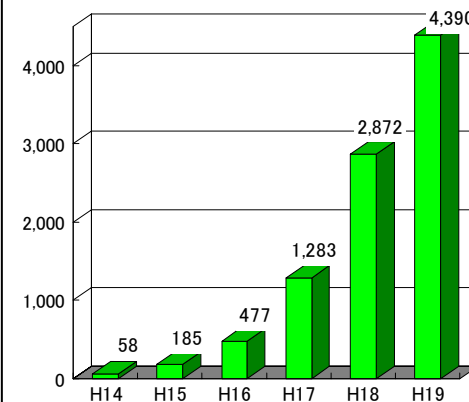


H15→H19 : 4. 0 times (approx.)

of Patent Applications

	H16	H17	H18	H19
National Universities	4,152	6,255	7,003	7,642
Public Universities	122	285	369	398
Private Universities	1,720	1,987	1,718	1,829
Total	5,994	8,527	9,090	9,869

of Patent Licensing



H15→H19 : 23. 7 times (approx.)

of Patent Licensing

	H16	H17	H18	H19
National Universities	223	932	2,026	3,204
Public Universities	7	34	37	76
Private Universities	247	317	809	1,110
Total	477	1,283	2,872	4,390



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Blue Light-Emitting Diode (Blue LED)

Prf. Akasaki invented GaN LED

(Mass production)

Nagoya University

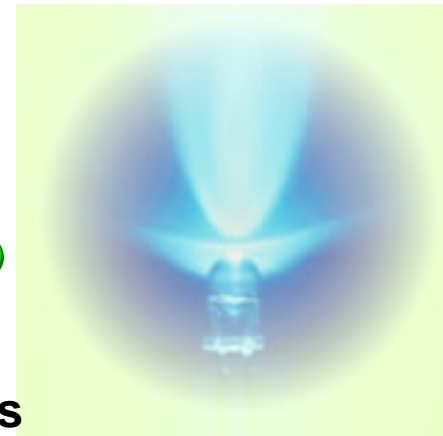
TOYODA-GOSEI Inc.

Financial & Contractual Support for R&D

JST

¥100B sales

¥5B to JST & Nagoya Univ.



HQ Tunnel Magneto resistance Device for Ultra high Density HDD

Osaka University

Noise control method

AIST

Cannon Anelva Inc.

MgO-TMR

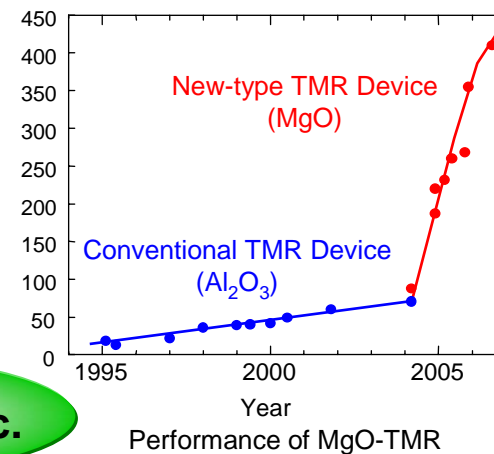
(Mass production)

