Outline for the 3rd Science & Technology Basic Plan (FY2006-2010)

Decided and communicated to Prime Minister by Council for Science and Technology Policy on Dec. 27, 2005

Aiming to be an advanced science- and technology-oriented nation

Science and Technology Basic Law
(enacted in 1995)

1st Basic Plan (FY 1996-2000)

●Increase in governmental R&D expenditure

The total budget for governmental R&D expenditure exceeded **17 trillion yen**.

●Construction of new R&D system

- Increase in competitive research funds
- **Support plan for 10,000 post-doctoral fellows** (including Ph.D students)
- Promotion of industry-academia-government collaboration
- Implementation of evaluation systems etc.

2nd Basic Plan (FY 2001-2005)

●Three basic ideas

(i) Creation of wisdom
(ii) Vitality from wisdom
(iii)Sophisticated society by wisdom

●Key policies

- Strategic priority setting in S&T
  - Promotion of basic researches
  - **Prioritization of R&D on national/social subjects**
- S&T system reforms
  - **Doubling of competitive research funds**
  - Enhancement of industry-academia-government collaboration
- Total budget : **24 trillion yen**
- 30 Nobel laureates within 50 years

3rd Basic Plan (FY 2006-2010)

●Review of the 1st and 2nd plans

(1)The 1st and 2nd S&T Basic Plans have solidified the foundation of S&T in Japan.
(2)"Mega-competition for knowledge" that Japan faces involves not only the United States and Europe but also Asian nations such as South Korea and China.

Our decision for future: stronger emphasis on the role of "Wisdom"

●Highlight

- ✓ **How to nurture creative S&T personnel?**
- ✓ **Further reform of S&T systems, leading to higher performance irrespective of Japanese serious situation due to limited resources**

Outline of the 3rd Basic Plan

1. Fundamental Concept

- Recent situation revolving around S&T
- Basic stance toward the 3rd plan
- Fundamental ideas and policy goals
- Total gov'tal R&D investment: 25 trillion yen (208 bill. dollar)

2. Strategic Priority Setting in S&T

- Promotion of basic researches
- Prioritization of R&D for policy-oriented subjects

  Primary prioritized areas; Life science, IT, Environmental sciences, Nano-tech. & materials
  Secondary prioritized areas; Energy, MONODZUKURI tech., Infrastructure, Frontier (outer space & oceans)
- Promotion strategy for the prioritized areas

3. S&T system reforms

- Fostering S&T personnel and providing opportunities
- Progress in science and leading to innovation
- Upgrading infrastructures for S&T promotion
- Strategic commitment on international S&T activities

4. Public Confidence and Engagement

- Responsible actions regarding ethical, legal and social issues
- Reinforcement of accountability and public relations of S&T activities
- Promotion of public understanding of S&T
- Facilitation of public engagement with S&T-related issues

5. Missions of the CSTP

- More efficient and effective management of governmental R&D
- Break of institutional or operational bottle necks
- Follow-up of the Plan and promotion of progress in S&T

Chap.1 Fundamental Concept (1)

