

The Construction of the National Science and Technology Infrastructure Platform and the Scientific and Technological Resource Sharing Network of China

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Content

The Construction of the National Science and Technology Infrastructure Platform (NSTIP) and the Scientific and Technological Resource Sharing Network of China (and STRSN)



What is NSTIP ?

Why is NSTIP constructed?

What is the structure of NSTIP?

How does NSTIP run?

What is the relation between NSTIP and STRSN ?

S&T resources

S&T resources include:

- Experimental base and large scientific instruments
- Natural science and technology resource
- Scientific data
- Scientific literature
- Network environment

Why is NSTIP constructed?

The more S&T resources, the better?

We realized:

Ways of possession, distribution, creation and use of S&T infrastructure determine National competitiveness

Reality is:

On the one hand:

- ✓ Large numbers of S&T infrastructure
- ✓ Some resources are very advanced

On the other hand:

- ✓ Small portion of scientists and organizations possess most of S&T resources
- ✓ Many resources has low utilization rate



The reason lies in:

- ✓Lack of sharing mechanism, incomplete relevant policies and regulations
- ✓Excessive competition
- ✓Lack of sharing conception and culture

Solution is:

Construction of the National Science and Technology Infrastructure Platform (NSTIP)

From vision to reality

2002-2003 Discussed, supported by scientists and government

2004- Local and central government financial investment

Central government invest 0.4billion U.S.

national initiative

Organizations involved:

Ministry of Science and Technology

National Development and Reform Commission

Ministry of Finance

Ministry of Education

Chinese Academy of sciences

Ministry of Land and Resources

Chinese Academy of Agriculture Sciences

State Bureau of Surveying and Mapping

Most big government owned research institutes

Local governments of provinces

basic thinking:

Promote resources **efficiency** through enhancing information sharing

Features:

- ✓ focusing on the **integration, sharing**
- ✓ **existing** resources
- ✓ Resource Information centralized management, material object resources distributed service

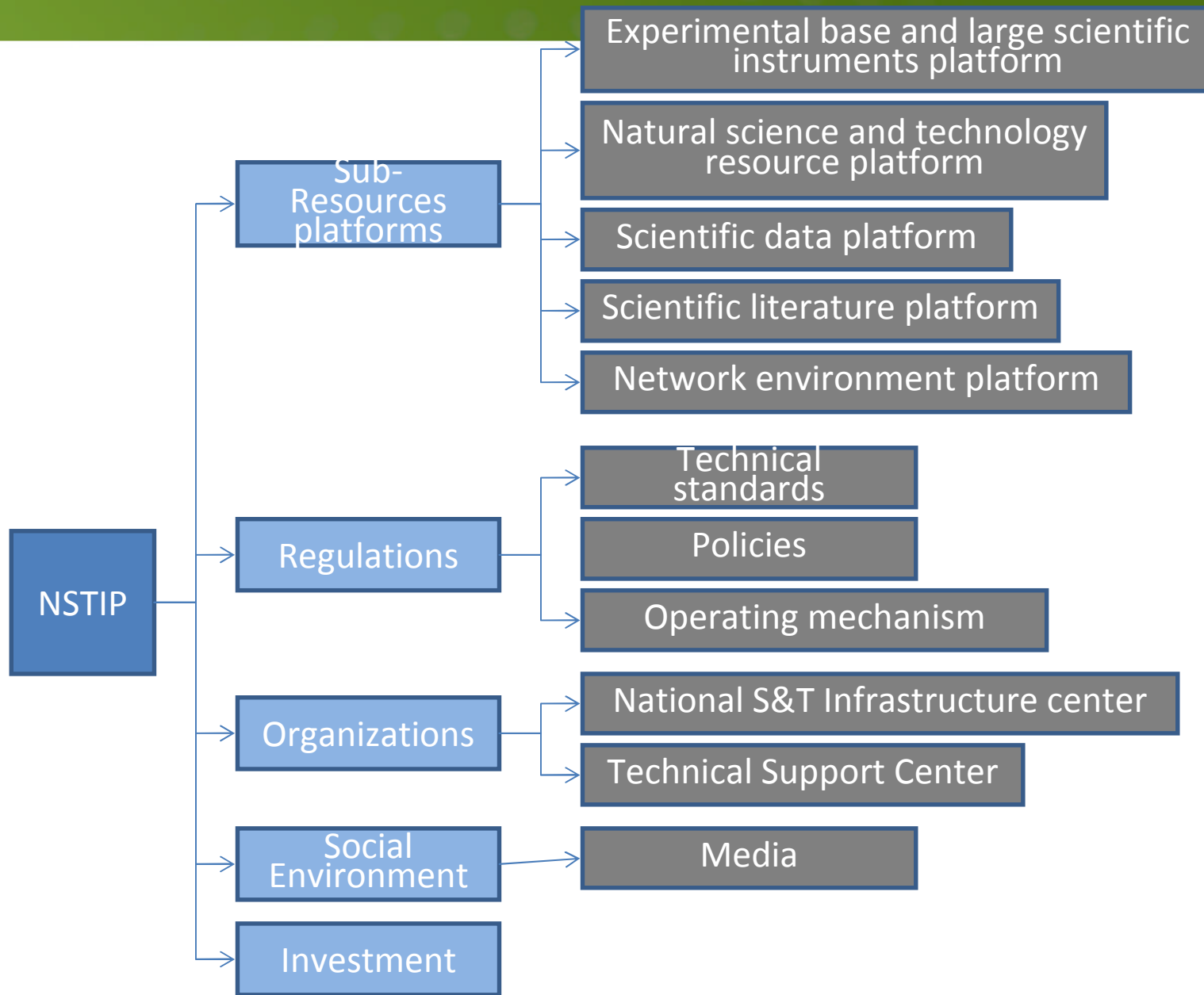
Important task:

- ✓ Information resources produce and sharing
- ✓ material object resources service

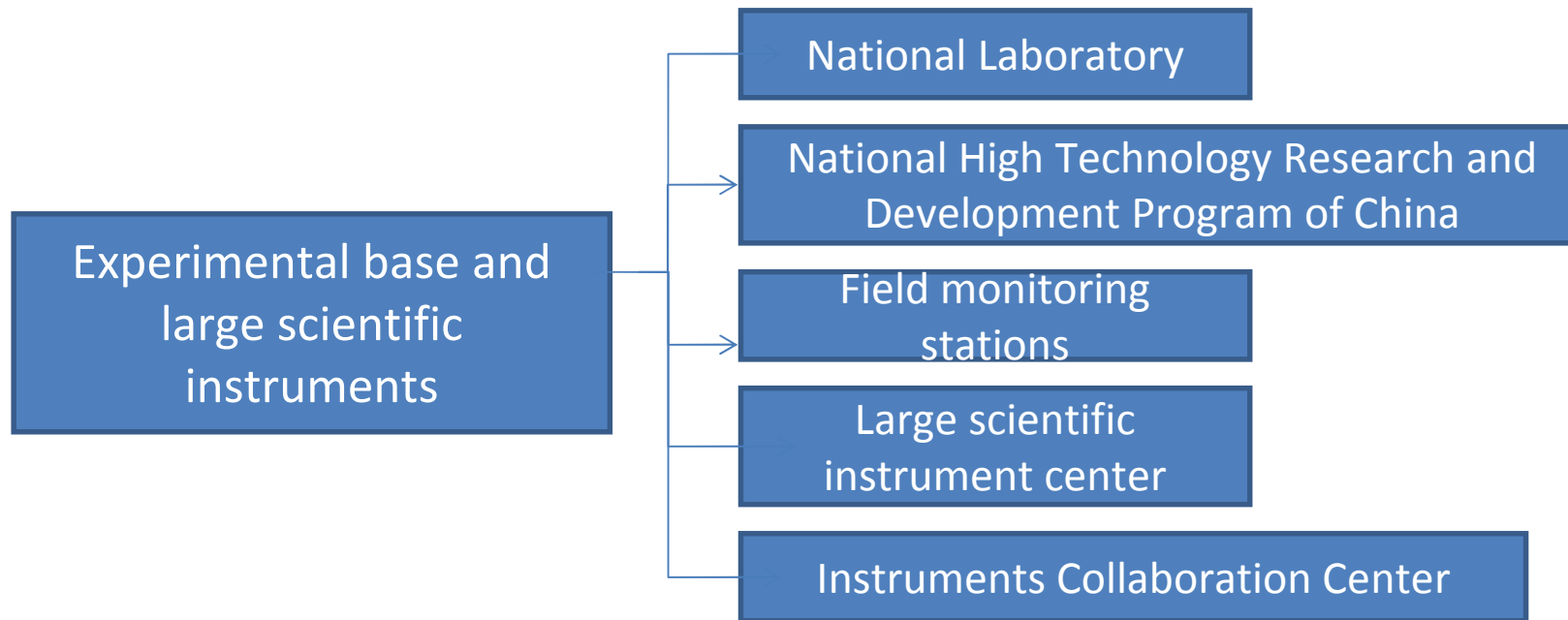
Money spend on:

- ✓ Resources information produce, maintenance, refresh
- ✓ regulations(Standards, policies.etc) establishment
- ✓ service award
- ✓ staff costs
- ✓ network, hardwares

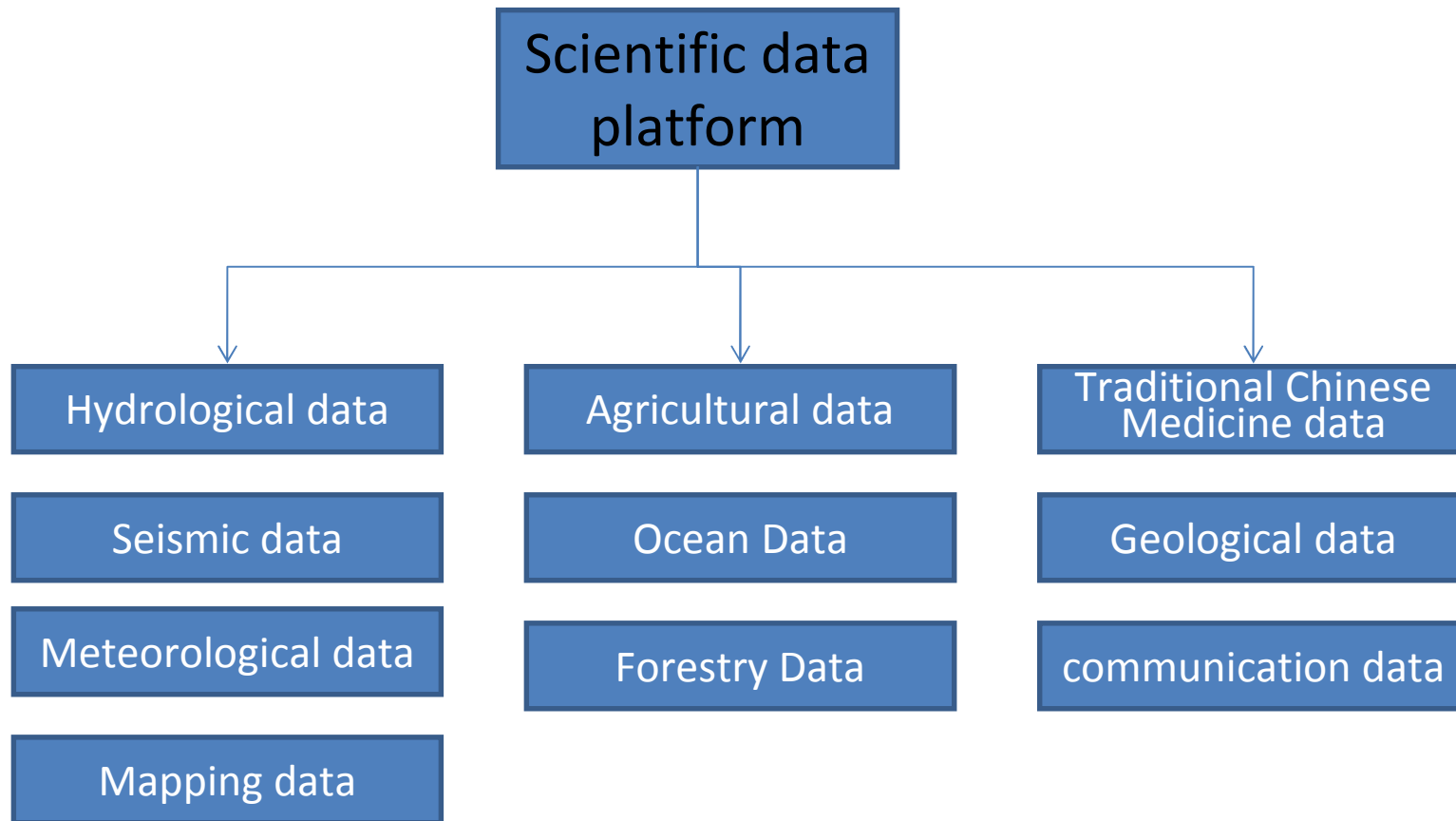
Structure of NSTIP



