**WE WILL START AT 10:00 AM (CET)**

**SESEC V Webinar**

# China Open-source Policies and Standardization

You are *muted*

Use the *Q&A or Chat Panel* to submit your questions

Keep your questions *short and concise*

Contact us: assistant@sesec.eu

Welcome to our website: https://sesec.eu/

*Seconded European Standardization Expert in China (SESEC) Project*

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CEN  CENELEC  ETSI  EFTA

# SESEC INTRODUCTION

## A Project co-funded by EC, EFTA, CEN CENELEC & ETSI

❖ **Promote** European and International standards in China

❖ **Improve** contacts between Project Partners and different levels of the Chinese administration, industry and standardization bodies

❖ **Enhance** visibility and understanding of the European Standardization System (ESS) in China.

❖ **Gather** regulatory and standardization intelligence

❖ **Undertake** technical lobbying



## Goals

- The SESEC initiative supports **EC policy** and **ESOs strategic objectives** in China.

- Our ultimate goal is the enhancement of **EU-China dialogue and cooperation** in the field of standardization.

- It is notably expected to support the Framework Cooperation Agreement in place **between the ESOs and SAC.**

# SESEC V LAUNCHED IN OCT 2022

Goals and Tasks

## Call for stakeholders' Strategic Comments on Standardization Cooperation with China

**Please contact**

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Ms. Zhuohua Chen zchen@cencenelec.eu in CEN/CENELEC Management Centre,

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# Contents

- Overview
- Government Policies
- Open-source Standardization
- Issues and Challenges
- Possible Trends and Next Steps

# Overview – Open-source in China

**500+**

**Open source communities**

(up to 2022)

A **wide sector coverage including** database, Internet of Things (IoT), big data, artificial intelligence (AI) and cloud computing etc.

- 12.5% global open-source projects are led by Chinese developers

- Overseas contributors take up to 33.7% in China-initiating open-source projects

- Based on the data in 2021, the number of Chinese developers ranked no. 2 in the GitHub platform with a total number of more than 7.55 million.

(Data source: *China Open Source Blue Book 2022*, by China OSS Promotion Union)

# Overview

- Open source has attracted the attention from relevant industries and governments due to its openness and sharing characteristics allover the world, including China.

- Open Source is mentioned in several important policy documents in China since 2021

- In recent years, more focus has been given from China on both domestic and international standardization, and such works have been penetrating into numerous sectors, especially in ICT and digital ones.

- The flourishing development of open source is meant to connect with standardization for a synergetic development, which will result in an unavoidable and important trend in the ICT fields.

# China Government Policies for Open Source

- The development of the open source and its industry is made by the efforts from the government, enterprises, communities and relevant individuals.

- Government policies have always been a significant promotion for industrial or sectoral development.

- China's high emphasis on open source, including its development of standardization, is reflected in a series of related policies.

- The policy documents range from national to specific sector level, especially those relate to digital and IPR fields.



REGULATIONS
RULES - LAW
REQUIREMENTS
COMPLIANCE
STANDARDS
TRANSPARENCY
POLICIES

# China Government Policies for Open Source

## *Chinese Government 14th Five-Year Plan (2021-2025)*

*March 11, 2021*

- One of the most important economic planning documents of China

- Set the tone of the digital development:

> "tap into the huge potential big data and its innumerable use cases. Greater **integration of digital technology and the real economy** will power the transformation and **upgrading of traditional industries**, and the development of new industries, new forms of business, and new models, which can be new drivers of economic growth"

