JST Bridges Science and Society by every means

November 7th, 2014

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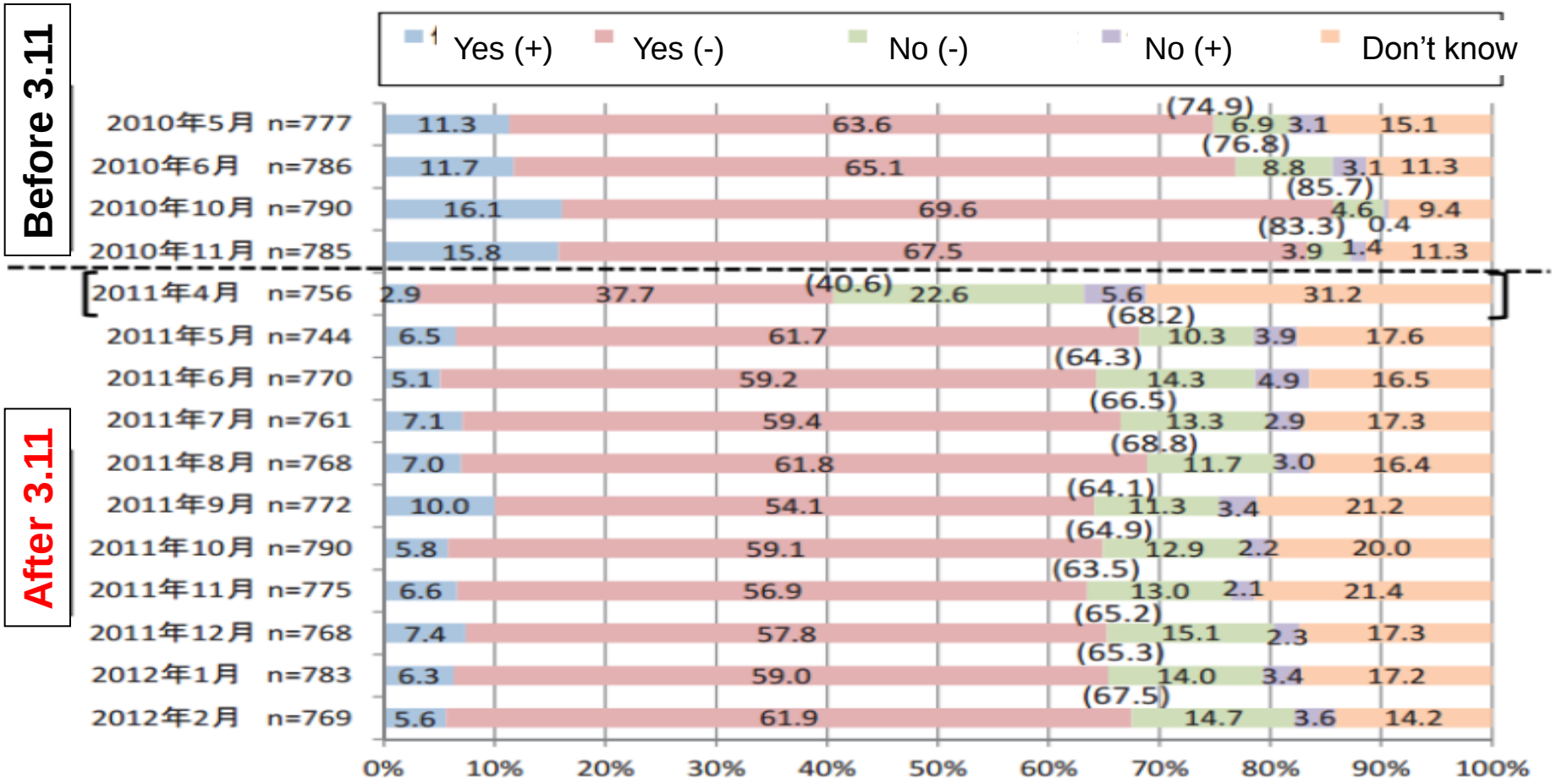
http://www.jst.go.jp/EN/index.html

What is happening to the relation between science and society in Japan?


March 11 2011 struck Science!

Do you trust scientists or their explanation ?



