



Japan Science and Technology Agency

Emi Yasuda

Section Chief

Department of Strategic Planning and Management

Japan Science and Technology Agency (JST)



Japan Science and Technology Agency (JST)

- History
- Japanese Science and Technology Policy and Budget
- Japan Science and Technology Basic Law and Basic Plan
- Independent Administrative Institution
- JST Position in Japanese Administrative Structure
- JST Vision
- JST Organization Chart and Budget
- JST Services
- JST PDCA Cycle



What is JST ?

- The Japanese Science and Technology Agency (JST) is an independent administrative institution under the authority of the Ministry of Education, Culture, Sports, Science and Technology (MEXT) in Japan.
- JST supports advanced research activities to realize a better standard of living through the utilization of science and technology.
- JST is engaged in a wide variety of projects to develop interest in science and technology.



History

Integration

Administrative Reform

1957
Japan Information Center of
Science and Technology
(S&T Information)

1961
Research Development
Corporation of Japan
(Technology Transfer)

1996
Japan Science and
Technology
Corporation

2003
Japan Science
and Technology
Agency

2009
JST
Long-term
Vision

Addition of New Services

1981
(Solution-oriented)
Basic Research

1993
Researcher
Exchange

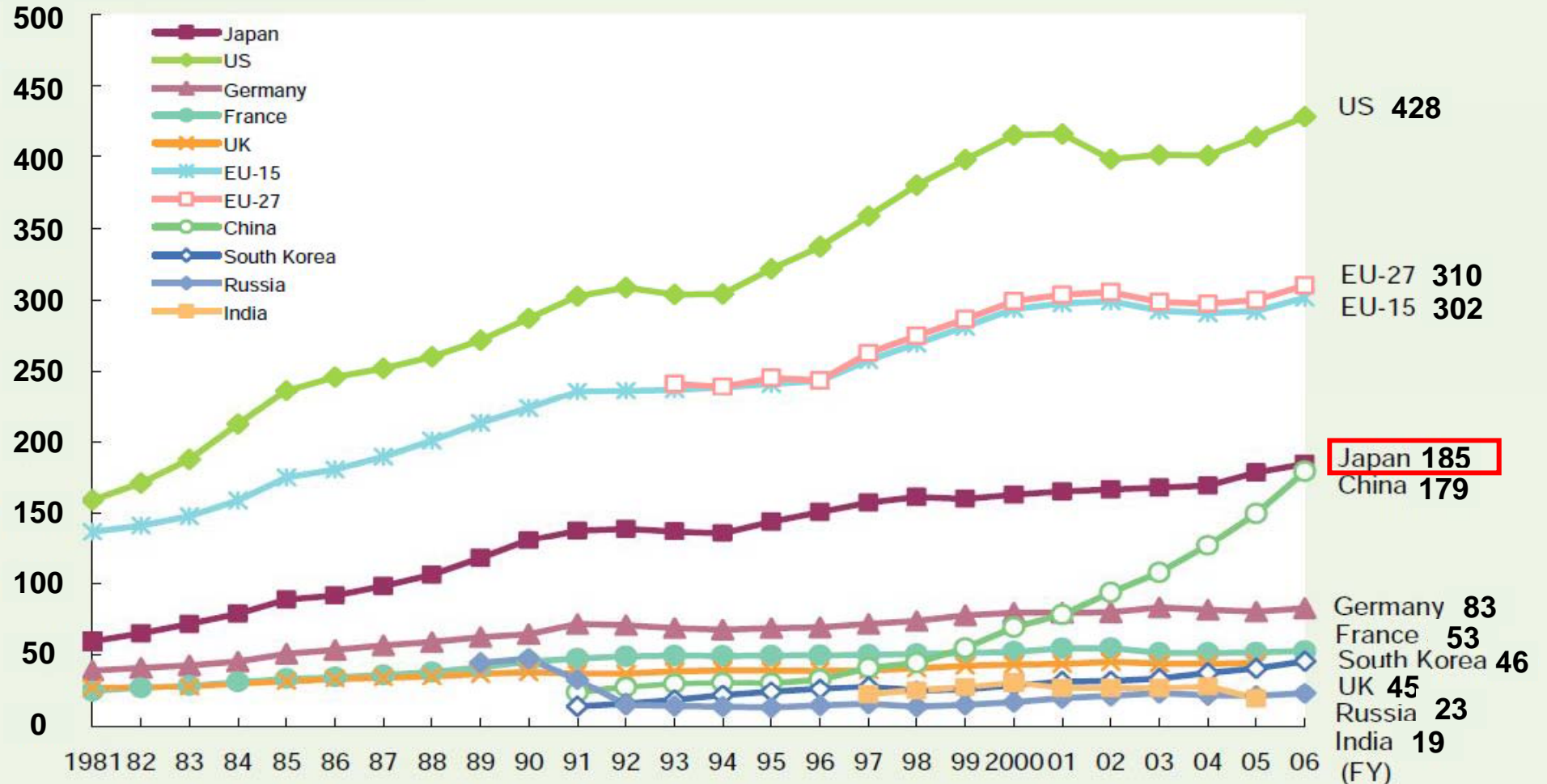
1996
Public Understanding of
S&T

1986
International
Collaboration



Trends in R&D Expenditures in Selected Countries/Regions

(Unit: US Dollars in Billions)



