



中国科学技术大学
University of Science and Technology of China

公共事务学院 | SPA

China's Science And Technology Policy

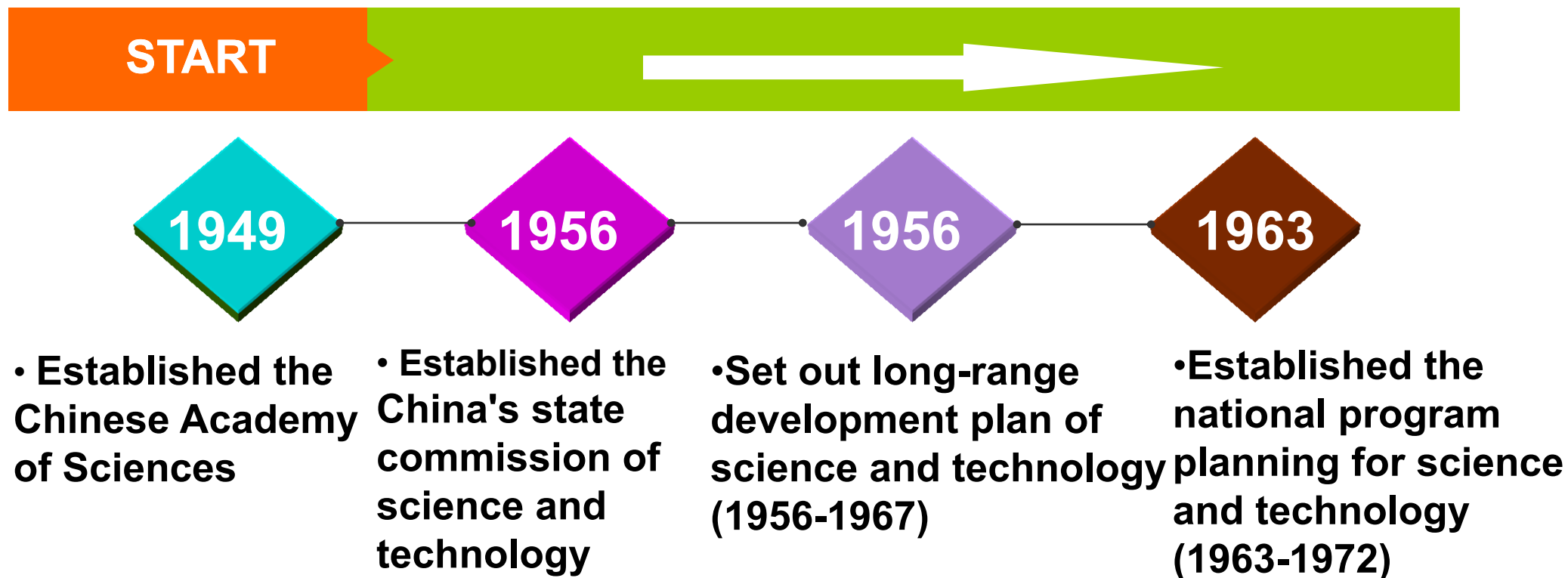
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History of China's S&T policies

At the beginning of the founding of PRC, the importance of S&T was realized by China's central government.

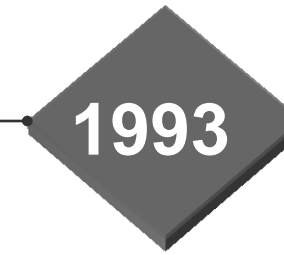
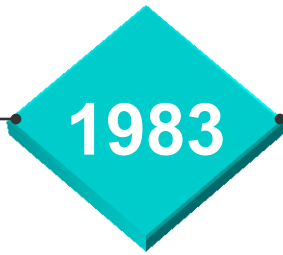
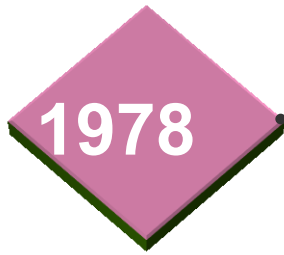




The founding of The Chinese Academy of Sciences (CAS)



中国科学院
CHINESE ACADEMY OF SCIENCES



• Hold the national science conference and passed the national program planning for science and technology development

• Established the long-term program planning for science and technology (1986-2000)

• Set out the science and technology development plan during the period of the seventh five-year plan

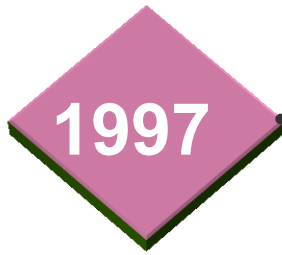
• Issued The Law of the People's Republic of China on Science and Technology Progress



“The development of science and technology must insist on the principle of be independent and self-made.”

