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Bridging the Knowledge Creation and the Socio- Economic Value

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The Social Innovation We should Pursue in the 21st Century

**1. National Innovation System
(Country & Regional)**

**2. Global Sustainable Innovation
Ecosystem**

**Issue:1 The balance between
Competition and Collaboration**

**Issue:2 To nurture the human
resources for Global Innovation**

Japan's Challenges to the Social Innovation in the 21st Century (1)

National and Regional Innovation:

**To keep the sustainable
development under the predicted
declining population and rapid
ageing in 21st century**

Japan's Challenges to the Social Innovation in the 21st Century (2)

Global Sustainable Innovation:

**To contribute to the sustainable
development of the world (Asia and
Africa) with the technologies to solve
the global scale crisis**

3E Issue (Environment, Energy, Economy)

Food and Water, Burst of Population

Science & Technological Innovation
is the Key to
Sustainable National & Global
Innovation Ecosystem

Basic stance of the new S&T Policy (2006–2010)

① S&T should be supported by the public and return benefit to the society and to the world.

- **National Innovation**
- **Global Sustainable Innovation**

② Fostering human resources and creating competitive research environments.

The New Science and Technology Policy



Total amount of investment

- **25 trillion yen (118 billion pounds) for 5 years. (2006-2010)**
- **Ensuring steady growth of S&T investments considering severe fiscal conditions.**
- **Maximizing outputs by setting outcome targets for R&D, improving evaluation system, eliminating overlapping distribution of research funds, etc.**

Strategic priority setting in S&T (1)

▶ **Basic Research**

~ *Steady promotion* ~

▶ **Policy mission-oriented R&D**

4 priority promotion areas
(Life science, IT, Environmental science, Nanotech & materials)
4 promotion areas
(Energy, MONODZUKURI-tech, Social infrastructure, Frontier)

Further Prioritization

Strategic R&D Areas

- Background of the present situation
- Setting goals
- Important R&D themes
- Strategic S&T priorities
- Various measures for promoting S&T

Strategic priority setting in S&T (2)

Total S&D budget for FY2006 3.57 trillion yen

Basic research
and university
education
1.42 trillion
yen

Policy mission-oriented R&D
1.79 trillion yen

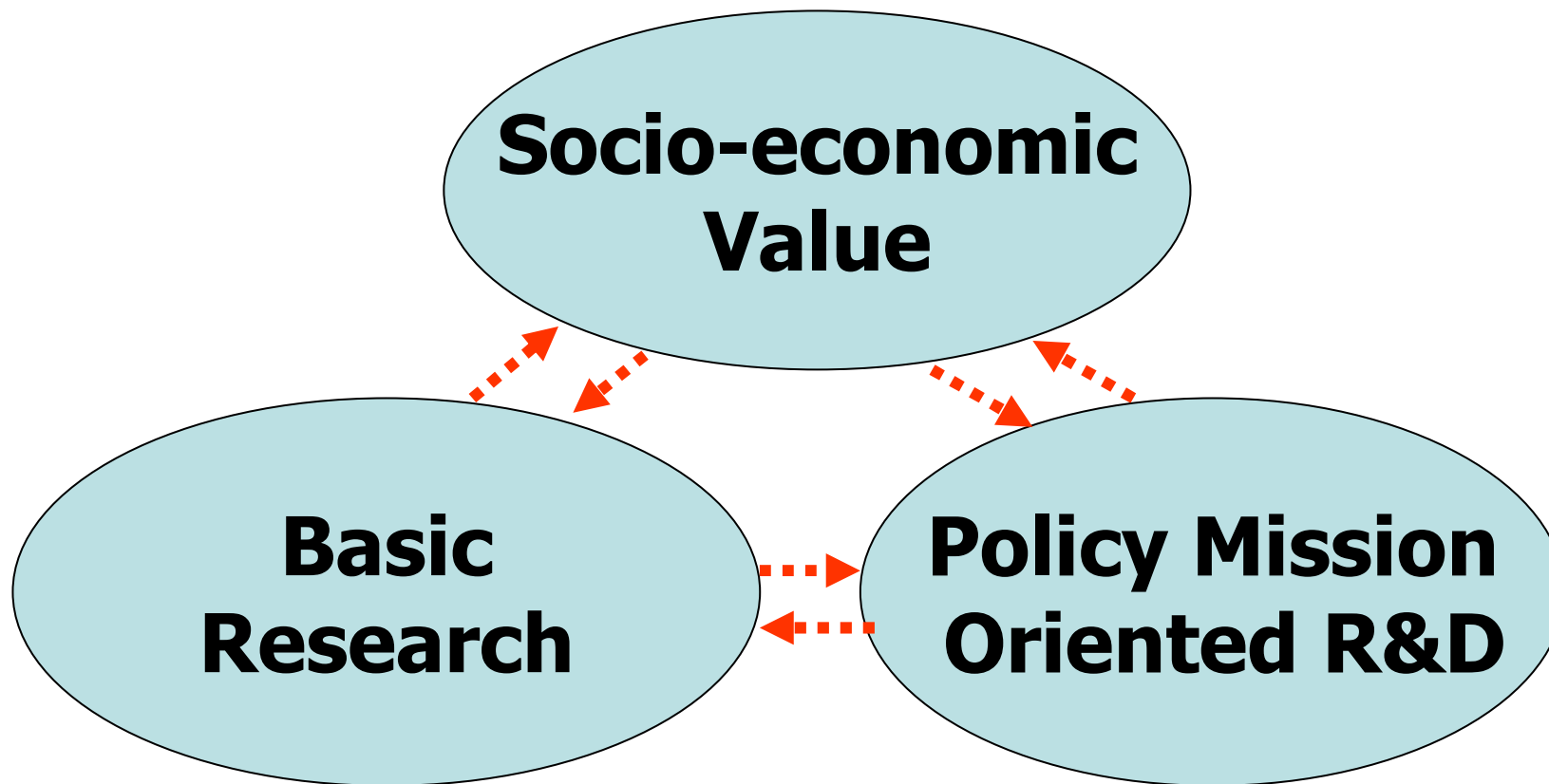
S&T systems
reform and
others
365 billion
yen