Multiple key words in this expression have frequently appeared in other follow-up national and ministerial level issuances to form a consistency

cen  CENELEC  ETSI  EFTA

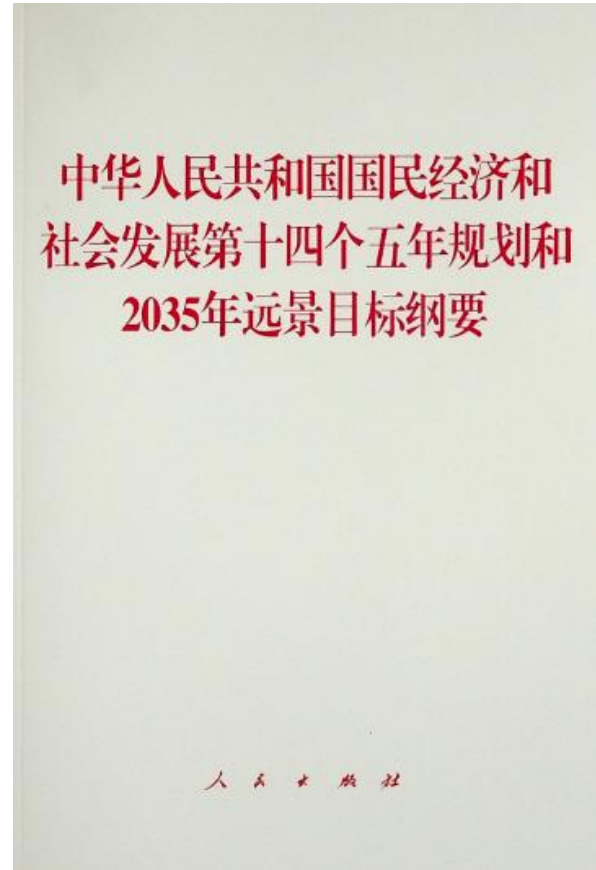# China Government Policies for Open Source

## China Government 14th Five-Year Plan (2021-2025)

*March 11, 2021*

**"*Key digital technologies: innovation and application*" chapter**

Set the direction and tone for the subsequent specific open source and its standardization policies

> "*Support for the development of innovation consortia including open-source communities, improve open-source intellectual property rights and legal systems; enterprises will be encouraged to make available open-source codes, hardware design, and application services*"

中华人民共和国国民经济和
社会发展第十四个五年规划和
2035年远景目标纲要

人 民 出 版 社

# China Government Policies for Open Source

## *National Outline for Standardization Development*

*- October 9, 2021*

- It is also called China standardization strategy. One of the most important policy documents for the development and planning on the country's standardization
- Put very few but critical words for open source:

*To develop machine-readable standards and open source standards, and promote the digital, networked and intelligent transformation of standardization*

Putting open source together with digital and intelligent transformation (two key working focus of the country in recent years) means more support and attention will be given in its development.

# China Government Policies for Open Source

### *14th Five-Year Plan for the Development of Software and Information Technology Services* - *November 30, 2021*

- Highly affirms the significance of the open source

- Set quantitative developing goals for the open source:
  - establishing two to three open-source projects with international influence;
  - fostering more than ten excellent open-source projects.

**More detailed planning and missions are also set:**
- *Strengthen security testing for the open-source code; ensure the supply security of open-source code components;*
- *Vigorously develop domestic open-source foundations and other open source organizations. Optimize open-source software governance rules, and popularize open source software culture. Accelerate the construction of open-source code hosting platform and other infrastructure;*
- *Build up open source communities and gather outstanding open source talents; establish an open source software ecosystem.*
- *Strengthen exchanges and cooperation with international open-source organizations to enhance the influence of domestic enterprises in the global open source system.*

# China Government Policies for Open Source

*14th Five-Year Plan for the Development of Software and Information Technology Services* - *November 30, 2021*

**Specifical contents on Standardization of open source**

- Enhance open-source governance capabilities

- Improve mechanisms related to intellectual property custody, maturity assessment, technology and ecological governance of open-source software

- Encourage capital to explore the establishment of intellectual property funds for open source software

- Formulate open source agreements in accordance with Chinese laws and regulations