“We also need to learn the advanced science and technology from other countries.”





• Put forward the strategy of rejuvenating the country through science and education and the strategy of sustainable development

• Hold the national technology innovation conference

• Set out The National Medium- and Long-Term Program for Science and Technology Development (2006-2020)

• Published The PRC 12th national economic and social development five year plan and write “change the development mode and create a new scientific development situation” in it.



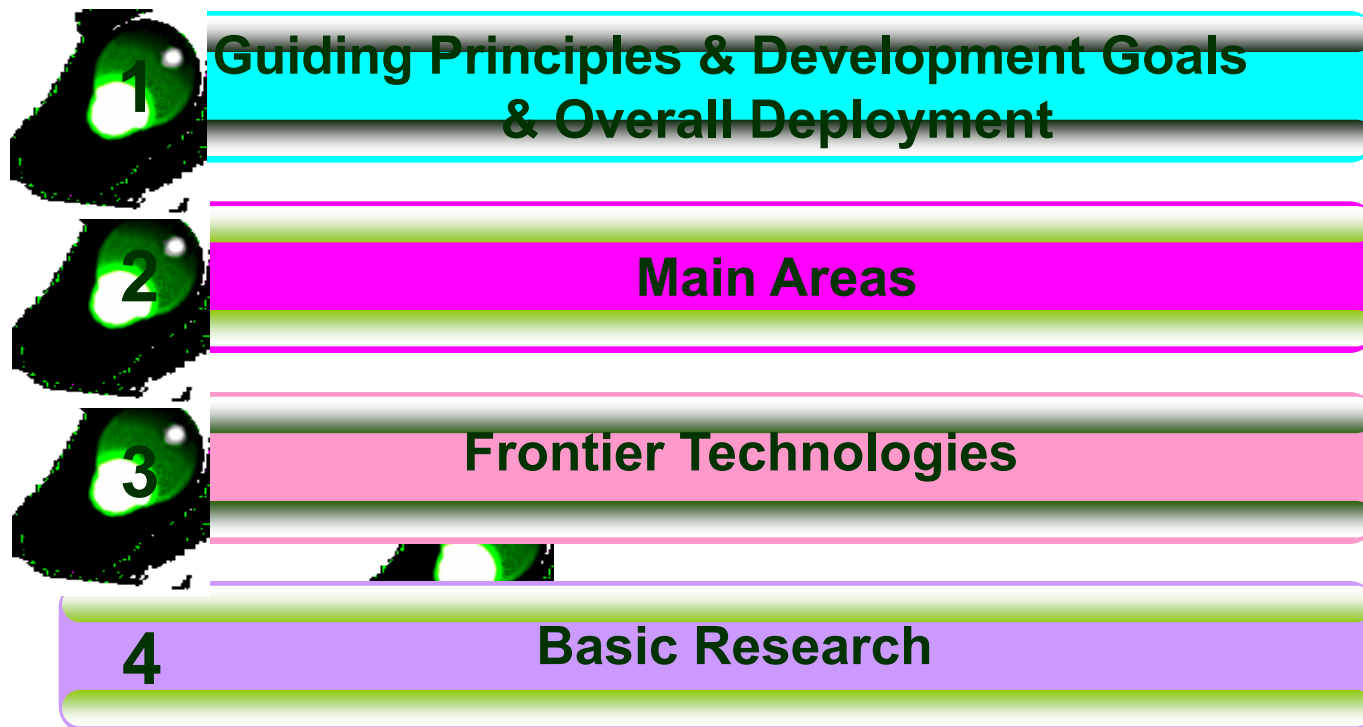
“To speed up the development of strategic new industry is inevitable requirement for the construction of innovation-oriented country.”

“Strengthen basic research and frontier research and further deepen the reform of the system of science and technology.”