【Basic stance 】

① **Promote S&T to be supported by public and to benefit society**

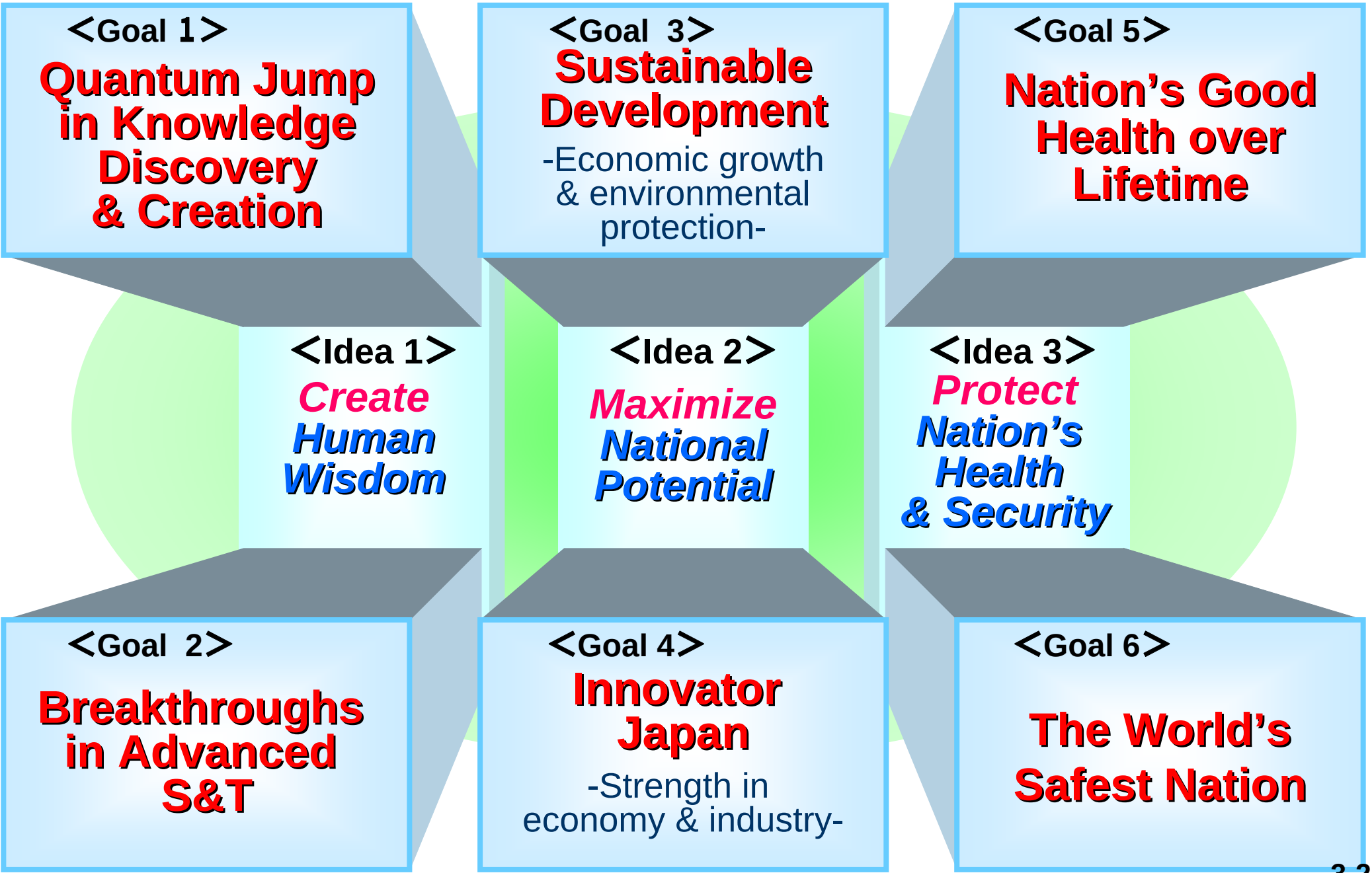
② **Emphasize fostering human resources and competitive research environments**

- Shift of emphasis from “hard” to “soft” such as human resources
- Greater significance of individuals at institutions

【Setting of policy goals】

- **S&T’s contributions to society and citizens should be made clear through articulated “six policy goals” (see next page).**
- **CSTP promotes S&T with the support of the public by demonstrating progress toward the policy goals.**

Science and Technology Policy Goals



Chap.1 Fundamental Concept (2)

【Total amount of investment】

- **Set total amount of governmental R&D investment at 25 trillion yen (208 billion dollar) for 5 years, on the premise that, within 5 years, annual R&D investment would be raised to 1% of GDP, and that average growth rate of nominal GDP would be 3.1%.**

  [1 dollar 120 yen]

- **Take into account of severe fiscal conditions in making budget compilation.**

- **Maximize investment effect by setting outcome targets of R&D, improving evaluation system, eliminating overlapping distribution of research fund and so on when executing the Plan.**

Chap.2 Strategic priority setting in S&T

- **Strategic prioritization makes governmental R&D investment more efficient and effective.**
  - Promote basic researches that would create a great variety of knowledge and lead to breakthroughs.
  - R&D resources should be intensively allocated to the primary prioritized areas; Life science, IT, Environmental sciences, Nano-tech. & materials
  - Selection and concentration principle must be thoroughly enforced for the R&D on the secondary prioritized areas; Energy, MONODZUKURI tech., Infrastructure, Frontier (outer space & oceans)
- **CSTP assigns "Strategically focused research fields" of each prioritized area, to which budget allocation would be emphasized during the next 5 years.**
- **Especially, some of long-term and/or large-scale projects initiated by government should be designated as "National mission-oriented project" and be rigorously evaluated.**