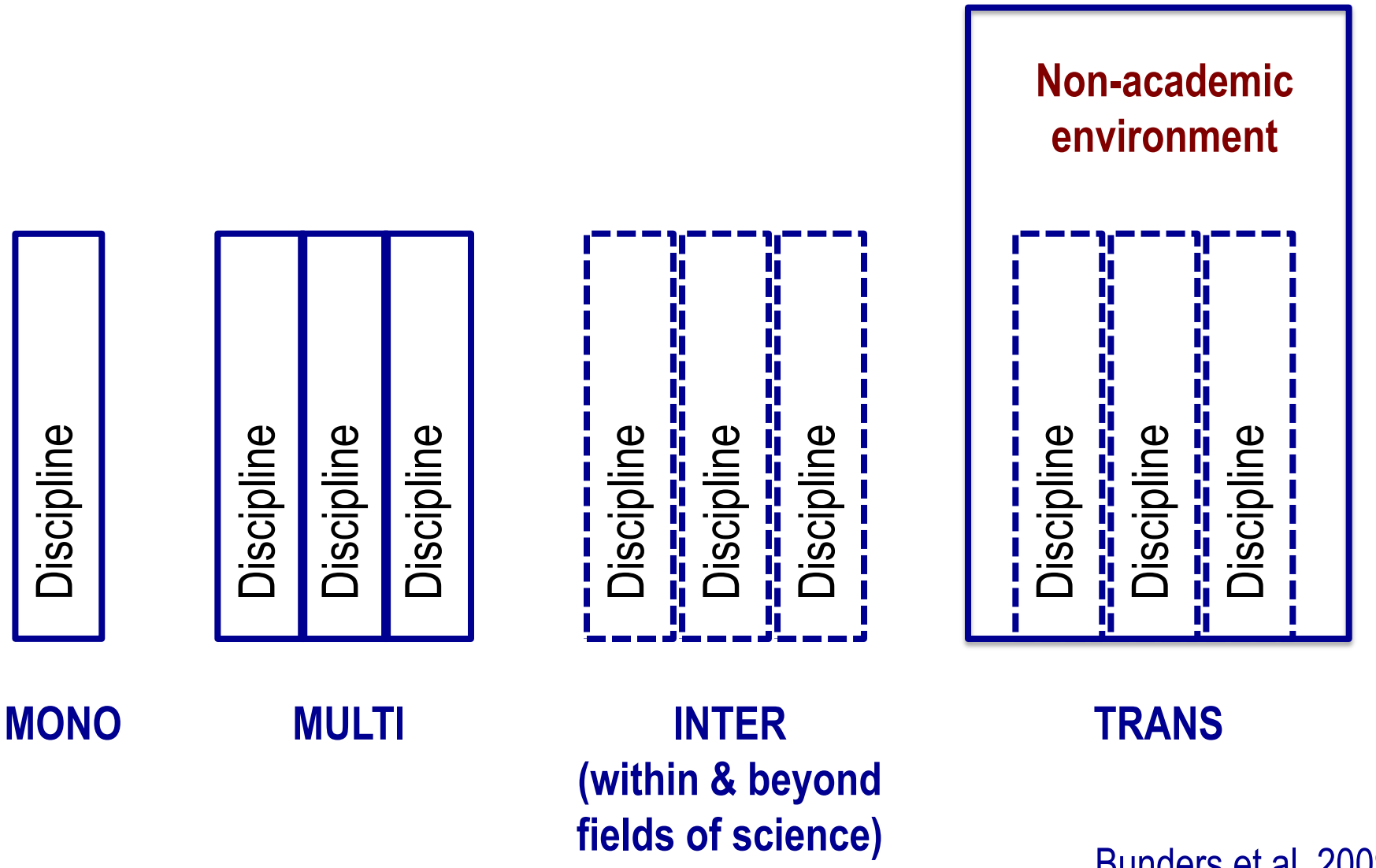
Reference: The Change of the Public Attitudes to Science and Technology
－The Findings from Face-to-Face Interviews and from a Monthly Internet Survey－, NISTEP, June 2012.

Serious Situation

- In Japan, people's trust for scientists (as well as engineers) has degraded by more than 10 points after the Great East Japan Earthquake in 2011.
- At the same time, people well understand that society without science, technology and engineering cannot be realistic.
- We need to restart trust building between science or scientists and the society. This is a quite urgent matter.