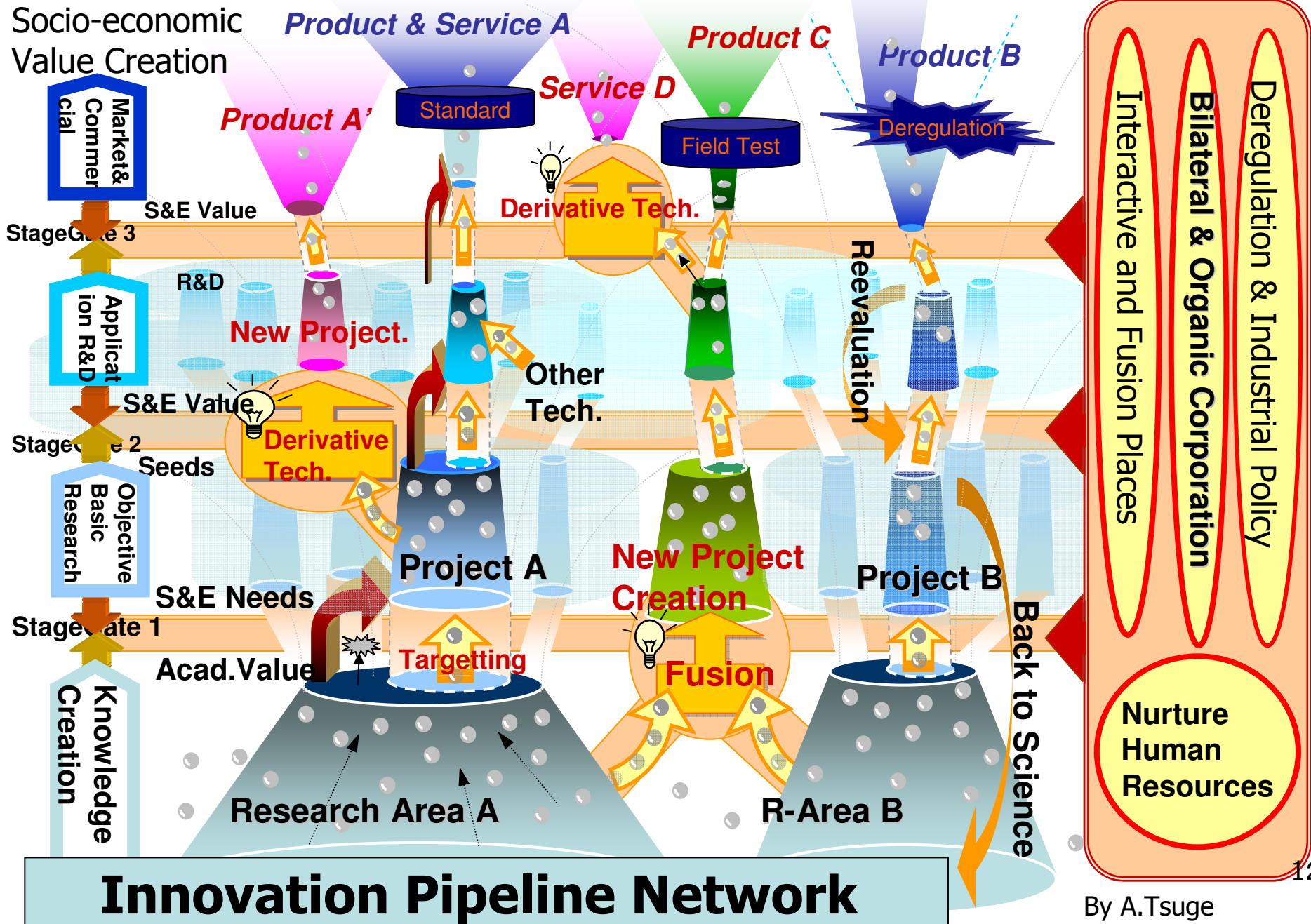
62 Strategic S&T priorities selected

ISSUE on Innovation Capability

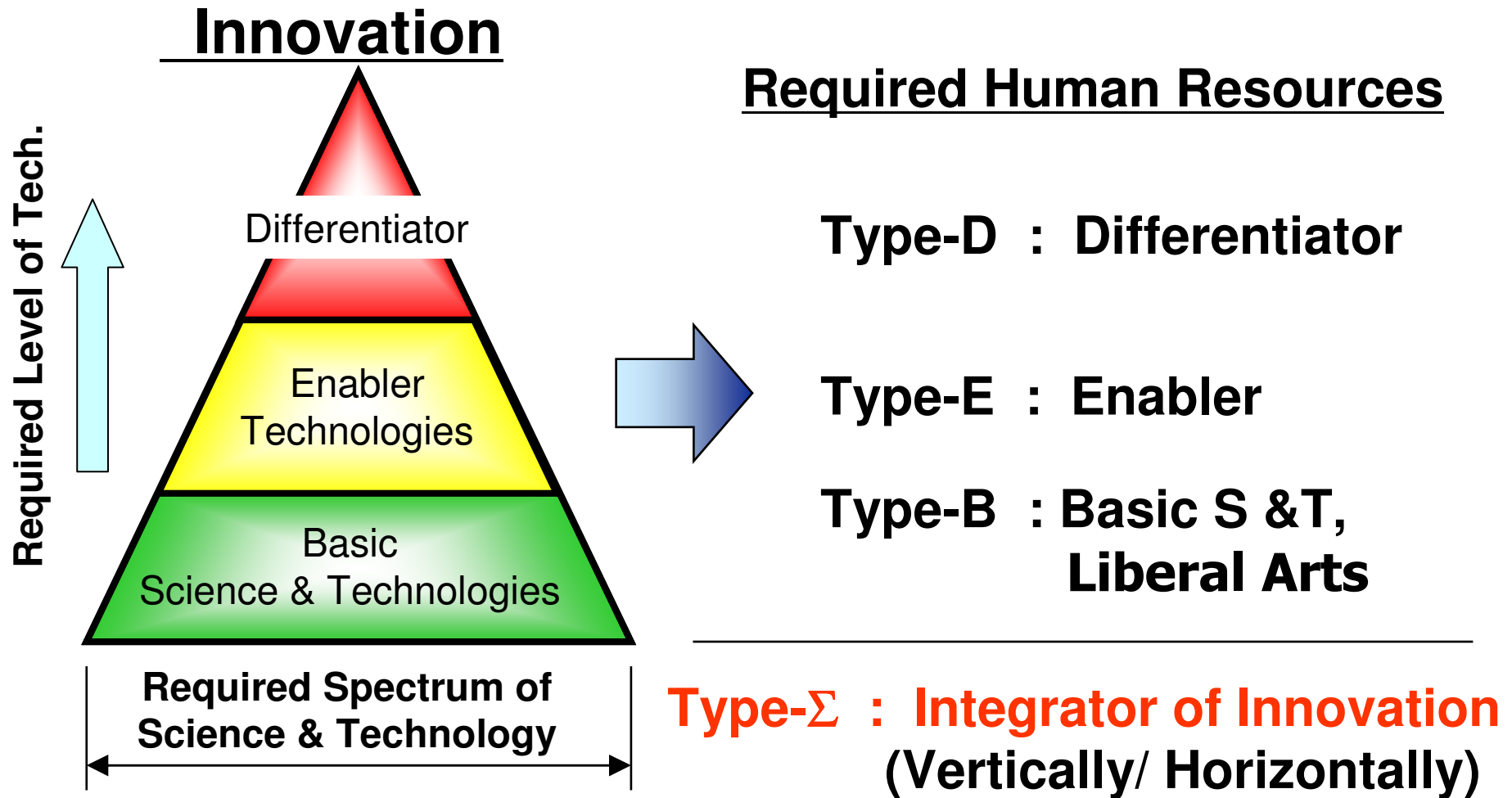
How to strengthen the interactive bridge between the knowledge creation and the socio-economic value creation.



