Challenges and opportunities for research data management in Chinese library community

Xu, Huifang
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Challenges and Opportunities for Research Data Management in China Library Community

Xu Huifang

National Science Library, Chinese Academy of Sciences

About...

National Science Library
Chinese Academy of Sciences

Chinese Academy of Sciences

- More than 100 Research Institutes
- 3 Universities
- Over 130 National laboratories
- Over 210 field observation stations.
- More Than 68,000 Formal Employees
- Over 52,000 Graduate Students.

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Focus in this presentation

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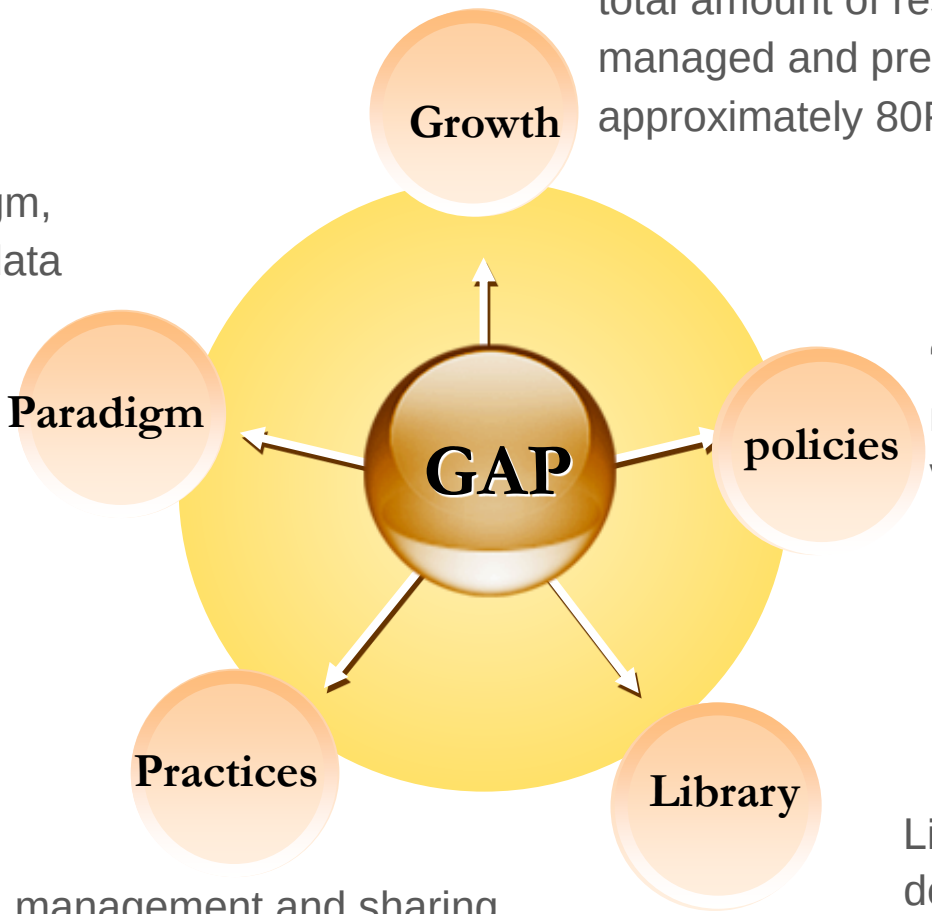
1. The gap between research data management and new research paradigm demand
2. China's research data management policies and features
3. National research data management and sharing platforms
4. Universities' data repositories
5. Journal data publishing
6. Libraries' RDM patterns and SWOT analysis
7. Suggestions

Gap between demand and reality

growth spurt of the amount of research data, total amount of research data effectively managed and preserved in China is approximately 80PB

New research paradigm, more depend on big data and data mining



First National level “research data management” was issued very recently at 2018

8 national research data management and sharing platforms, several university data repositories and 3 specific data publishing journals, China have 2879 universities and colleagues.