Global Circumstances

- Nowadays, society or human life and science are interconnected and twisted. Thus,
  - Stakeholders regarding science are not limited within experts, but expands to everyone who consists society.
  - Issues we face today are so complex that a single discipline alone may not provide a better solution.
- Early involvement of every stakeholder to science activity, i.e. co-design, co-production and co-delivery, is important.
- Inter-disciplinary or Trans-disciplinary mind set is strongly required. Especially involvement of social science and humanities is important.



Bunders et al, 2009

Bridging, linking, connecting…

- Scientists' activities in society is crucial. Their communication and interaction with society should be definitively 'two ways'. People are father knowledgeable than scientists imagine.
- As a very specific example, science advice is important as a linkage function between science and policymakers who represents the society in the democracy.

JST as a bridging organization of Science, engineering and Society

Operating Policy of JST

Mission

We contribute to actualize the prosperity and sustainable society in Japan through implementing the advanced R&D as well as transferring achievements to the industry.

Vision

1. Achieving innovations in science and technology through creative research and development
2. Maximizing research outcomes by managing research resources on a virtual network
3. Developing Japan's infrastructure for science and technology so as to accelerate innovation in science and technology

Goal Value

Quantum Leaping	High Impact	Sustainability	Human Development

Major Operation

R&D Strategy

R&D Strategy Planning

- Center for R&D Strategy (CRDS)
- China Research and Communication Center (CRCC)
- Center for Low Carbon Society Strategy (LCS)

Strategic Basic Research / Innovative Research

Promoting Creation of Science, Technology and Innovation

- Strategic Promotion of Basic Researches
- R&D based on University-Industry Collaboration
- Recovery and Revival from the Great East Japan Earthquake
- Promotion of International S&T Joint Projects
- R&D System Reform
- Promotion of ImPACT, SIP

S&T Infrastructure

Establishing an infrastructure to drive the generation of innovation

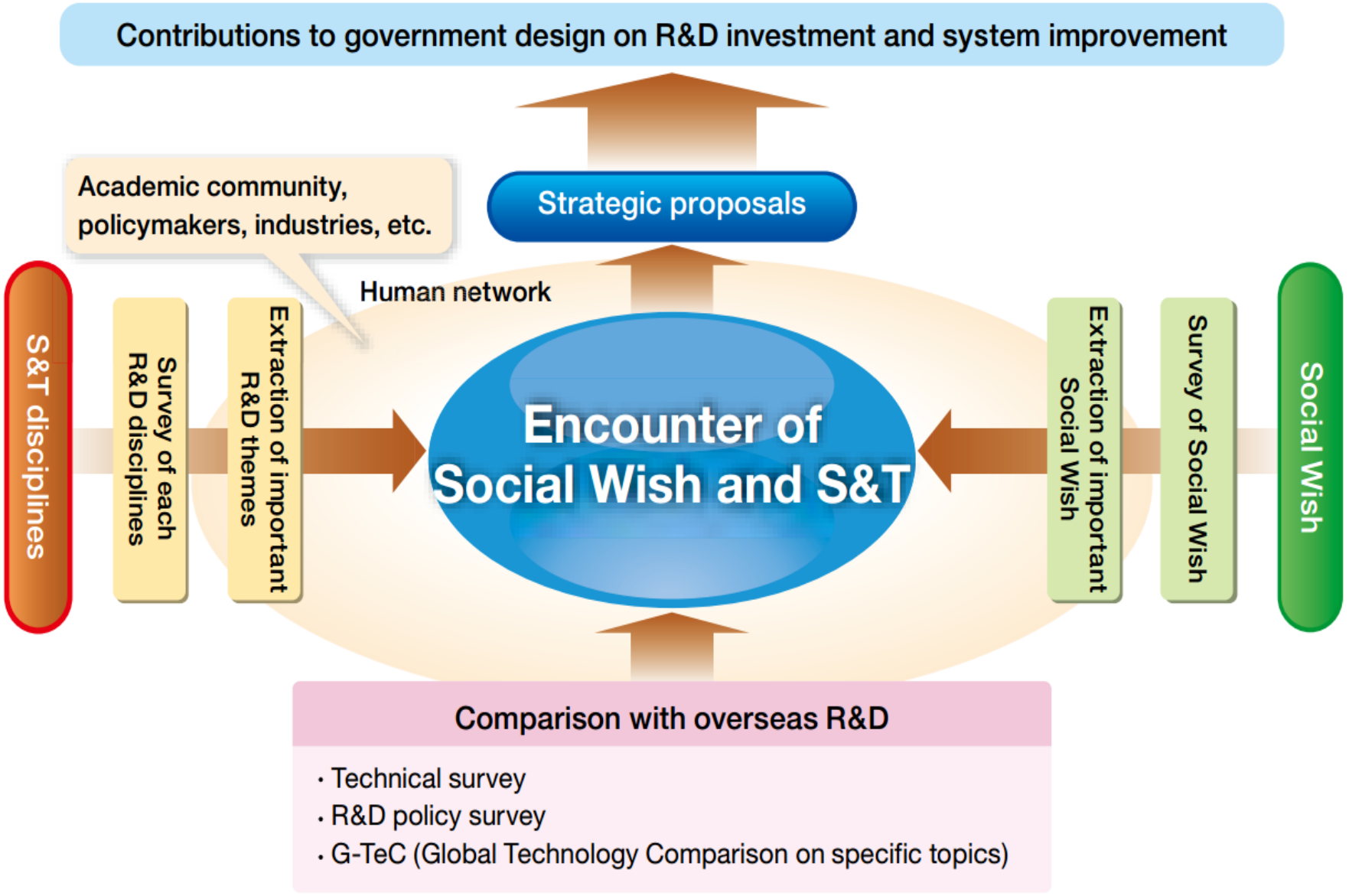
- Soft infrastructure to support innovation -