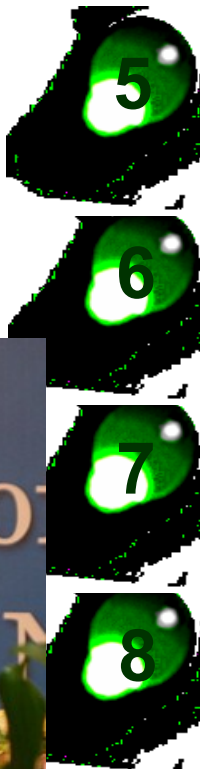


The National Medium- and Long-Term Program for Science and Technology Development (2006-2020)





“Implement this program seriously and create a new situation of the development of science and technology in China.”



5 Reform of the S&T System & the Construction of a National Innovation System

6 Major Policies & Measures

7 S&T Input and S&T Infrastructure Platforms

8 Talented Workforce Buildup





Guiding Principles

enous innovation

ing original innovation, integrated innovation, and re-
tion based on assimilation and absorption of imported
logy, in order improve our national innovation capability

frogging in priority fields

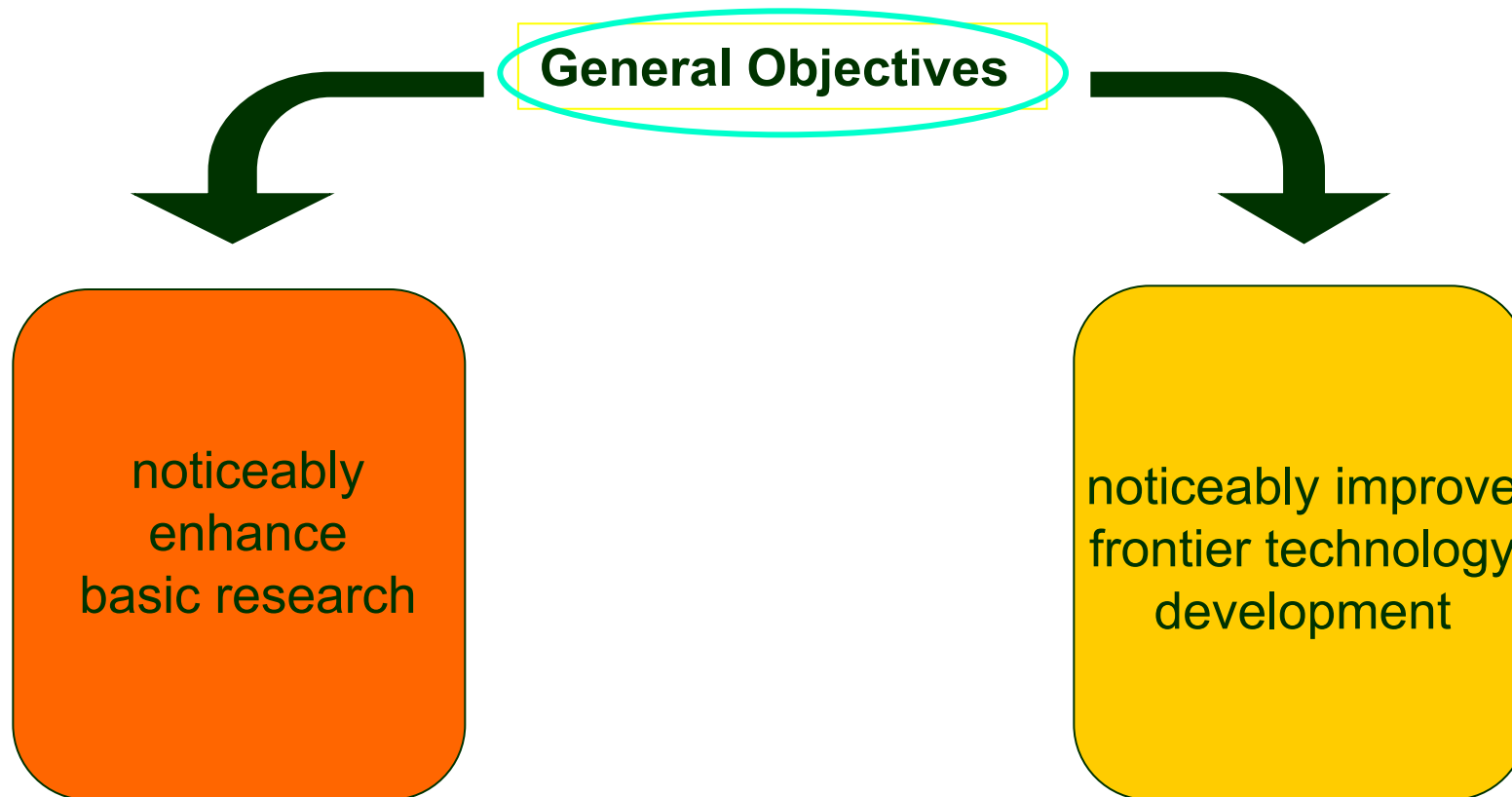
and concentrate efforts in those key areas of relative
th and advantage linked to the national economy and
's livelihood as well as national security, to strive for
hroughs and realize leaping developments