- Actively participate in global open-source governance

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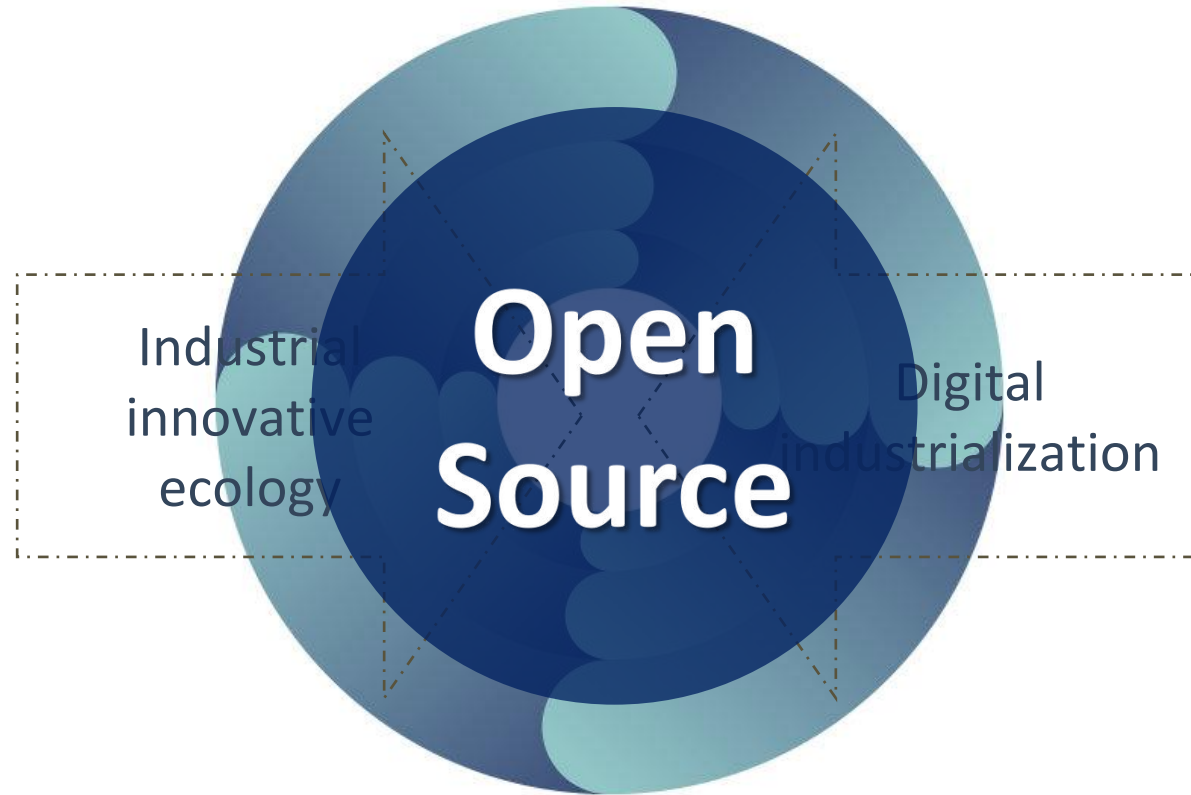
# China Government Policies for Open Source

*Outline for Building an Intellectual Property Powerhouse and the Annual Plan for the "14th Five-Year Plan" Period* - *January 5, 2022*

- Put open source as one of the key elements in the intellectual property sector

- Appoints Ministry of Industry and Information Technology (MIIT) to be responsible for the specific work

- Key contents on open source standardization:
  - study and formulate compliance standards for open-source IT intellectual property;
  - develop rules and standards for open-source community code contribution;
  - conduct research on industrial open-source intellectual property risks and compliance issues;
  - strengthen industry open-source intellectual property compliance assessment and training

# China Government Policies for Open Source

*14th Five-Year Plan for Digital Economy* - *January 12, 2022*

# China Government Policies for Open Source

## 14th Five-Year Plan for Digital Economy - *January 12, 2022*

**The document states to:**

- support the development of open-source communities, platforms and projects that have independent core technologies;

- promote the joint contribution and sharing of innovation resources

- promote the open evolution of innovation models

**It also requires to:**

- encourage the development of new collaboration platforms such as open-source communities and developer platforms;

- foster an open and collaborative digital industry innovation ecosystem between large, small and medium-sized enterprises and social developers;

- promote the rapid growth of innovative enterprises"

# China Government Policies for Open Source

## *Other Significant Policy Documents*

- **Three-year Action Plan (2021-2023) for the Construction of New Types of Infrastructure for the Internet of Things**
  - list the open source as a substantial part for improving innovative capability.
  - explore a development model of patents + standards + open-source communities, and stimulate innovation

- **14th Five-Year Plan for the National Intellectual Property Protection and Use**
  - research and construct data intellectual property protection rules;
  - optimize intellectual property rights and the legal system for the open source.