Financial Support for R&D

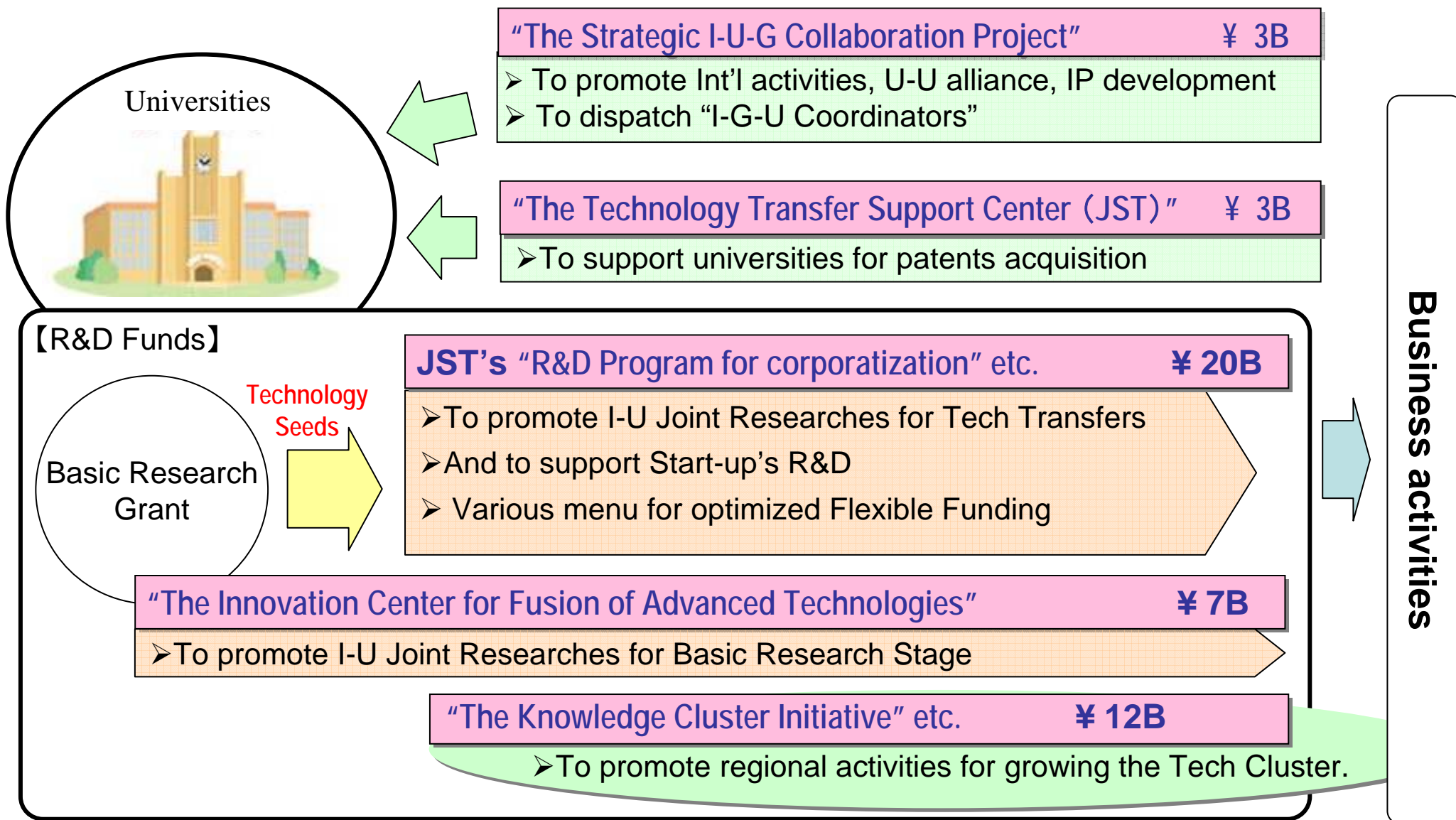
NEDO

¥300B sales

(Magneto-head for HQ HDD)