Chap.3 S&T system reforms (1)

- Fostering S&T personnel and providing opportunities -

- **Encourage young researchers**
  - Providing more opportunities to conduct research as an independent principal investigator
  - Increasing grant for young researchers
- **Expand opportunities for female researchers**
  - Setting target of 25 % new-employment share* of female researchers
    (* averaging among all natural science fields)
- **Attract foreign researchers to work in Japan**
- **Opportunities for excellent senior researchers**
- **Make research environments more competitive**
  - Increase in competitive research fund so as to enhance competition between individuals and also between organizations
- **Nurture human resources who excel in diverse fields adequately responding to social needs**
- **Encourage children and develop their abilities**

Chap.3 S&T system reforms (2)
- System reform toward world-class S&T excellence -

- **Further reform of university system for stronger competitiveness**
  - Producing 30 world-class research centers of excellence
- **Enhancing of industry-academia-government collaboration**
  - Joint program of advanced research centers on integrated fields for innovation
- **Activation of the regional S&T mainly conducted by local universities**
  - Program for regional revitalization utilizing local universities' resources
- **Drastic reform of public research institutes to strengthen their function**
- **Upgrading of government-wide R&D data base for efficient and appropriate budget allocation**
- **Providing equipment & facilities, and improving intellectual infrastructures and research-informational infrastructures including network & data base**

Chap.4 Public Confidence & Engagement ／Chap.5 Missions of the CSTP

- **Promotion of public interest and engagement in S&T**
- **For sure and steady progress of the basic plan;**
  1) CSTP leads S&T promotion beyond bureaucratic sectionalism.
  2) Based on detailed understanding of S&T activities performed in independent administrative institutes and national universities, CSTP should request related ministries to take adequate measures.
- **Dynamic management of strategies to maximize the total performance of S&T in Japan**
- **Strategic commitment on international S&T activities, such as ministerial meeting among Asian countries, to challenge common agenda and to respond to expectations of international society**
- **Further structural reforms including institutional issues, which contribute to smoother return of S&T outcomes to society**

Summary

- Key points of the 3rd S&T basic plan -

1. Promote S&T to be supported by public and to benefit society

2. Enforce prioritization of investment

3. Nurture human resources
   - Shift of emphasis from “hard” to “soft” such as human resources
   - Greater significance of individuals at institutions

4. Reform S&T system for the world-class excellence
   - For continuous creation of innovation

5. Strengthen the function of CSTP
   - Further structural reforms, including institutional issues

Further Discussion

- **In-depth work on prioritization in each prioritized area and setting outcome targets**
  Promotion strategy for the prioritized areas and outcome target will be determined at the same time as the 3rd basic plan.
- **The 3rd Basic Plan will be finalized by the end of FY 2005 (*i.e.* end of March 2006)**

CSTP Membership Roster

(As of January 6, 2006)

Members of the CSTP		
Chairperson	Mr. Junichiro KOIZUMI	Prime Minister
Cabinet Members	Mr. Iwao MATSUDA	Minister of State for S&T Policy
	Mr. Shinzo ABE	Chief Cabinet Secretary
	Dr. Heizo TAKENAKA	Minister of Internal Affairs and Communications
	Mr. Sadakazu TANIGAKI	Minister of Finance
	Mr. Kenji KOSAKA	Minister of Education, Culture, Sports, S&T
	Mr. Toshihiro NIKAI	Minister of Economy, Trade and Industry
Executive Members (academia/industry)	Dr. Hiroyuki ABE	Full-time (Professor Emeritus, Tohoku University)
	Dr. Ayao TSUGE	Full-time (Executive director, Mitsubishi Heavy Industries Ltd.)
	Dr. Taizo YAKUSHIJI	Full-time (Visiting Professor, Keio University)
	Dr. Tadamitsu KISHIMOTO	Full-time (Visiting Professor, Osaka University)
	Dr. Reiko KURODA	Professor, the University of Tokyo
	Dr. Yuko HARAYAMA	Professor, Tohoku University
	Mr. Etsuhiko SHOYAMA	President, Chief Executive Officer and Director, Hitachi, Ltd.
Sci. Council	Dr. Kiyoshi KUROKAWA	President of Science Council of Japan