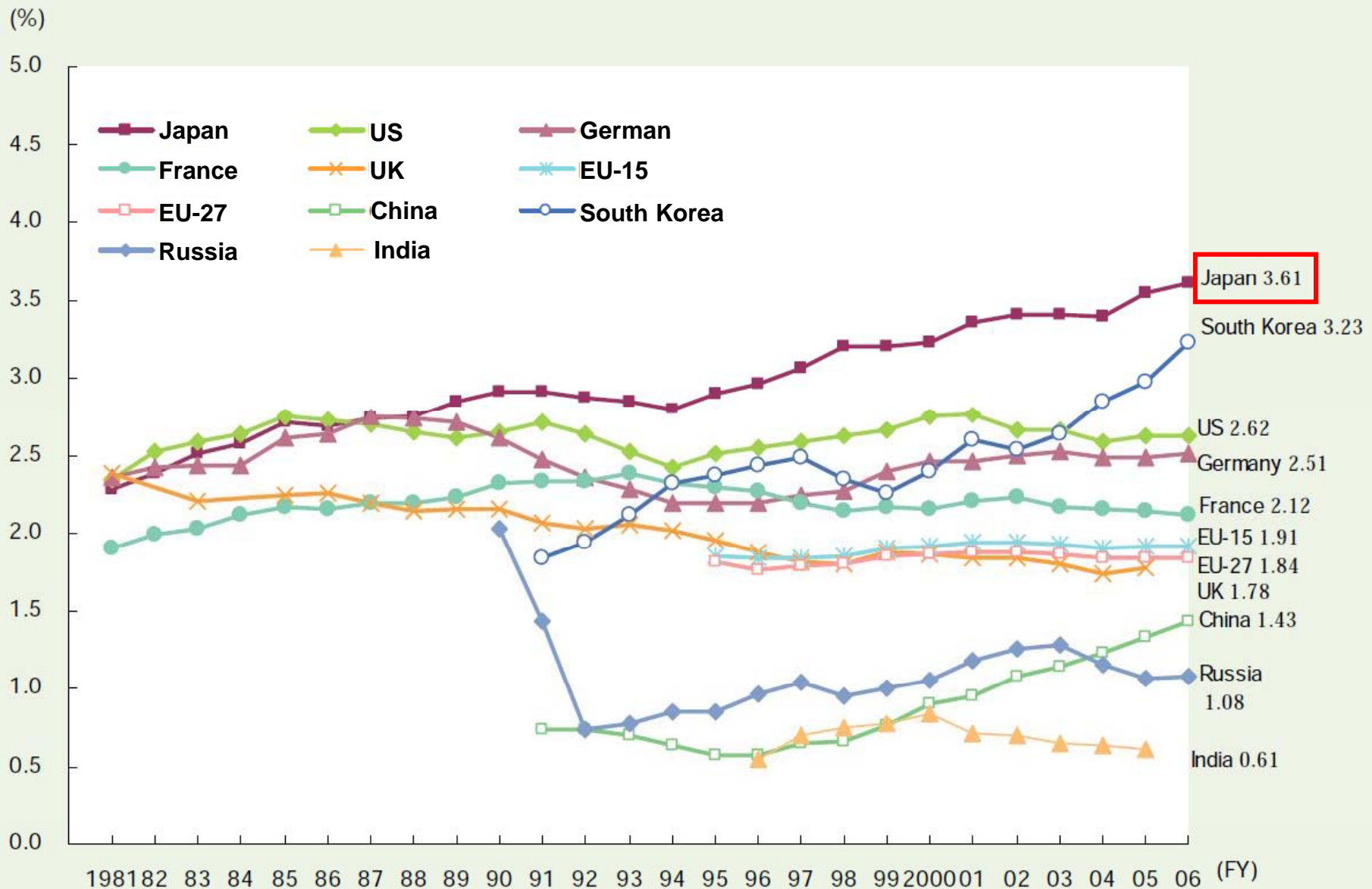
EU-15: Belgium, Germany, France, Italy, Luxembourg, the Netherlands, Denmark, Ireland, the UK, Greece, Portugal, Spain, Austria, Finland, and Sweden

EU-27: EU-15 plus Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, Slovenia, Bulgaria, and Romania

Source: White Paper on Science and Technology 2008



Trends in R&D Expenditures as a Percentage of GDP in Selected Countries/Regions



Source: White Paper on Science and Technology 2008



Recent Major Events in S&T and Policy in Japan

| Year | S&T Related Acts | Administrative Reform |
|---------------|---|--|
| 1995 | The Science and Technology Basic Law | |
| 1996 -2000 | The Science and Technology Basic Plan | |
| 1999 | Act on Special Measures for Industrial Revitalization | |
| 2001 | | National Administrative Reform |
| 2001 -2005 | The 2 nd Science and Technology Basic Plan | National Research Institutes Public Corporations ⇒ Independent Administrative Institutions (2003, JST) |
| 2004 | | National Universities ⇒ National University Corporations |
| 2006 -2010 | The 3 rd Science and Technology Basic Plan | |



The Science and Technology Basic Law

- This Law requires the government to formulate and implement comprehensive measures in relation to the promotion of S&T, including **a higher standard of S&T, the development of Japanese economy and society, the improvement of the welfare of the nation, and the sustainable development of human society.**
- To accomplish these objectives, the Law stipulates that the government must draw up a basic plan for S&T.