Library’s role, strategy, deployment for data management and service remains vague

Research data management related policies

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The State Council

Research data management measures 2018.3 milestone

Interim sharing and management measures for government information resources 2016.9

Action plan for promoting big data development 2015.9

Outline of the national program for medium and long-term scientific and technological developments (2006-2020) 2006.2

State Oceanic Administration, Ministry of Transport, Ministry of Land and Resources,The Ministry of Agriculture, National Marine Information Center, China Meteorological Administration, China Earthquake Administration

Chinese Academy of Sciences

Research data management and open sharing measures for the Chinese Academy of Sciences 2019.2

Research data management related polices

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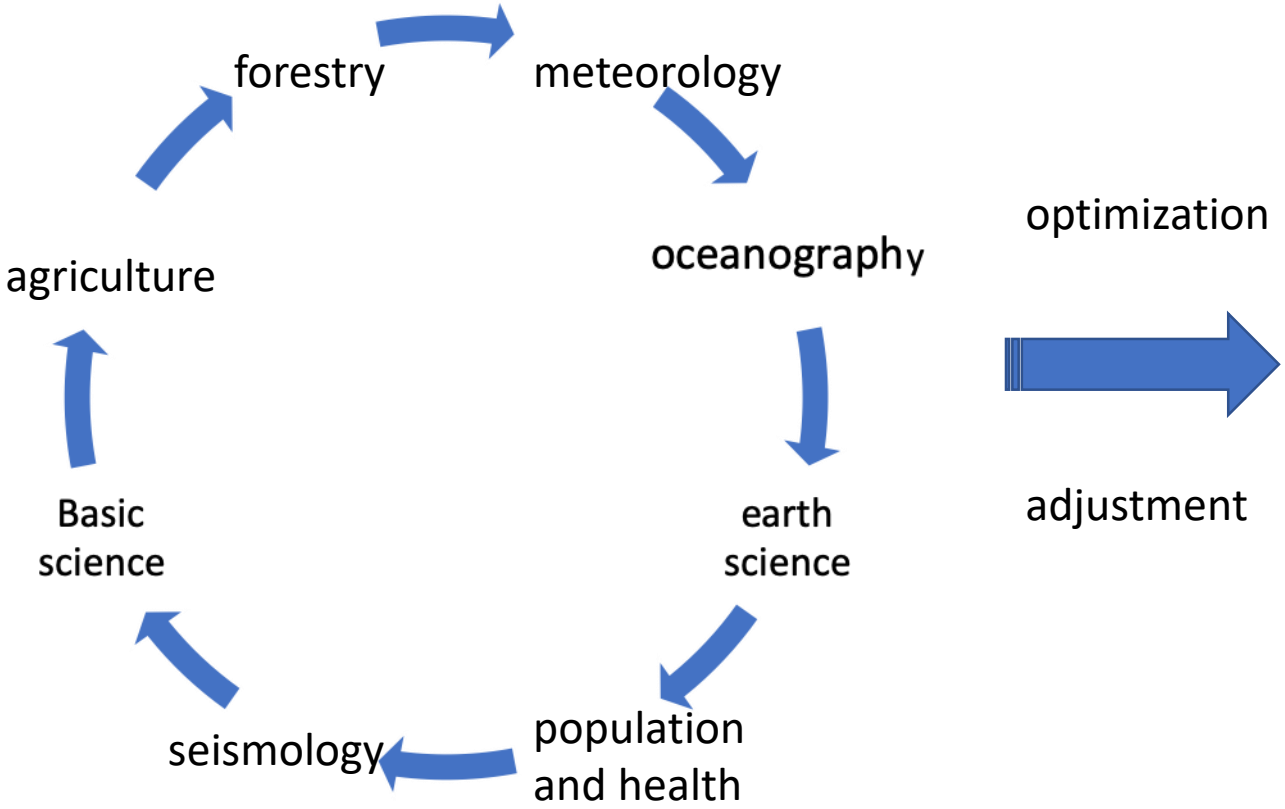
1. Most of the policies are issued by the state council and ministries.