# Open Source Standardization

## Brief Summary on Synergetic Development of Open Source and Standardization

- **Standardization Support Open Source Communities:**
  - Open-source rules and community governance (terms, concepts and rules) need to be standardized. Use standards, like de facto open source standards, to accelerate the development of the open-source implementation.
  - Standardization of open-source projects and technologies: A wide range of open-source communities started their standardization projects, some association standards are developed around open-source projects and technologies, and such associations standards also promotes the formulation of international standards.

- **The Open-Source Also Support Standardization**
  - Standardization organizations establish open-source projects to support the validation, enforcement, and dissemination of standards

# Open Source Standardization

*China's Perception/concepts on Synergetic Development of Open Source and Standardization*

- some consensus and common ground has been made regarding the relationship of the open source and standardization:

  - the synergetic development of open source and standardization may become an excellent model for the development of ICT technologies
  - the development of national and association standards will jointly stimulate a sustainable and healthy environment for the open-source ecology

# Open Source Standardization

## *Key Points for the Coordination of Open Source and Standard*

- The open-source and relevant stakeholders in China also deems that three key points are significant to develop open-source
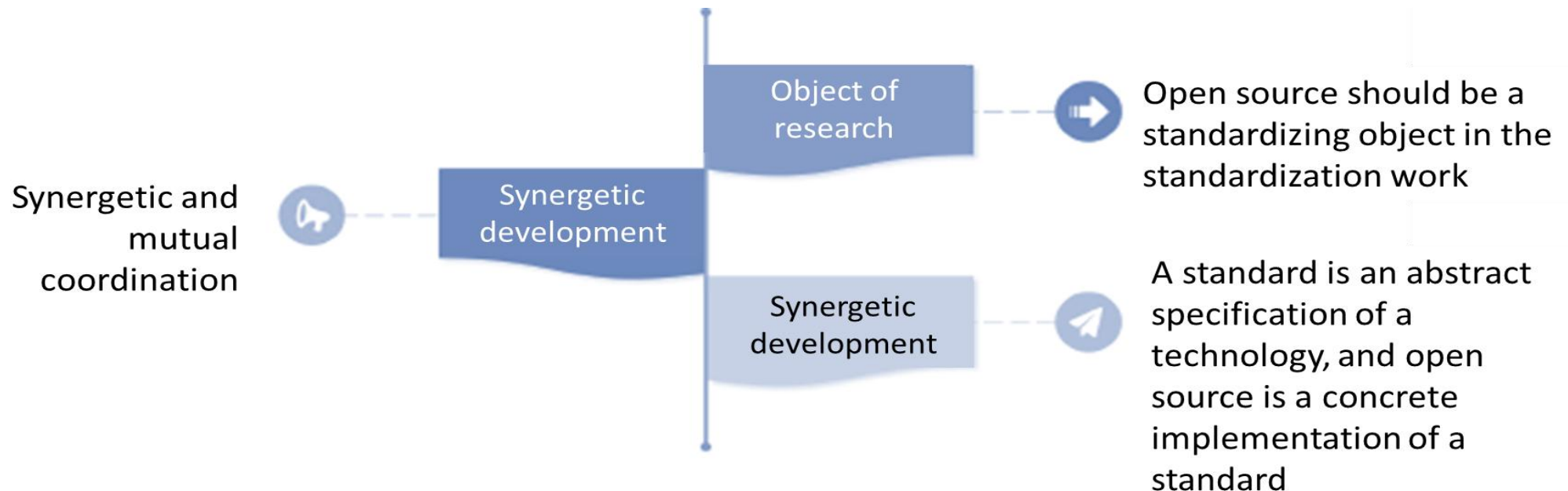
# Open Source Standardization

*The industrial consensus in China regarding the interaction of open source and standardization*

- The value of standards to open source lies in providing **portability and interoperability**

- The formulation, optimization and promotion of standards are also closely related to the research and development, upgrade and application of open-source projects.