oling development

attempt to strive for breakthroughs in key, enabling
technologies that are urgently needed for the sustainable
and coordinated economic and social development.

Leading the future

a vision in deploying for frontier technologies and basic
research, which will, in turn, create new market demands
and new industries expected to lead the future economic
growth and social development





Development Goals

By 2020:

- ↳ the nation's gross expenditures on R&D (GERD) are expected to rise to **3% or above**
- ↳ the rate of S&T contribution to the economy reaching **60% or above**
- ↳ dependence on imported technology reduced to **30% or below**
- ↳ the annual invention patents granted to Chinese nationals and the international citations of scientific papers moving into the **Top 5 countries**



Overall Deployment

↖ In the next 15 years, China's S&T undertakings will be deployed as follows :

1

Identify a number of priority areas, break through some major technological snags

2

Implement some special major projects that are in line with national objectives, and will lead to the leaping development or fill up a blank

3

To respond to future challenges, advance deployment will be made for frontier technologies and basic research topics

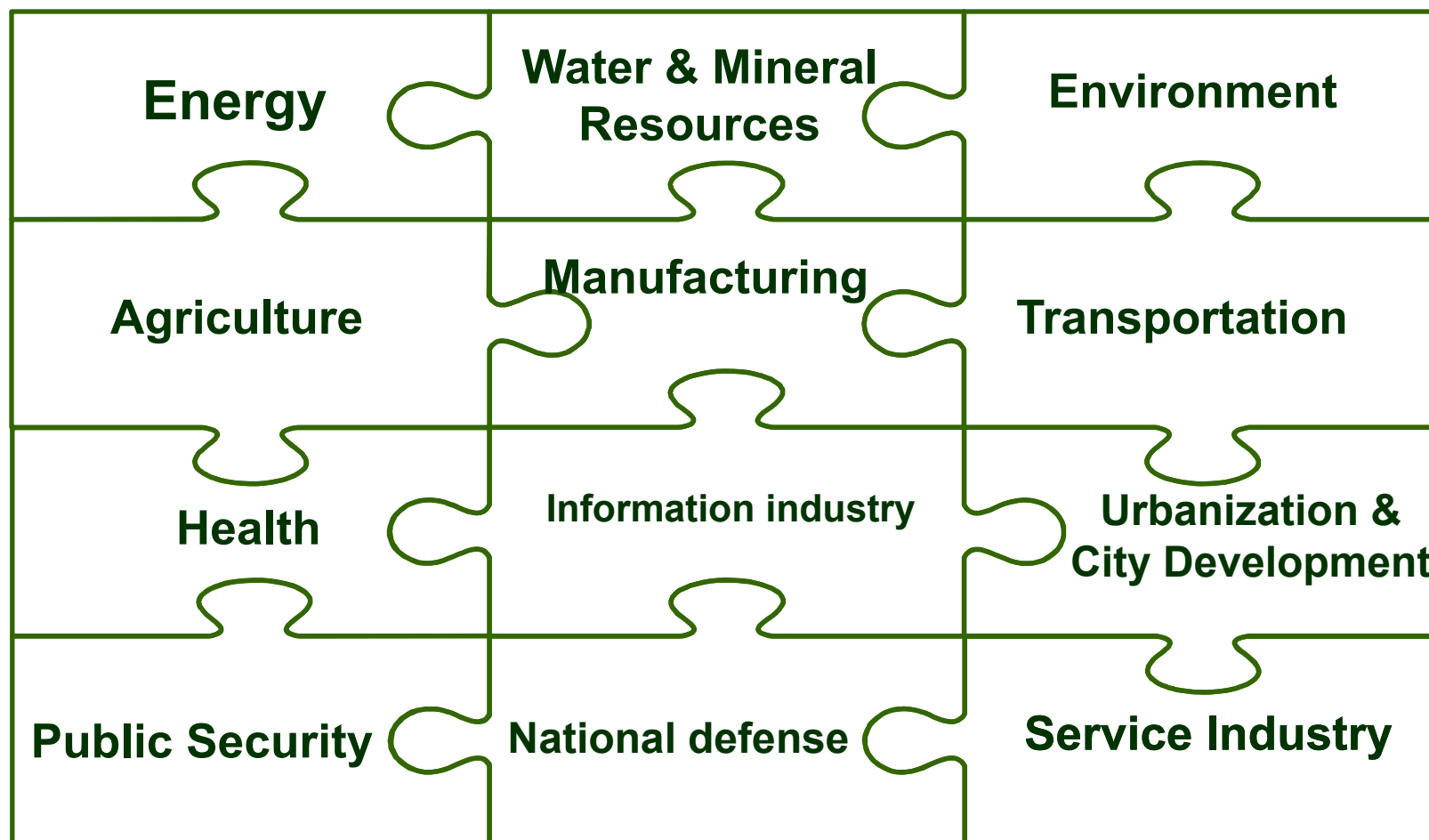
4

Deepen the S&T system reform by perfecting relevant policies and measures, increasing S&T investment, strengthening the buildup of S&T talents



Main Areas

- ↖ Main areas refer to such industries and sectors that are both critical to economic and social development and national security and in dire need of S&T support





Frontier Technologies

↖ Frontier technologies are selected in accordance with the following principles :

- 1. representing the development direction of world high-tech frontiers
- 2. having a pioneering role in shaping and developing new industries in the future
- 3. being conducive to industrial technology upgrading and for realizing the leapfrogging development
- 4. possessing a strong team of talented personnel and a sound R&D basis