2. It is predictable that there will be more policies will be released by funding institutions and research institutions to make supplementary to those polices issued.

3. The complementary policies should ensure DMP be carried out with projects, make more clear on assignment of responsibilities, operational process, share and access.

National research data management and sharing platforms



20 national science data center

National research data management and sharing platforms

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1. http://www.ncmi.cn
2. http://www.geodata.cn
3. http://www.cfsdc.org
4. http://www.agridata.cn
5. http://data.earthquake.cn
6. http://data.cma.cn
7. http://www.nsdata.cn
8. http://mds.nmdis.org.cn

National research data management and sharing platforms

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GOOD

- ✓One stop discovery
- ✓Data resources link
- ✓Discipline-specific metadata standards
- ✓Keywords are searchable
- ✓Support life cycle data management
- ✓Support discovery and access
- ✓Data volume is TB level

NOT GOOD

- Not true data fusion
- Without name data entities with URI
- Not adopted common standards like Dublin or Datacite Schema
- Free word indexing
- Lack DMP functions
- Limited services with non-registered users, especially for download and API
- Data service volume is GB level

Three types of Standards and Regulations:

- Regulations related to the operation of platform
- Regulations set of data management standards
- Regulations involve platform development and user services
- Formed 18 national research data standards(Like Soil Science Data Metadata)

University Data Repositories

https://opendata.pku.edu.cn/

http://dvn.fudan.edu.cn/home/

Dataverse

Open research platform

Reking U

Social science data platform

Fudan U

Dataverse

Digital repositores and services platform

Shanghai international studies U

Dataverse

RDM Platform

Wuhan U

Dspace

http://sdm.lib.whu.edu.cn/jspui/

https://datam.shisu.edu.cn/home/

Journal data Publishing

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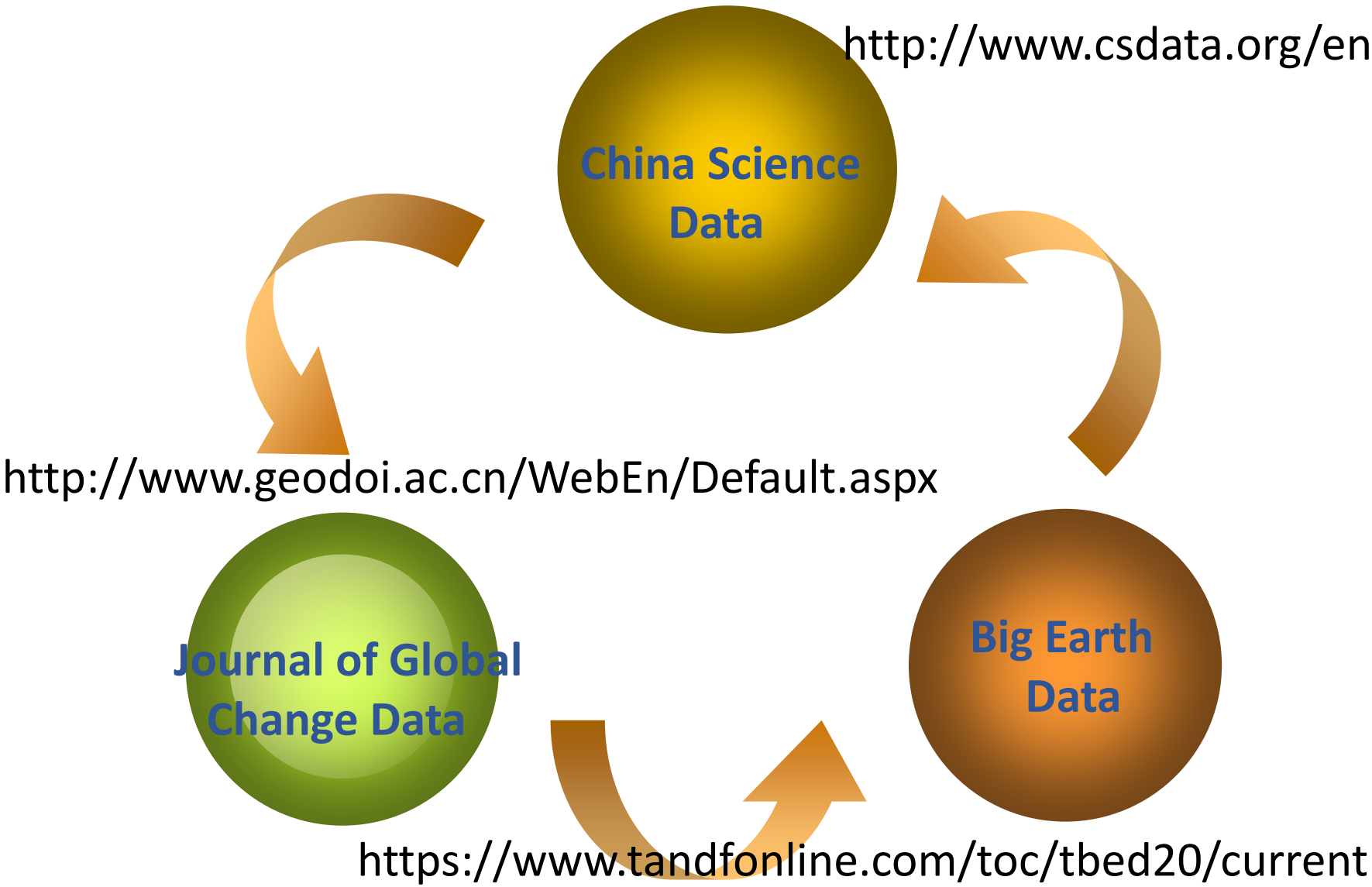