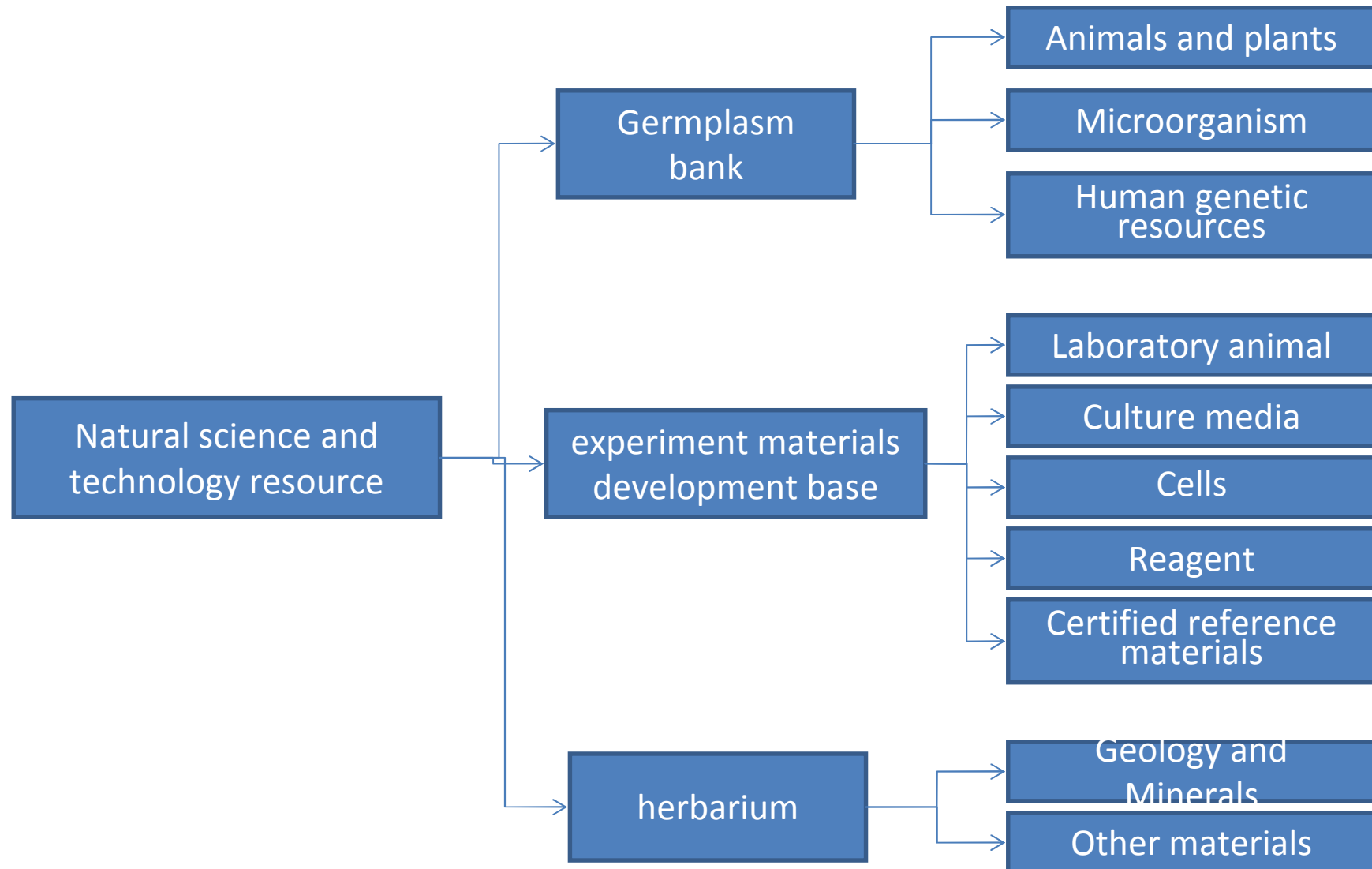
Structure of Experimental base and large scientific instruments platform



Structure of Scientific data platform



Structure of Natural science and technology resource platform



Progress

Integrated information:

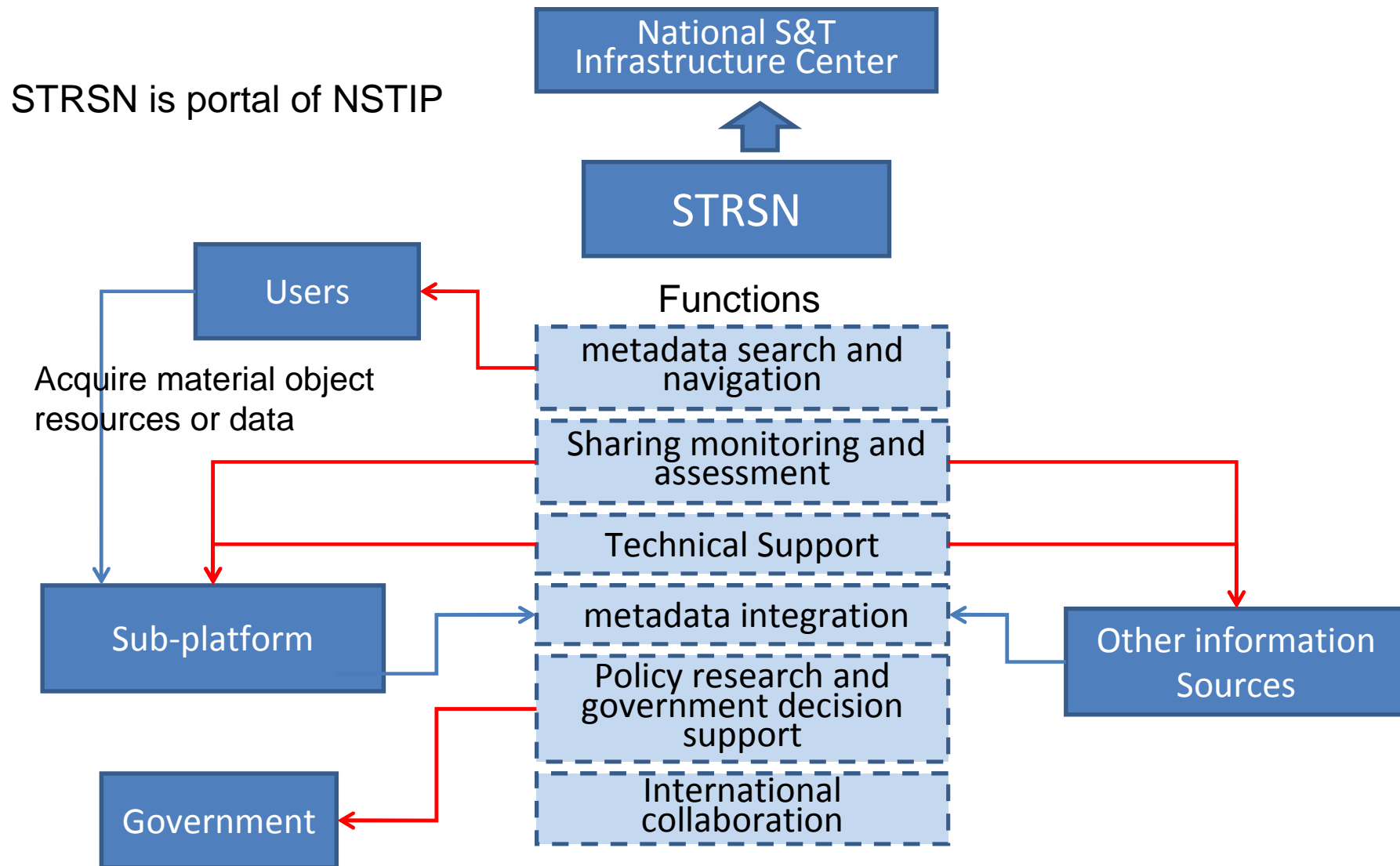
- ✓ Instruments: 12,000 sets (Unit price over 60,000 U.S.)
- ✓ Natural resources: 8,670,000 copies
- ✓ Scientific data: 35.5 TB
- ✓ Scientific literature: 17,000 S&T literature copies in English, 215,000 S&T books

Social impact

Conception of sharing is generally accepted

Many persons and organizations take part in the NSTIP

Scientific and Technological Resource Sharing Network of China (STRSN) (www.escience.gov.cn)



Quantity of information integrated(1)

large scientific instruments



- 20 wind tunnels
- 80,000 metrological primary standards
- 200,000 analytic testing methods
- 25000 analytical methods
- 5400 emergency response data

Experimental base



- 220 state key laboratories
- 6 national laboratories
- 80 field observation stations
- 170 national engineering and technology research centre
- 4500 testing institution

Quantity of information integrated(2)

Natural science and technology resource



420,000 plant germplasm
90,000 animal germplasm
130,000 microorganism
3,240,000 specimen

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S-T literature



400,000 standard literature
standard database

Quantity of information integrated(3)

Scientific data



45G forestry
230G ocean
269 datasets medicine and health
1011 datasets earth system
2T meteorology

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science popularization



90 museums

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Thanks to everyone
Welcome to China