# Open Source Standardization

## China's Synergetic Development of Open Source and Standardization

- Although no official release has published up to today on a specific structure, the preliminary framework summarized by the industry has been made
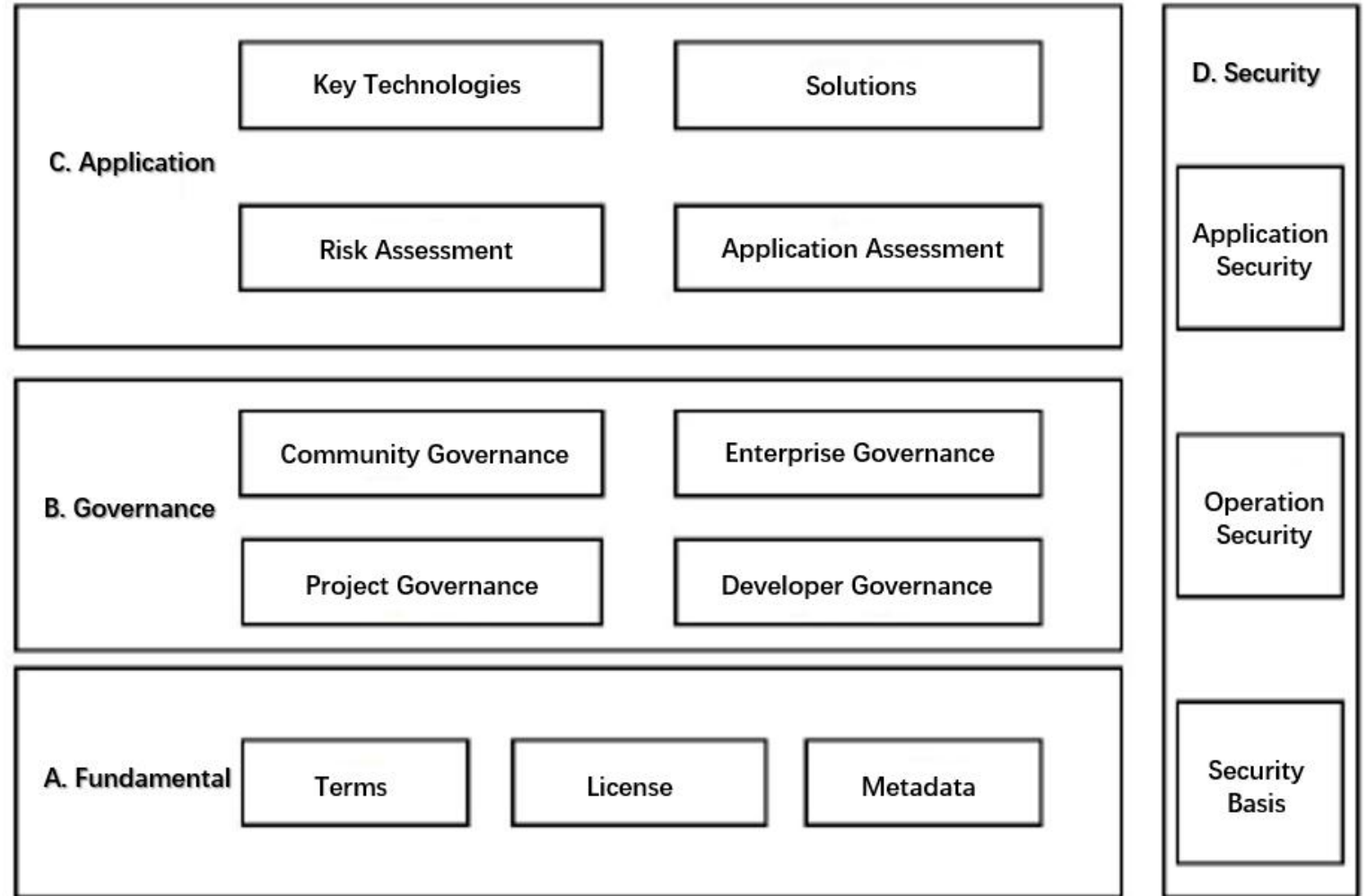