Bridging Knowledge Creation and Socio-Economic Value



Nurturing Human Resources for the Social Innovation

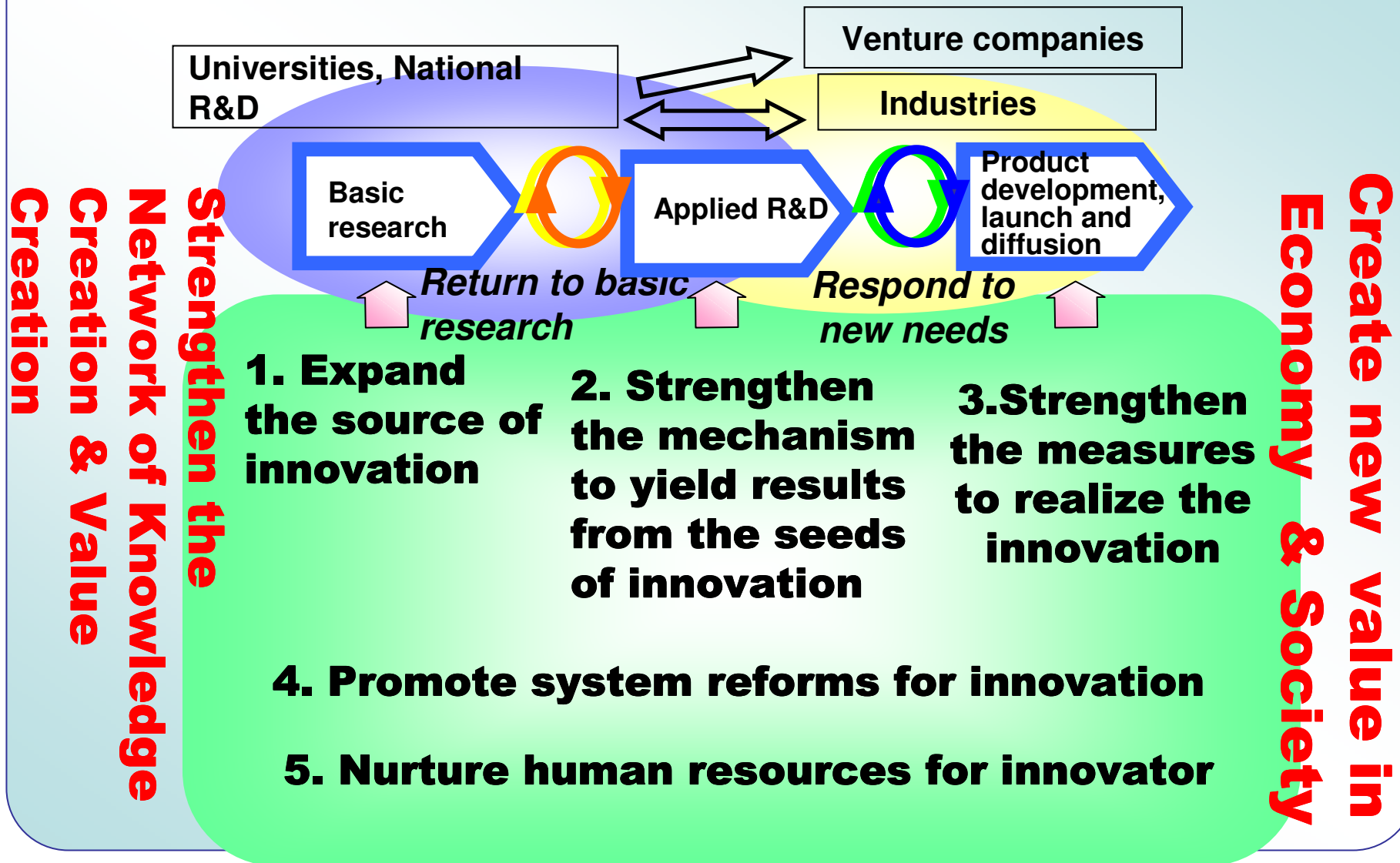


By A. TSUGE, Executive Member, Council for Science
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Importance of **Converging Technologies**

- **Key to Bridging across the knowledge Creation and the Socio-Economic Value Creation**
- **Nurturing Σ -type Integrator Human Resource is indispensable together with D-type, E-type and B-type Human Resources to make the Converging Technologies to be Socio-Economic Valuable**

The New Comprehensive Strategy for Creating Innovation (CSTP, 2006. 6)



Comprehensive Strategy for Creating Innovation

1. Expand the source of innovation

Knowledge Creation

1. Ensuring the diversity and continuity of basic research as the source of future innovation

2. Establishing the world-top class research centers with the participation of excellent researchers from **all over the world**

2. Strengthen the mechanism to yield results from the seeds of innovation

- (1) Implementing and accelerating **real collaboration between industry, academia and government**
- Establishing new research centers where the industrial sector and the academic sector will collaborate with each other throughout the research process from the initial stage to the final stage (Drastically enhancing plan to build **innovation centers** in advanced interdisciplinary areas)
 - Bringing education at graduate schools up to global standards through industry-academia-government collaboration (Curriculum design, Long-term internships)

2. Strengthen the mechanism to yield results from the seeds of innovation

--Continue--

(2) Enhancing regional innovation

(3) Seamless funding to the promising researches and promoting intellectual interaction in every stage

