

Comprehensive STI Strategy - Outline -

**June 7, 2013
Cabinet Decision
Government of Japan**



Comprehensive STI Strategy (1)

Need for the Comprehensive STI Strategy

- Emerging role of STI to address various challenges confronting Japan, above all, economic recovery

Basic Concept

- Comprised of long-term vision and immediate action programs
- Comprehensive package of mission-oriented STI policies
- Clarified roles of various players (between industry, academia and government, between government ministries) and policy-mix (including budget, taxation, deregulation etc.)

Comprehensive STI Strategy (2)

Shape of the nation to be attained in 2030

- Remaining a world top-class economic power in a sustainable manner
- People enjoying wellness, security and safety
- Contributing actively to the progress of humankind and international community

3 perspectives to promote STI policies

- Acting “**smart**” (utilization of IT to create knowledge industry)
- Implementing “**system**” thinking (combining strengths to multiple added value)
- Thinking “**global**” (always looking outside Japan for interaction)

Comprehensive STI Strategy (3)

Challenges to be addressed by STI

- Five grand policy challenges to tackle toward realizing the aforementioned shape of the nation:
- “Focused policy challenges” and “focused measures” therefor described for each of the five grand challenges
- Roadmap tailored for each of the “focused policy challenges” toward FY2030

1. Realization of clean and economical energy system
2. Realization of a healthy and active ageing society as a top-runner in the world
3. Development of next generation infrastructures as a top-runner in the world
4. Regional revitalization taking advantage of the regional resources
5. Early recovery and revitalization from the Great East Japan Earthquake

Comprehensive STI Strategy (3)

Challenges to be addressed by STI

1. Realization of clean and economical energy system

Focused policy challenges	Focused measures
Stable and low-cost supply of clean energy (production)	(1) Increasing supply of renewable energy through innovative technology
	(2) Realizing highly efficient and clean innovative technology for electric generation and combustion
	(3) Diversifying sources and resources of energy
Improved utilization efficiency and consumption reduction through new technology (consumption)	(4) Efficient energy utilization through the development of innovative device
	(5) Efficient energy utilization through the development of innovative structure material
	(6) Sophisticating technology for energy utilization on the demand side
Integration of sophisticated energy networks (distribution)	(7) Establishing network systems to promote diverse energy utilization
	(8) Sophisticating innovative technology for transformation, storage and transportation of energy

Comprehensive STI Strategy (3)

Challenges to be addressed by STI

2. Realization of a healthy and active ageing society as a top-runner in the world

Focused policy challenges	Focused measures
Extension of healthy longevity	(1) Finding evidences for the ways to getting healthy through epidemiological study
	(2) Developing innovative methods of prevention, diagnosis and treatment of; (2-1) cancer, cardiovascular diseases, diabetes, COPD (2-2) psychiatric and neurological disorders (2-3) infectious diseases and improvement of hygiene (2-4) rare and intractable diseases
	(3) Substitution and compensation for physical and organ function
	(4) Reinforcing industrial competitiveness in the areas of pharmaceuticals and medical devices
	(5) Making workers healthy
	(6) Developing future health care
	(7) Promoting comprehensive local health care through the utilization of IT in health, medical treatment, nursing
	(8) Developing BMI and devices for medical care and nursing at home
Promotion of social inclusion of handicapped adults and children	Same as (2-4), (3) and (8)
Healthy growth of children to be responsible for the next generation	(9) Improving children's health indicators and elucidating factors to influence upon children's health

Comprehensive STI Strategy (3)

Challenges to be addressed by STI

3. Development of next generation infrastructures as a top-runner in the world

Focused policy challenges	Focused measures
Ensuring the safety and security of infrastructures	(1)Realizing effective and efficient maintenance, management and renewal of infrastructures
Reinforcing resilient function for preventing and mitigating disasters	(2)Realizing resilient infrastructures against natural disasters
Regional and town revitalization through establishing next-generation infrastructures	(3)Realizing integrated transport system
	(4)Realizing the base for next-generation infrastructures

Comprehensive STI Strategy (3)

Challenges to be addressed by STI

4. Regional revitalization taking advantage of the regional resources

Focused policy challenges	Focused measures
Reinforcing agriculture, forestry and fisheries through the utilization of STI	(1)Sophisticating agriculture, forestry and fisheries by utilizing genome information
	(2)Developing highly-functional and high-value added agricultural, forestry and fishery products through the collaboration with medicine
	(3)Sophisticating production system of agricultural, forestry and fishery products by IT and robotic technology
Developing mechanisms for the creation of innovation coming from regions	(4)Nurturing industrial competitiveness through the utilization of producing technology
	(5)Promoting local business by service engineering
	(6)R&D and measures for activating local economy through industry-academia-government collaboration in the regions

Comprehensive STI Strategy (3)

Challenges to be addressed by STI

5. Early recovery and revitalization from the Great East Japan Earthquake

Focused policy challenges	Focused measures
Realizing a society where residents' health are protected from disasters and children and the elderly people are sound and healthy	(1)Developing medical technology, R&D on proper methods of medical provision and health maintenance, R&D on how to properly support those vulnerable in disasters including expecting and nursing mothers, infants and elderly people in the event of disasters
Establishing energy system resilient against disasters	(2)Developing renewable energy in consideration of climates and characteristics of the regions
Developing new business models in local industries	(3)Reinforcing industrial competitiveness and job creation through the utilization of innovative technology and local strength
Establishing next generation infrastructures resilient against disasters	(4)Expediting the transmission of information on the occurrence of tsunamis and earthquakes, improving the resilience of structures, disposal and effective use of massive disaster wastes
Mitigating and resolving influences by radioactive material	(5)Effectively and efficiently decontaminating and disposing of radioactive materials, preventing exposure of workers engaging in decontamination

Comprehensive STI Strategy (4)

Creating Environment to Make Japan World's Most Innovation-friendly Nation

Focused policy challenges	Focused measures
Nurturing the sprouts of innovation	(1) Establishing an environment which enables diverse people to take the leadership in enterprises, universities and R&D corporations
	(2) Reinforcing universities and R&D corporations as international hubs
	(3) Restructuring systems of competitive funds
Activating the innovation system	(4) Reinforcing industry-academia-government collaboration and inter-ministry collaboration
	(5) Promoting mobility of human resources
	(6) Improving research support system
Fructifying innovation	(7) Activating private enterprises engaging in new projects
	(8) Promoting regulatory reform
	(9) Reinforcing the strategies for international standardization and IP

Comprehensive STI Strategy (5)

Reinforcing headquarter function of CSTP

- Empowering CSTP both in authority and budget to be able to perform its headquarter function to make Japan world's most innovation-friendly nation

< Immediate actions >	
Leading the formulation of Japan's overall "S&T budget" through such means as;	● Establishment of S&T budget strategy meeting
	● Establishment of cross-ministry programs to promote innovation
	● New development of measures to succeed FIRST*
Reinforcing the CSTP secretariat both in terms of workforce and its think tank function	
Activating CSTP	● Policy dialogues with key stakeholders
	● Regular information exchange with other headquarters

*FIRST: Funding Program for World-Leading Innovative R&D on Science and Technology. Since 2009 supported selected top 30 researchers in wide spectrum of fields. The support lasts 5 years. Total amount of support: ¥100B, individual support per project ¥1.5B-¥6B.