(Data source: *China Open Source & Standardization Synergy Development Report 2022, by CESI)*

# Open Source Standardization

## *Current Standard Work in China – national TCs*

| | TC260 | TC28 | TC180 |
|---|---|---|---|
| **English Name** | Information Security | Information Technology | Finance |
| **Mirroring International Organization** | ISO/IEC/JTC1/SC27 | ISO/IEC/JTC1 | ISO/TC68 |
| **Working Scope** | Standardization work that relate with information security in China | The standardization of information collection, representation, processing, transmission, exchange, presentation, management, organization, storage and retrieval systems and tools, design and development in China | The standardization work of banking, securities, insurance and other relevant professional fields in China |

# Open Source Standardization

*Current Standard Work in China – Standard work*

**TC260**

**One** national standard under development:
**Information security technology - Security evaluation method for open source software**

**Status:** one round of calling-for-comment finished in June 2023

**Main contents:**
- Aiming at ensuring the security of open source code, and reducing the security risks of open source code in software products
- Puts forward the security evaluation elements and evaluation methods for the open source code of software products

# Open Source Standardization

*Current Standard Work in China – Standard work*

**TC28**

**One** national standard under development:
**Information technology—Open source—Open source license framework**

**Status:** under review

**Main contents:**

- Present the general framework of common open source licenses.
- Elaborates the requirements on basic information, preface, definitions, authorization, limitation, breach and termination of authorization, warranty and limitation of liability terms, applicable law, license version and compatibility, license usage instructions

# Open Source Standardization

*Current Standard Work in China – Standard work*

**TC180**

**One** national standard under development:
**Financial industry open source software evaluation specification**

**Several** sector standards under development:
- **Financial industry open source software guidance on application management**
- **Financial industry open source software application assessment specification**
- **Financial industry open source technologies - terminology**

# Open Source Standardization

*Current Standard Work in China – Association standards*

| China Electronics Standardization Association | |
|---|---|
| **English Name** | CESA |
| **Working Scope** | Engaged in electronic information industry and related industry standardization |

**Several** association standards under development:

- **Information technology - Open source - metadata general requirements**
- **Information technology - Open source governance – part 1: general framework**
- **Information technology - Open source governance – part 2: evaluation model of enterprise governance**
- **Information technology - Open source governance – part 3: project evaluation model**
- **Information technology - Open source governance – part 4: community governance and operation**
- **Information technology - Open source governance – part 5: evaluation model of developer contribution**

# Open Source Standardization

## *International Participation of China*

China actively participate international standardization in ISO, IEC and ITU-T, especially in ISO/IEC JTC1 on open source

- Actively participated in the German-led AG3 established in May 2019. Although it has been disbanded after submitting its final study report in 2021, the focus of the group was to investigate software needs in the open source field.

- ISO/IEC JTC1/SC7: China, as an early member, and UK, Canada, India and other countries jointly set up the "Open Source Software (AHG7)" in 2022.