(4) Intensively implementing measures for priority S&T Area

3. Strengthen Measures to Realize Innovation

(1) Promoting the use of new technology and international standardization

(2) Drastically enhancing innovation by venture businesses

(3) Strengthening R&D in the private sector

Etc.

4. Promote System Reforms for Innovation

- **Eliminating structural impediments in related systems** that interfere with provision of innovation to the society (e.g. Reforming the immigration control system that will enable the excellent researchers can get proper position , etc)

5. Strengthen Development of Human Resources

1. Strengthening **young innovator human resources** through the aforementioned activities
2. Strengthen the **science and mathematics education** in elementary, junior high and high schools
3. Enhance education in basic knowledge : **liberal arts**
4. Educate the **engineers & technicians** who play the vital role in the realization of the social innovation

**The 3rd Science & Technology Basic Plan
and The New Comprehensive Strategy
for the Sustainable Innovation was
Incorporated with
The Economic Growth Initiative
and
The Innovation 25 Initiative**

- 1. Enhance the **National Innovation System**
for the Global Competition**
- 2. Collaboration and Contribution to the **Global
Sustainable Innovation Ecosystem****

Concluding Remark

- 1. Global Sustainable Innovation Ecosystem** is the common issue of the world.
- 2. Science and Technology Innovation** is indispensable together with **Education** and Building up the **human resources**.
- 3. Integration of [Education] , [Research] and [Innovation]** is the key Agenda for the social innovation.
- 4. Nurturing Σ -type Integrator Human Resources** is Crucial together with the **Converging Technologies**.