Biotechnology

**Information
Technology**

**Advanced Materials
Technology**

**Advanced
Manufacturing
Technology**

**Advanced Energy
Technology**

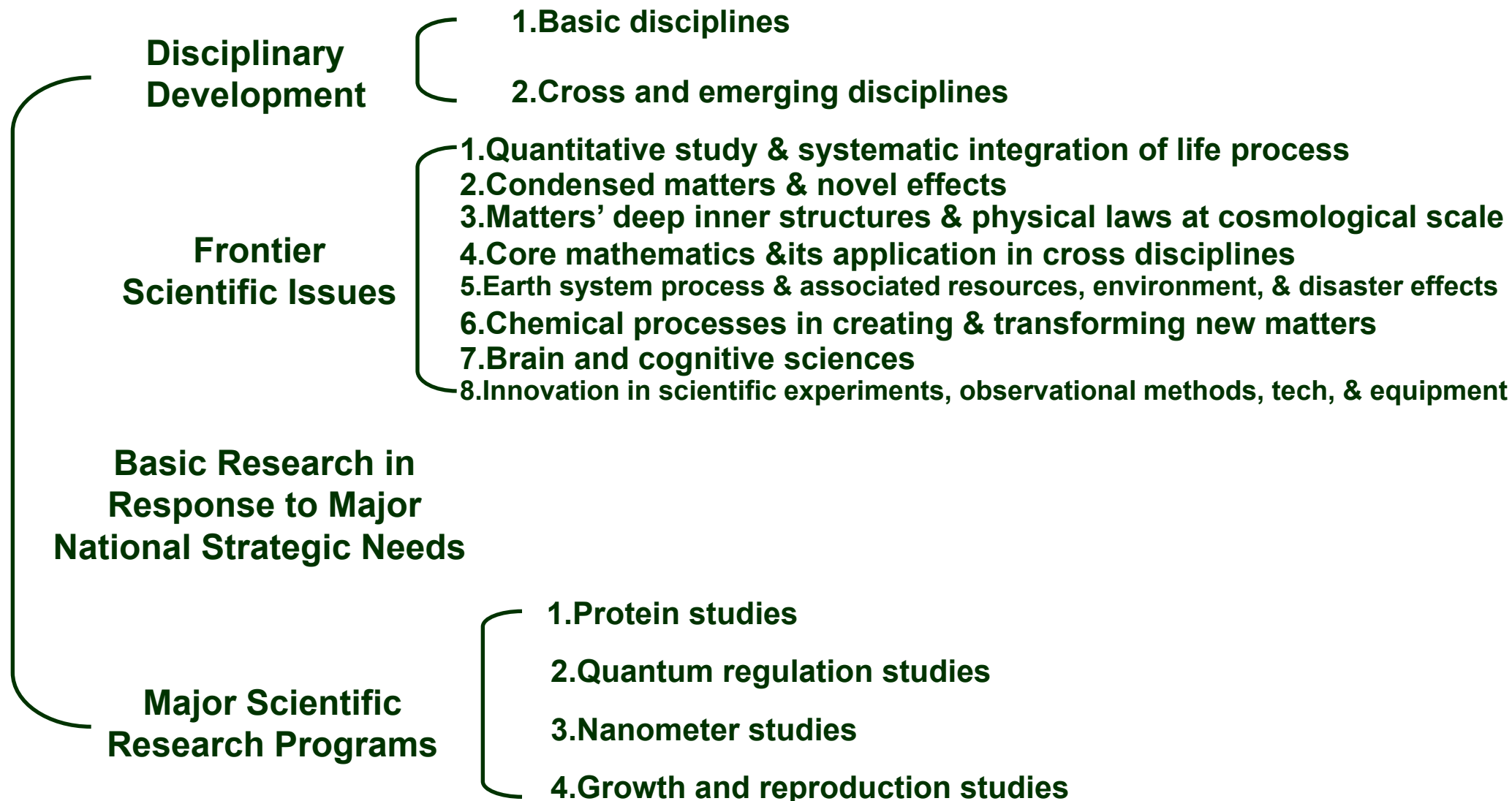
Marine Technology

Lasers Technology

**Aerospace
Technology**



Basic Research





Reform of the S&T System & the Construction of a National Innovation System



- promoting the full-fledged construction of a national innovation system with Chinese characteristics
- focusing on S&T resources distribution efficiency and comprehensive integration
- effecting a breakthrough in building an enterprise-centered technological innovation system featuring the integration of industry, academia, and research
- drastically enhance the nation's indigenous innovation capability



The S&T system reform will strive to accomplish the following major missions:

Deepening Institutional Reform & establishing a Modern Research Institute System

Vigorously Pushing Forward the Construction of a National Innovation System with Chinese Characteristics



Supporting & Encouraging Enterprises to Become the Main Player in Technological Innovation

Advancing the S&T Management System Reform



Major Policies & Measures

- 1. Financial and Taxation Policies Encouraging Technological Innovation at the Enterprise Level**
- 2. Strengthening assimilation and absorption of imported technologies, and re-innovation**
- 3. Government Procurement Favoring Indigenous Innovation**
- 4. Intellectual Property Rights Strategy and Technology Standards Strategy**
- 5. Policies Encouraging Innovation Education for Experienced Workers**



- 6. Accelerating the Industrialization of High Technologies and the Diffusion of Advanced Appropriate Technologies**
- 7. Perfecting the Mechanism for Combining Defense and Civilian Sectors, and Making Defense Part of the Civilian Sector**
- 8. Expanding International and Regional S&T Cooperation and Exchanges**
- 9. Improving Scientific and Cultural Literacy of the Entire Nation and Building a Social Environment Conducive to S&T innovation**



S&T Input and S&T Infrastructure Platforms

↖ **S&T input and basic facilities platforms constitute a material basis for S&T innovation, and an important prerequisite and a fundamental guarantee for sustainable S&T development.**

↖ **Compared with the developed and emerging industrialized nations, the nation's total and intensity of S&T input remains insufficient, with irrational aspects in the investment structure, and a weak S&T infrastructure.**



Drastically increasing its input in S&T activities and strengthening the construction basic S&T facilities :