The Science and Technology Basic Plan

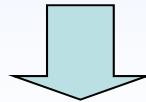
The Basic Plan stipulates the following :

- Comprehensive plans for the promotion of R&D.
- The policies taken comprehensively and systematically by the Government with regard to the installation of R&D facilities and equipment.
- The promotion of information intensive R&D activities.
- Maintenance of the necessary environment for the promotion of R&D.
- Other matters required to promote S&T.



Objectives of The Three S&T Basic Plans

Science and Technology Basic Law (enacted in 1995)



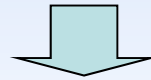
Stipulating the Gov. to draw up
the S&T Basic Plan

1st Basic Plan (FY1996-2000)

- **Increase in governmental R&D expenditure**
 - The total amount of the government R&D investment exceeded **170 billion dollars**
- **Construction of new R&D system**
 - Increase in competitive research funds
 - Support plan for 10,000 postdoctoral fellows (including PhD students)

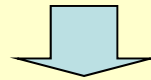
NOTE : Exchange rate : 1 USD = 100 JPY

Science and Technology Basic Law (enacted in 1995)



Stipulating the Gov. to draw up the S&T Basic Plan

1st Basic Plan (FY1996-2000)



2nd Basic Plan (FY2001-2005)

- **Key policies**

- Strategic priority setting in S&T
- Promotion of basic research
- Prioritization of R&D on key national and social agendas
- S&T system reforms
- Doubling of competitive research funds

- **The total amount of government R&D investment :**

240 billion dollars

NOTE: Exchange rate : 1 USD = 100 JPY

Science and Technology Basic Law (enacted in 1995)



Stipulating the Gov. to draw up the S&T Basic Plan

1st Basic Plan (FY1996-2000)



2nd Basic Plan (FY2001-2005)



3rd Basic Plan (FY2006-2010)

- **Two basic stances**

- S&T to be supported by public and to benefit society
- Emphasis on fostering human resources and competitive research environment

- **Strategic Priorities Setting in S&T**

- Promotion of basic research
- Prioritization in agenda-oriented S&T

- **The total amount of government R&D investment :**

250 billion dollars



Independent Administrative Institution (IAI)

- IAI is a legal body for Japanese governmental organizations regulated by the Basic Law on Reforming Government Ministries of 1998
- Concept :
To separate governmental ministries and agencies into two functional groups: planning and operational
 - Planning functions will continue to be carried out by government-based ministries and agencies.
 - Operational functions will transferred to IAIs.



Independent Administrative Institution (IAI)

- Purposes
 - To improve quality of operations
 - To increase activity in operations
 - To streamline operations
 - To increase project autonomy
 - To improve transparency
- Features
 - Medium-term Objectives / Medium-term Plan (Five-Year Plans) / Fiscal Year Plan
 - IAI President's management
 - Evaluation by the Evaluation Committee
 - Obligation of transparency
 - Budgets
 - Personnel



Ministries and Funding Agencies

Cabinet

Cabinet Office

— **CSTP: Council for S&T Policy**

OPSR : Organization for Pharmaceutical Safety and Research

NARO : National Agriculture and Bio-oriented Research Organization

JRTT : Japan Railway Construction, Transport and Technology Agency

CSTP : The Council for S&T Policy

JSPS : Japan Society for the Promotion of Science

NEDO : New Energy and Industrial Technology Development Organization

NICT : National Institute of Information and Communications Technology

Ministry of Public Management, Home Affairs, Posts and Telecommunication --- **NICT**

Ministry of Justice

Ministry of Foreign Affairs

Ministry of Finance

Ministry of Education, Culture, Sports, Science and Technology (MEXT) --- **JST, JSPS**