Libraries' data Service patterns

Data management platform

Data resource discovery system

Consulting and training

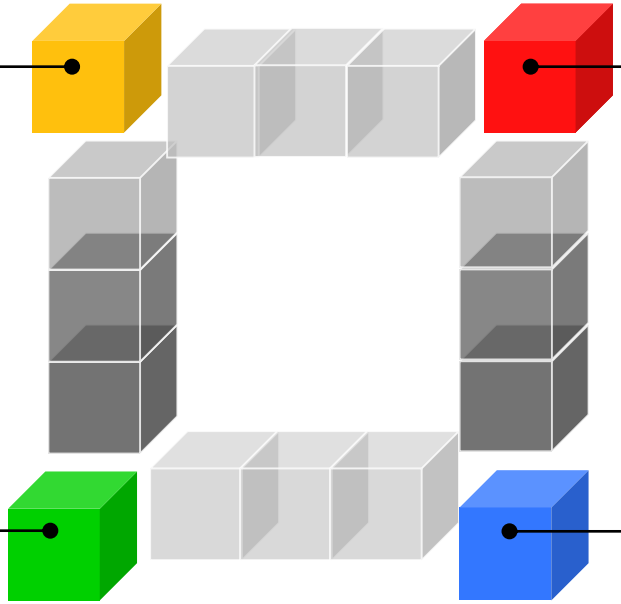
Data analysis and visualization

Open access data integration and navigation

Data Conservancy of John Hopkins University Library
Pre middle post research stage data management services in York University
DOI registration service of German National S&T Library
Dryad data knowledge base of German National Library of Medicine

SWOT-External opportunities

- Innovation demand
- Data growth spurt



- **Underdeveloped**
  Data publishing
- Attach importance

SWOT-External Challenges

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- Not well prepared to transform for new research paradigm