**Establishing a Diversified,
Multi-channel S&T Input
System**

1

2

**Readjusting & Optimizing
Input Structures, & Raising
the Cost-effectiveness of
S&T Expenditures**

3

**Strengthening the Construction
of S&T Infrastructure Platforms**

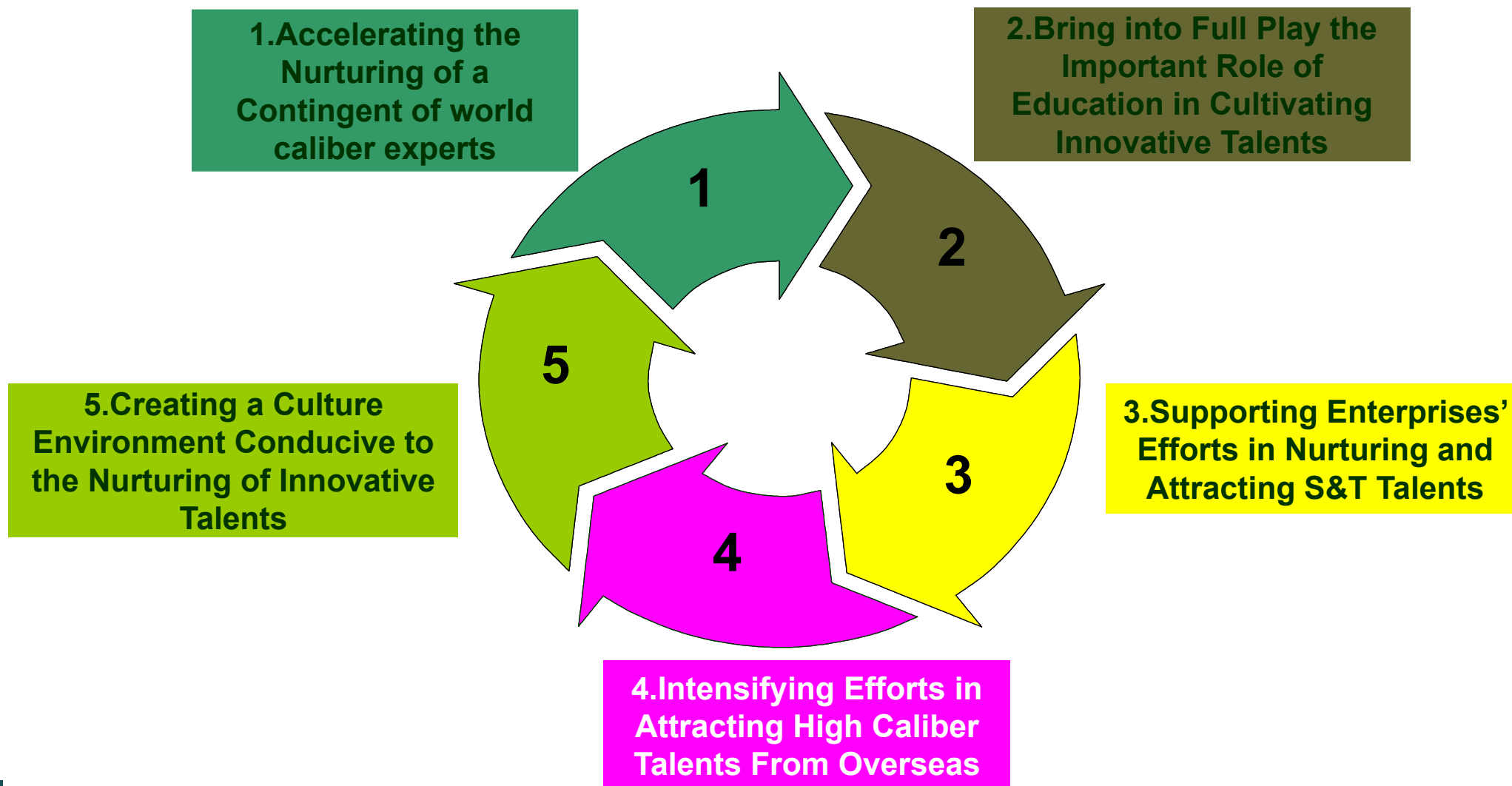
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**Establishing a Mechanism for
Sharing S&T Infrastructure
Platforms**



Talented Workforce Buildup

S&T innovation is rooted in S&T personnel:





- ↖ **The implementation of the outline of the National medium and long term S&T development plan calls for a strengthened leadership and coordination as it has a broad coverage, long time span, and demanding requirements. Effective measures shall be adopted to ensure the implementation of the missions defined in the Outline.**



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