Ministry of Health, Labor and Welfare --- **OPSR**

Ministry of Agriculture, Forestry and Fisheries --- **NARO**

Ministry of Economy, Trade and Industry --- **NEDO**

Ministry of Land, Infrastructure and Transport --- **JRTT**

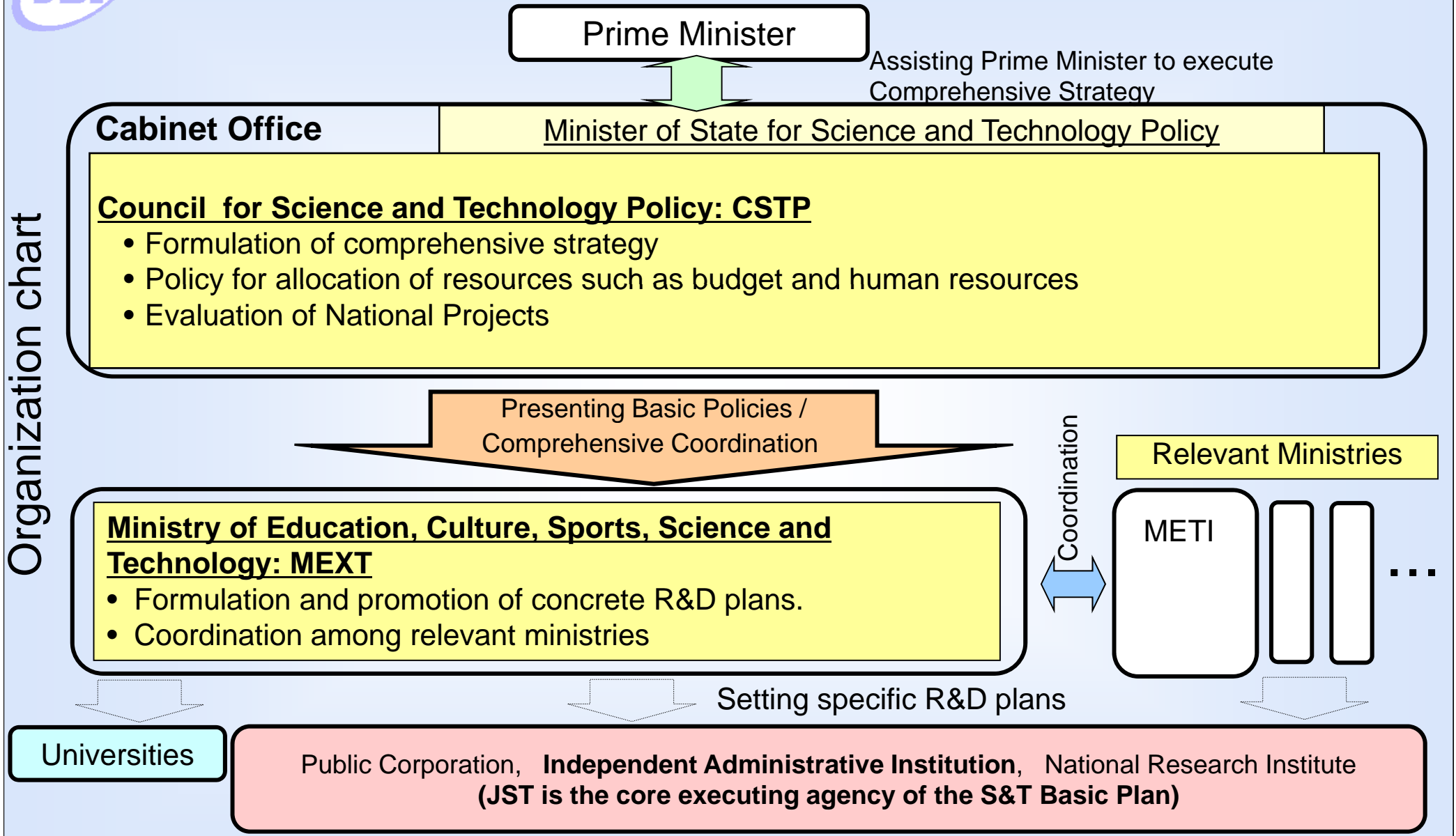
Ministry of Environment

Ministry of Defense



Science and Technology Administrative System in Japan

Organization chart



Reference: National Institute of Science and Technology Policy



JST Long-term Vision

- Vision formulated in March 2009
 - To define our role in contributing to society and the general public through the promotion of science and technology with regard to national science and technology policy trends.
 - As JST has been an independent administrative institution for just over five years now, we thought it was time to redefine and share our mission and objectives.
- Outlines the specific objectives for JST over the next five years, and includes the general aim for the next ten years.



JST Long-term Vision

JST長期ビジョン

～科学技術ネットワークの構築・発展を目指して～

平成21年3月



長期ビジョン検討会
科学技術振興機構

Mission

Value

Vision

Action Plans



JST Long-term Vision

Mission

Value

Vision

Action Plans

We promote science and technology for the future in order to advance national welfare and prosperity.



JST Long-term Vision

Mission

Value

Vision

Action Plans

1. Challenge and innovate
2. Actively communicate with stakeholders
3. Collaborate
4. Think globally with foresight
5. Develop specialized capabilities
6. Ensure integrity and accountability



JST Long-term Vision

Mission

Value

Vision

Action Plans

1. To promote innovation based on science and technology.
2. To support the development of an environment for all people who advance and utilize science and technology.
3. To promote science and technology for sustainable development, and contribute Japanese leadership in international collaborations.



Positioning of Our Services in the Visions

JST aims to formulate and progress the science and technology network spread throughout Japan and the world based on this Vision.



**Creating Advanced Technology
(Solution-Oriented Basic Research)**



Promoting Technology Transfer and Innovation



**Promoting the Dissemination of Scientific and
Technological Information**



Promoting Science Communication



Researcher Exchange and Research Support

Vision1

Vision2

Vision3



JST Organization Chart

Auditors

President

Research and Development Council Advisers

Executive Directors

Innovation Headquarters

- ◆ Department of Planning and Coordination
- ◆ Center for Research and Development Strategy, CRDS
China Research Center, CRC
- ◆ Research Institute of Science & Technology for Society, RISTEX
- ◆ Basic Research
Department of Research Promotion
Department of Research Project
Department of Advanced Measuring Technology
Department of Inclusive Research Administration
Department of Research Support

- ◆ Center for Intellectual Property Strategies
- ◆ Technology Transfer
Department of Industry-Academic Collaboration
Department of Technology Development
Department of Regional S & T Promotion

- ◆ Science & Technology Information
Department of Advanced Databases
Department of Literature Information
Department of Service