- **Knowledge Infrastructure**
- **Next-Generation Development**
- **Science Communication**

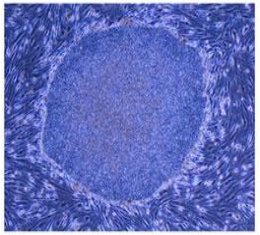
R&D Strategy - Center for Research and Development Strategy (CRDS)

- Realizing expectation of the society
  - Encounter of Social Wish and S&T as a Planning Process for R&D Strategies.
- Pursuing better science advice
  - Examining the roles of science and the government in policy-making.
- Collaborating with global partners
  - Multilateral discussions, such as International Council for Science (ICSU), Global Research Council (GRC), AAAS annual meeting, and OECD Global Science Forum.

R&D Strategy - Center for Research and Development Strategy (CRDS)



Connecting science with society by making science ideas to reality



- Strategic basic research
  - Intellectual excellences in science are evolving according to strategy up to proof of concept.

  (Ex) iPS cell (Professor Yamanaka)

- Innovative development
  - Proved concepts are evolving with industry to concrete outcomes as prototype.

  (Ex) Blue LED

  (Professor Akasaki and Toyoda Gosei co. Ltd)

Connecting through information dissemination

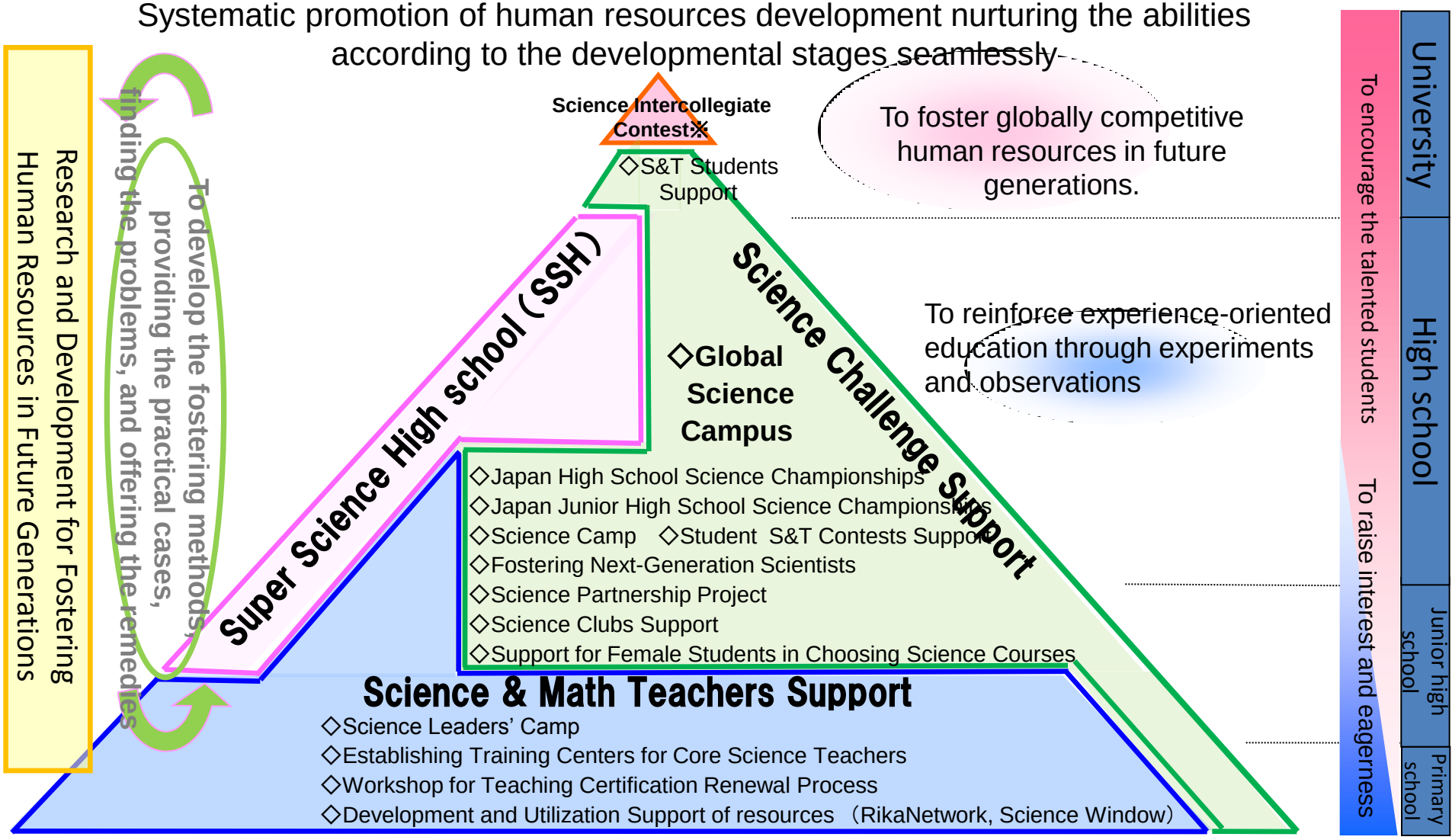
- Through actualizing the Open Access, JST will create the environment where not only universities and academic society but also researchers and technicians in the private sector can utilize the S&T information and various stakeholders can obtain considerable merits and make the contribution for creating the innovation.
- e.g. Storing data in institutional repositories, Construct the institutional repositories, Grasp the information comprehensively, from funding to accomplishment reports.

Next-Generation Development

- Encouraging talented children
- Improvement in teaching skills in S&T
- R&D for verification of effects, popularization of results

Next-Generation Development

Systematic promotion of human resources development nurturing the abilities according to the developmental stages seamlessly



- Conveying S&T knowledge on websites and hard copies

→ Science Channel, Science Portal etc.

- Support institutional science communication activities and establishing local networks for science communication
- Implementing of science communication platforms

→ **Science Agora**, JST outreach activities, etc.

- Science communication study and research (including risk communication)

A history and a future perspective of the Science Agora

What is Science Agora?