- Library's role is not reach an agreement in all levels

SWOT-Internal advantage and disadvantage

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Advantage

Realize and act

Rich experience on Inf infrastructure

Rich experience On inf organization

Existed commercial platforms

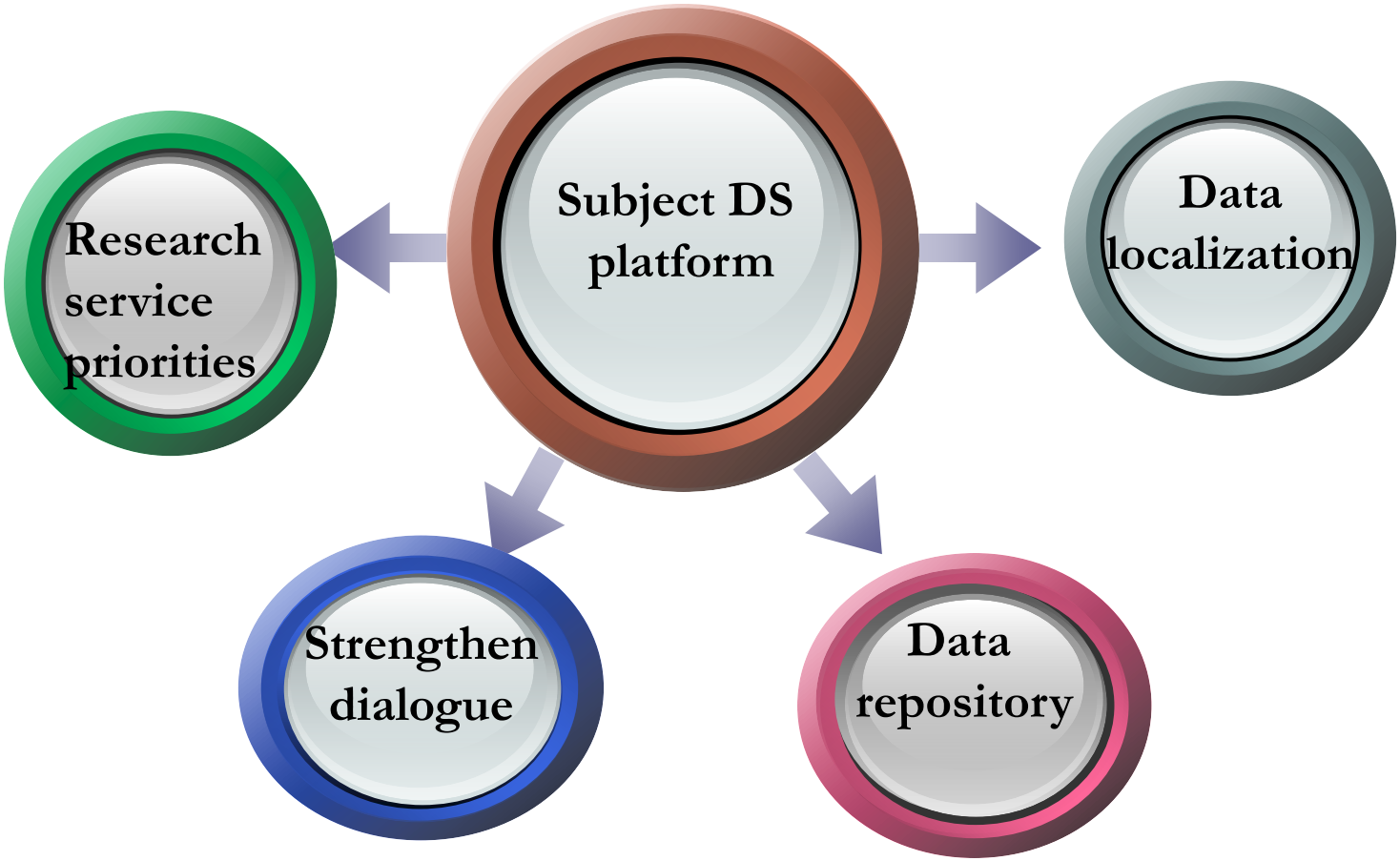
Dis advantage

Lack of talent

No precise role awareness

No corresponding strategy and deployment

Recommendations and Suggestions



Thank You !

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