Science Communication Headquarters

- ◆ Education of Science and Mathematics
Department of Learning Support of Science & Mathematics
- ◆ Science in Society Network
Department of Science in Society Network
National Museum of Emerging Science and Innovation, Miraikan
- ◆ Center for Promotion of Science Education

Dept. of Strategic Planning and Management

Dept. of General Affairs

Dept. of Public Relations & Science Portal

Dept. of Financial Affairs

Dept. of Infrastructure

Dept. of Audit

Dept. of International Affairs

JST Overseas Branches
Beijing (China)
Washington D. C. (USA)
Paris (France)
Kuala Lumpur (Malaysia)

Research Partnership for Sustainable Development Division

Department for Administration of Research Promotion

Dept. for Nuclear Research and Development

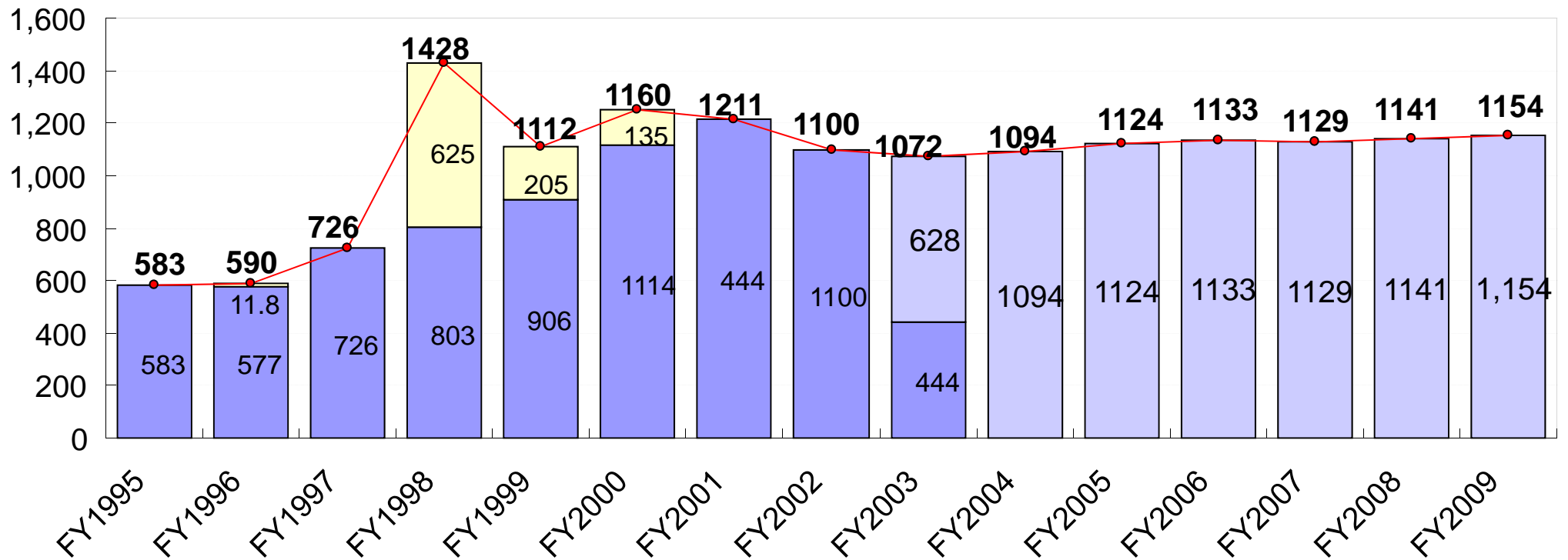
Dept. for the Special Coordination Funds for Promoting Science and Technology

Dept. for Coordination Program of Science and Technology Projects



JST Annual Budget

(Unit: US Dollars in Millions)