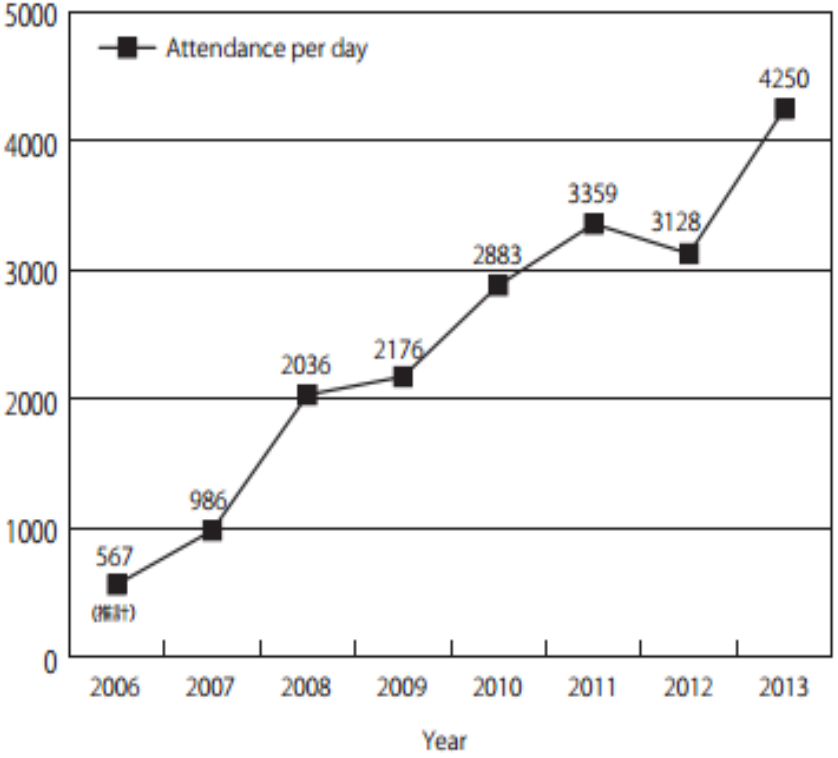
サイエンスアゴラ
Science Agora

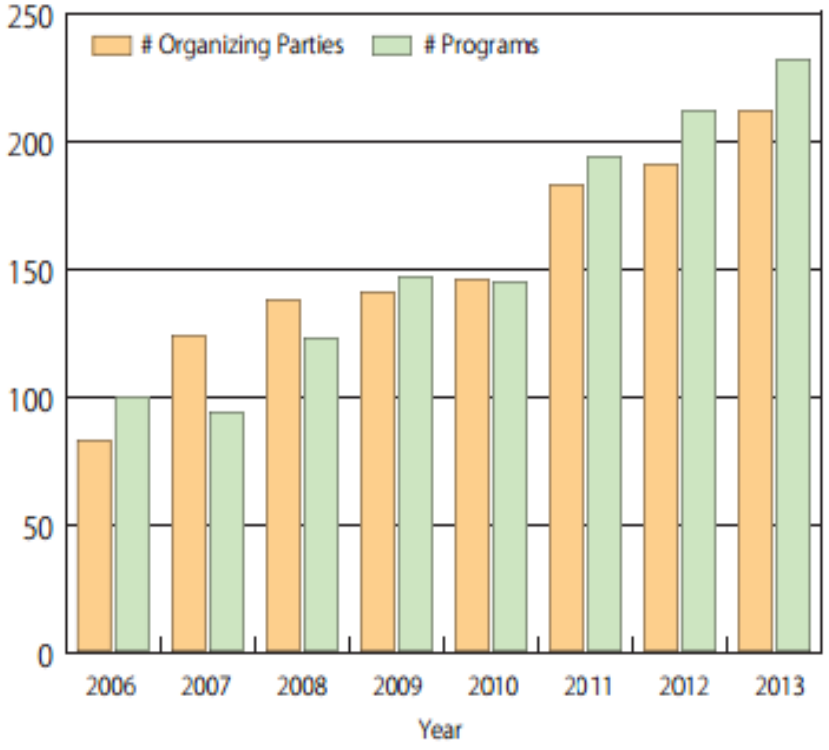
- **Science Agora is an annual event aimed at linking science and society through science communication.**
- **It is an event consisting of a variety of programs for discussing policies from various angles to improve society by utilizing S&T.**
- **Since its establishment in 2006, it has been growing year by year, and in 2013 we had more than 200 programs and more than 8500 attendees.**

#	Year	Date	Place	Attendance	# Programs	# Parties
1	2006	Sat-Mon, Nov. 25-27	Tokyo	1700 (estimated)	100	83
2	2007	Fri-Sun, Nov. 23-25	Tokyo	2959	94	124
3	2008	Sat-Mon, Nov. 22-24	Tokyo	6109	123	138
4	2009	Sat-Tue, Oct. 31-Nov. 3	Tokyo	8705	147	141
5	2010	Fri-Sun, Nov. 19-21	Tokyo	5934	145	146
6	2011	Fri-Sun, Nov. 18-20	Tokyo	7057	194	183
7	2012	Sat-Sun, Nov. 10-11	Tokyo	6255	212	191
8	2013	Sat-Sun, Nov. 9-10	Tokyo	8500	232	210

Science Agora Event Statistics (1)

Science Agora enjoys steady growth. It has been contributing to expansion of networks among practitioners of nationwide excellence, and thus offers a myriad of communication opportunities for everyone at all ages.