Overview of MEXT's Programs to strengthen I-U Partnership

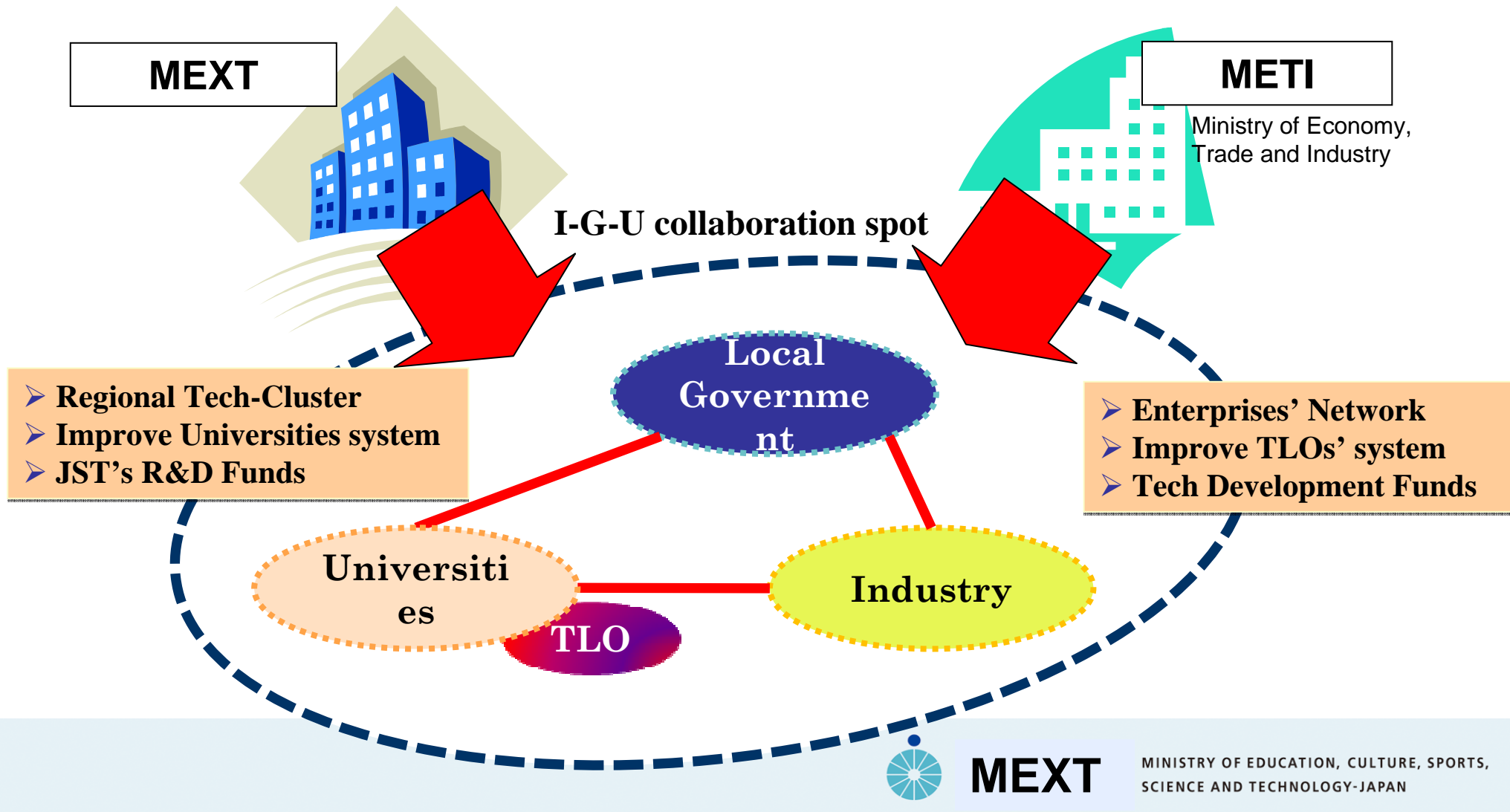


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“I-G-U collaboration spot”s (from 2009)

- ◆ To develop “Tech-Innovation eco-system”
- ◆ MEXT & METI will select 10 global and 20~30 local “I-G-U collaboration spot”s.
- ◆ Both Ministry implements various measures to promote I-G-U collaboration.



For Solving Global Issues & the Welfare of Mankind

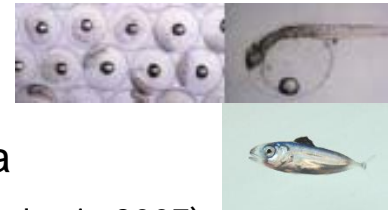
Tohoku University : CDM Project in China

- Tohoku Univ. & JCF Inc. introduced “Coke Dry Quenching System” to Shansi’s Coke Industry
- This project is registered to the CDM, a part of “the Kyoto-Mechanism”
- Contributing improvement of China’s energy efficiency & Japan’s target of CO₂ mitigation



Kinki University : Farm-raised Sustainable Tuna

- Kinki Univ. succeeded completely farm-raised Bluefin Tuna
- Established “A-marine Kindai Inc.” for production and distribution (¥4B sales in 2007)
- Contributing to Breadbasket Issue, Marine Resources Issue & Food Safety Problem



Kyoto University : Global I-U Cooperation on iPS etc.

- Cooperation on iPS research with Harvard Univ., Toronto Univ., Novocell Inc....
- Forming Global I-U Research Network aiming at Clinical Applications.
- Establish overseas offices (in Beijing, London) for global I-U Collaborations



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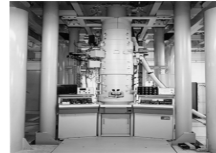
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Open use of the Advanced Research Facilities

- Super computing system
- Synchrotron radiation facilities
- High-power laser system
- Measurement and analysis equipments etc.

Chubu district

- ◆ Shinsyu University
- ◆ Sizuoka University
- ◆ Nagoya University
- ◆ National Institute of Natural Sciences and cooperation institutions



Nagoya University :
The Megavolt Electron Microscope

Hokkaido/Tohoku district

- ◆ Hokkaido University
- ◆ Tohoku University



Tohoku University :
The Non-cooling medium Hybrid Magnet

Kinki district

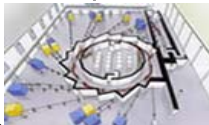
- ◆ Osaka University
- ◆ Kyoto University and cooperation institutions
- ◆ Japan Atomic Energy Agency



Osaka University :
The High Intensity Laser Equipments

Chugoku/Shikoku/ Kyusyu district

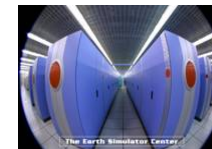
- ◆ Hiroshima University
- ◆ Kyusyu University and cooperation institutions



Kyusyu synchrotron Light Research Center :
The Synchrotron Light Equipments

Kanto district

- ◆ Tsukuba University
- ◆ High Energy Accelerator Research Organization
- ◆ National Institute for Materials Sciences
- ◆ National Institute of Advanced Industrial Science and Technology
- ◆ University of Tokyo
- ◆ Tokyo Institute of Technology
- ◆ Waseda University
- ◆ Riken
- ◆ Japan Agency for Marine-Earth Science and Technology
- ◆ Yokohama City University



JAMSTEC :
The Earth Simulator



Spring-8/XFEL



Next-Generation Supercomputer



J-PARC

They are listed in "The Law for the Promotion of Public Utilization of the Specific Advanced Large Research Facilities"

Conclusion

- **I-U collaboration in Japan has been greatly developed in the last decade.**
- **As an assignment of the next decade, the Japanese University will develop Global I-U Collaboration activities, in order to contribute to Global Issues and the Welfare of Mankind.**
- **They are looking for and welcome I&U partners from across the world. There are many technological seeds and research environment in Japan.**
- **Japanese Government strongly supports those global I-U collaboration, which will show the competitiveness of research of Japanese Universities.**



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Thank you for your attention !

We welcome your comments and questions.

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