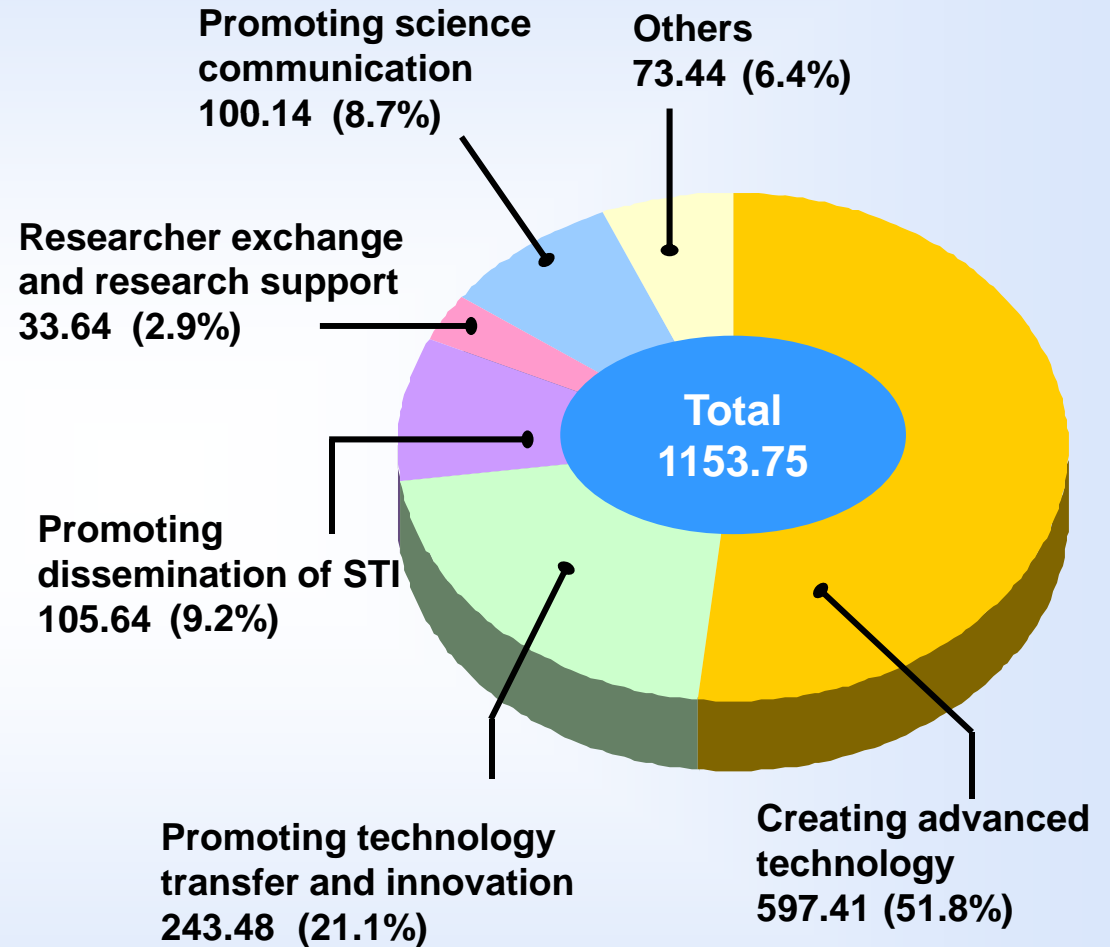
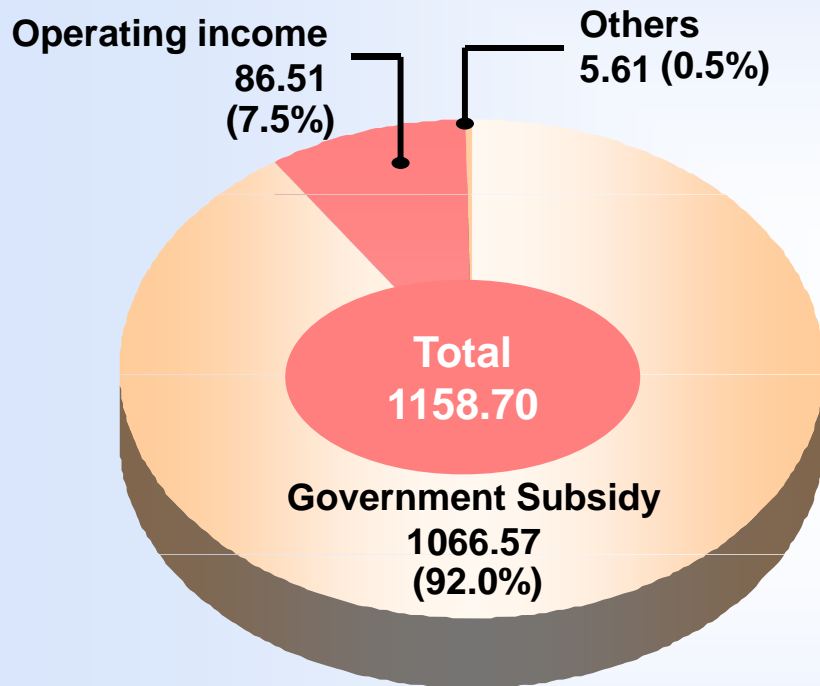


- Initial Budget
- Initial Budget (for Japan Science and Technology Corporation)
- Supplementary Budget

NOTE : Exchange rate : 1 USD = 100 JPY



JST Revenues and Expenditures in FY2009



Unit : US Dollars in Millions

NOTE : Exchange rate : 1 USD = 100 JPY



Creating Advanced Technology (Solution-Oriented Basic Research)



Support solution-oriented basic research for strategic sectors set by the government.

National Policy Objectives
(Science and Technology Basic Plan)



National Strategic Sectors

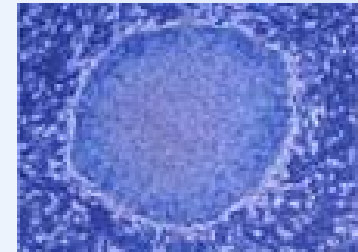


Establish research areas and research supervisors

Intensively promote research by mobilizing exceptional researchers to respond to desired research content, in order to achieve national policy objectives



Creation of innovative technology
seeds through research results



Induced Pluripotent
Stem Cell
by Prof. Yamanaka

Scheduled for 19th Sep.

CREST
PREST
ERATO

*Details will be
presented this
afternoon*



Promoting Technology Transfer and Innovation



Link universities and corporations to promote the sharing of research results with society.

- Contribution to the design of the national intellectual property strategies
- Support for commercialized R&D through industry-academia collaboration
- Support for creation of regional innovation

Details will be presented tomorrow morning

JST Innovation Plaza Kyoto



Scheduled for 19th Sep.