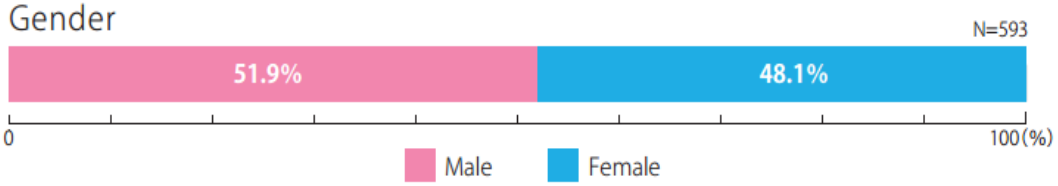


Science Agora Event Statistics (2)

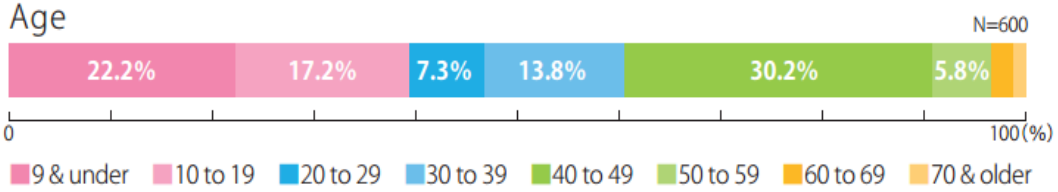
Who visited?

◎Both children and adults enjoyed the visit.

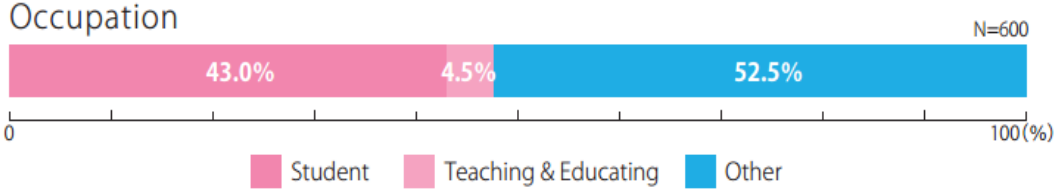
Gender



Age

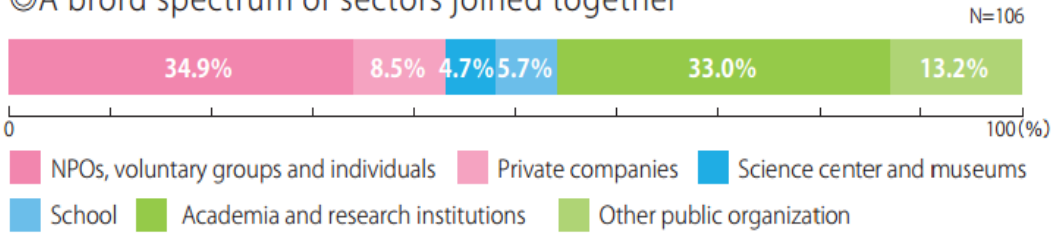


Occupation



Who exhibited?

◎A brord spectrum of sectors joined together



Science Agora 2013

Reflection

- **Science Agora seems to be a festival for Science Communicators in 2013.**
- **It should be not only a festival for Science Communicators but a forum of scientists, engineers, and related stakeholders.**
- **It should be a forum aiming to be as high quality as AAAS annual meeting and ESOF.**

Focused Approaches towards Agora 2014

サイエンスアゴラ
Science Agora

We would like to expand the event, and invite not only science communicators but also scientists, policy makers, business leaders and related stakeholders.

1. Enriching event programs through the participation of scientists and scientific communities

"Opening to the public" JST's virtual research institutes: Discussing underlying issues in the science community, such as the fusion of diverse academic fields, interaction with society, research ethics, and personnel development

2. Diversifying the sector of participating stakeholders who are involved in science

Media, publishing industry, industrial society, government & administration, general citizens, next-generation personnel, etc.

Future perspective

- **Scientists and Engineers themselves put their effort into understanding of the social wish.**
- **Social Infrastructures support bridges among society including scientists, engineers, policy makers.**
- **Not only Scientists and Engineers but citizens co-design, co-production and co-delivery the outcomes of science and technology.**