Antibody Masks



Large-scale super-high-resolution scanner specialized for cultural property



Promoting the Dissemination of Scientific and Technological Information



- JST promotes and disseminates scientific and technical information (STI) for **a Nation Built on Scientific and Technological Creativity**.
- STI is the “life blood of research and innovation”.
- Database services and portals
 - Literature Databases
 - Research Information Databases
 - Factual Databases and Portals



Promotion and Dissemination of STI for Innovation

JST

Universities

National/Public Res Institutes

Academic Societies

Researchers Engineers

etc

Scientific papers, R&D reports

Tech. Transfer Licensing Info.

info. on Research Institutes

Portal on STI

- Portals to disseminate STI in **SciencePortal** **Science Links Japan**
Japan and overseas

General Linkage Center of STI

- To search information across the interdisciplinary boundaries leading to new ideas and technical seeds

Literature Databases

Builds a solid R&D infrastructure to provide reliable STI in Japan and abroad

- STM (scientific, technical and medical) literature database with Japanese abstracts via the Internet
- E-publishing platform for journals of Japan's academic societies
- Web archive of academic journals from their first issues

Research Information Databases

Supports R&D activity, provides R&D results promptly

- Provides scientific information on research institutes, researchers, research subjects, research resources, research results (patents) and job offerings

Creation of new industry by bioinformatics, Life-long engineering education etc

- Advancement and standardization of biological database, Promotes bioinformatics R&D, such as genome analysis software
- Offers online materials for life-long engineering education, a database on failure or accidents in ST fields

Provision of Information

Industry

Universities

National/Public Res Institutes

Academic Societies

Researchers Engineers

etc

Japanese Interface

English Interface

Chinese Interface

French Interface

Pay Service



J-GLOBAL

JST General Link center Of Basic information for ALL S&T



<http://jglobal.jst.go.jp/>

- Newly launched in March, 2009.
- Identifying and connecting different types of STI for new ideas and insights.

つながる ひろがる ひらめく Presented by JST



科学技術総合リンクセンター

試行版(β版1.0)

全て | [研究者](#) | [文献](#) | [特許](#) | [研究課題](#) | [大学・研究所](#) | [科学技術用語](#) | [化学物質](#) | [遺伝子](#) | [資料](#)

一発詳細画面

検索のヒント 漢字の人名検索はスペースを詰めて下さい (例) 科学太郎

● J-GLOBALとは [\[詳細はこちら\]](#)
研究者、文献、特許などの情報をつなぐことで、異分野の知や意外な発見などを支援する新しいサービスです。またJST内外の良質なコンテンツへ案内いたします。

● 今後の予定 [\[詳細はこちら\]](#)
搭載情報の収録範囲などがまだ限られているため試行版(β版1.0)としています。今後、以下の第一段階の改善を予定しております。

- 搭載情報の網羅性、適及年等の拡充
- 基本情報間の関連付け精度の向上

JSTとしては、β版に寄せられるお客様の声を踏まえながらこれらの改善に努め、より利用価値の高いサービスを目指してまいりますので、[ご意見](#)のご協力をお願い申し上げます。

想定活用事例
New

8/17リリース
新データ搭載
New

お知らせ

- 8月19日: J-GLOBALの**想定活用事例を追加しました。**
- 8月13日: **特許技術用語辞書のサービス開始について**

ホットな検索キーワード

- 1: [今村 知明](#)
- 2: [アムラ](#)
- 3: [日本リモートセンシング学会](#)
- 4: [カド 培彦](#)
- 5: [L4990A](#)

[もっと見る](#)

最近の検索履歴

統計



管理者からのお知らせ

- [【基本情報回土を機械的に同定処理した結果】の発表のお知らせ \(6月5日 10時30分\)](#)
- [【特許の基本情報のタイトル切り出し語】についての変更のお知らせ \(6月12日 18時00分\)](#)

ホットなページ

- 1: [大塚 誠](#)
- 2: [木村 拓也](#)
- 3: [孔 炳龍](#)
- 4: [池上 裕子](#)
- 5: [二ノ瀬 俊明](#)

[もっと見る](#)

J-GLOBALをもっと便利に

- [Google ツールバーに追加](#)
- [ブックマークに登録](#)
- [iGoogleガジェット](#)




JST Document REtrieval system for Academic and Medical fields II

(pay service)



- An enhanced web-based literature database provides easy access to STM articles in Japan and abroad.
- Launched in April, 2006.
- Some search results of JDream II are linked to several sites, providing full text articles, via **J-STAGE, CrossRef, PubMed and others.**

検索するファイルを選択し、検索モードボタンをクリックしてください

| 科学技術全般ファイル | 医学分野一般ファイル | 無料ファイル |
|---|--|--|
| <input checked="" type="radio"/> JSTPlus (科学技術全分野 1981~) <input type="radio"/> JST7580 (科学技術全分野 1975~1980) <input type="radio"/> JSTPlus + JST7580 <input type="radio"/> JSTPatM (特許・文献統合DB) | <input type="radio"/> JMEDPlus (国内発行の医学薬学等の文献情報 1981~) <input checked="" type="checkbox"/> 医学・薬学予稿集全文データベース <input type="radio"/> MEDLINE (国内海外の医学関連分野の文献情報 1950~) <input type="radio"/> MEDLINE + JMEDPlus  | <input type="radio"/> JCHEM (化学物質データベース) <input type="radio"/> JSTChina (中国文献DB) <input type="radio"/> 研修JSTPlus <input type="radio"/> 研修JMEDPlus |
| JSTマルチファイル | その他のサービス | |
| <input type="radio"/> JSTPlus + JMEDPlus <input type="radio"/> JSTPlus + JMEDPlus + JST7580 | <input checked="" type="checkbox"/> J-DOCS (文献複写のお申込み 有料) <input checked="" type="checkbox"/> JST資料所蔵目録 Web検索システム (OPAC 無料) | |



Promoting Science Communication



- Promote Science and Technology related educational support
- Provide Support for Science Communication



Support for the Study of Science & Technology

JST supports education in science, mathematics, and technology, focusing on the following:

- Finding and fostering talents
- The study and practice of advanced educational programs
- The development and promotion of collaborative education between schools and other organizations
- Enhancing teachers' educational activities



Science Education Assistant Allocation Program

- The purpose is to enhance observation and experimentation activities in elementary schools and to stimulate teachers to improve their skills.
- Science Education Assistants (SEAs) assist with observation and experimentation sessions, including setup and cleanup, and advise on teaching methods.
- Guest teachers give classroom sessions with a special emphasis on the social implication of a particular area of science.
- Executed by the administrations of high schools.



Super Science High Schools (SSHs)

- The purpose is to push high schools to improve human resources in Science and Technology.
- Each SSH designated by MEXT has developed its own curriculum, teaching method, and material on science and mathematics in cooperation with universities and research institutes since 2002.
- Executed by administration of high schools and secondary education schools.
- As of 2009, there were 106 SSHs all over Japan.



Support for Science Communication

JST provides nationwide opportunities for the general public, particularly the youth, to develop interest in science and technology through experience and learning.

- Enhancing activities of relevant regional organizations
- Increasing opportunities for experiencing science and technology in familiar settings
- Promoting dialog between scientists and citizens
- Providing science and technology information to the public



Support Project of Regional Activities for Understanding of Science and Technology

This activity supports S&T related hands-on activities for local students and residents, and the establishment of regional and national networks in which the local governments, universities, and other participating institutions can connect with each other.



Experiencing nature and modern agriculture
(Atsumi, Aichi)



Learning science in a tangible way

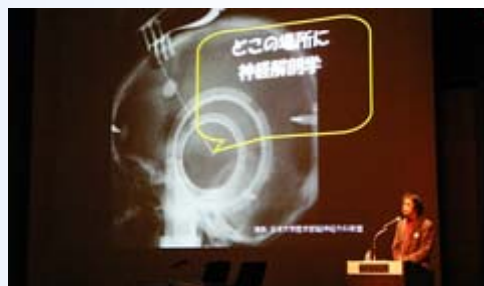


Science Agora



science agora 2009

This is the largest **science communication** event in Japan held annually (since 2006) for everyone from academia, government institutions, NPOs, science museums and, of course, for citizens.



<http://scienceagora.org/>

Overview of the events in 2008

| | |
|------------------------|--|
| Date | November 22-23, 2008 |
| Place | Tokyo International Exchange Center, Miraikan, and AIST Tokyo Water front |
| Number of Participants | 6109 |
| Number of exhibitors | 138 Organizations |
| Events and Workshops | Workshops, symposia, exhibitions, demonstrative experiments, science shows |



National Museum of Emerging Science and Innovation (Miraikan)

http://www.miraikan.jst.go.jp/index_e.html

State-of-the-art knowledge and innovation is exhibited in a fun and easy-to-understand way

- Four themes:
 - The Earth Environment and Frontiers
 - Life Science
 - Information Science and Technology for Society
 - Innovation and the Future



 **Miraikan**

Scheduled for 17th Sep.

Front-line scientists and engineers join in as supervisors and advisors.

- Exhibitions are designed and supervised by front-line scientists and engineers.

Technique development by experts;
Explanation, Demonstration, and Dialogue

- “Science Communicators” develop and introduce new tools and methods to convey cutting-edge science and technology.
- “Science Communicators” convey cutting-edge science and technology through dialogues with visitors.



Researcher Exchange and Research Support



Promote strategic international cooperation in the areas of science and technology

- Strategic International Cooperative Program (SICP)
- Science and Technology Research Partnership for Sustainable Development (SATREPS)

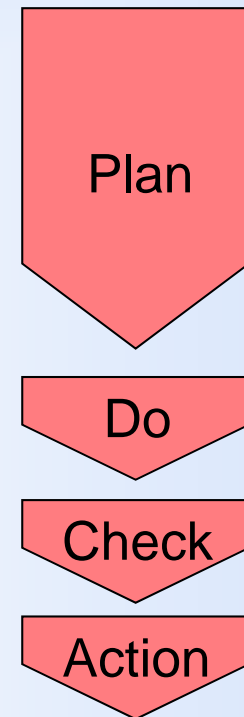
Details will be presented tomorrow afternoon



JST PDCA Cycle



PDCA Cycle



+

JST Long-term Vision