# Issues & Challenges

- *Insufficient standardization level in the open-source rules and governance bring quality and security issues.*
  - some concepts remain unclear and the standard formulating process stays relatively fragmented
  - people in the open source field tend to work out "de facto standards" rather than set standards

- *The open-source community has a poor understanding of the value of standardization*
  - A code is often considered as a "standard" in open source field
  - But interoperability with competing open source projects, competing proprietary systems, and other systems in the same ecosystem will not be guaranteed in this scenario.
  - The process of using code as standards will result in a lack of support from open, public and transparent process

# Issues & Challenges

- *Standardization organizations need to improve their understanding on the value of open source*
  - Traditional standardization organizations may not be fully aware of importance of open source in standardization work
  - Traditional ways of standard formulation are preferred and may lead to challenges in future competition

- *Intellectual property issues in standards are challenges in collaboration with open source*
  - Standards Copy right concept is sometimes conflicting with open-source application
  - Common practice of traditional SDOs Free Reasonable and Non-Discriminatory (FRAND) principle for IPR cannot support the open-source business model.
  - In some cases, IPR can't be disposed/processed appropriately to meet certain standards, which makes the code of an open source organization unable to be promoted or even developed.

# Possible Trends in China

## *Standardization on Governance of Open-source Rules and Communities Governance*

- China tends to do governance standards for open source

- China will actively participate in the international development of open source.

- The actions that the country is taking may lay a solid foundation for enhancing China's competitiveness in the future.

## *Standardization on Technologies of Open-source Projects*

- The value of standardization for open-source projects is also getting more attention. China may seize the opportunity to further standardize technologies in open-source projects

# Possible Trends & Next Steps

*Open-source Projects Built up by Standardization Organizations*

- It has been a basic and advanced model for standardization organizations to construct open-source projects.

- This model is very likely to be applied by SDOs in China as an important measure to improve the country's standardization levels
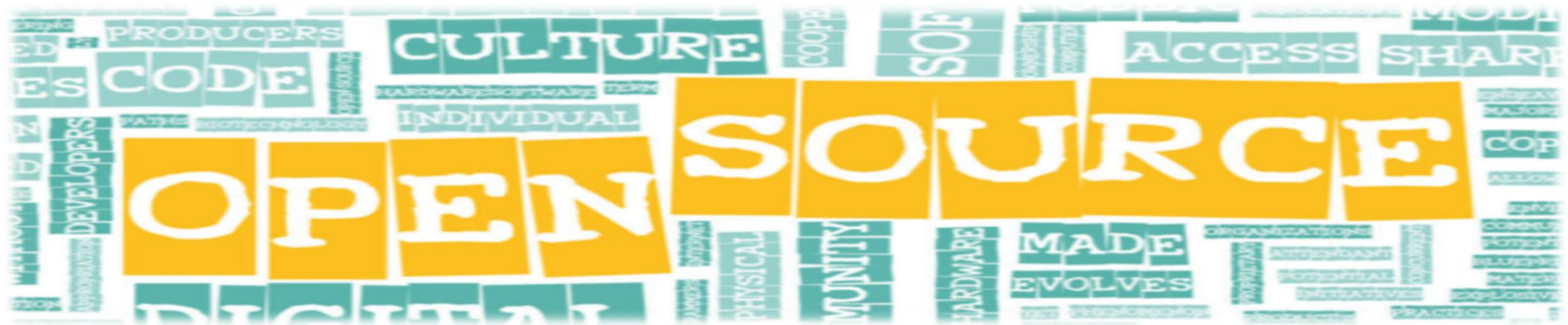
# Possible Trends & Next Steps

*Recommendations by Chinese policy makers and open-source communities*

- Build up an open source standard system

- Accumulate and form community consensus and formulate them into association or national standards

- Build up standardization system within open source organizations: support the standardization needs from open source projects, starting with association standards.

- Form industrial alliance in open source for the implementation of standards, make it enterprise-oriented, to facilitate open source standard implementation, and personnel training etc.

# Conclusion for today

- China takes open-source technologies and standardizations in a very high priority.
- Some quicker achievements may be obtained in China by the strong encouragement of the government and policy makers
- Some common agreements have been reached by Chinese policy makers and open-source communities on open-source standardization. However, the standards developing are still in very preliminary stage in China.
- Open-source are strongly recommended to be used by SDOs, but again it is still in very early stage.
- There are many challenges in the synergetic collaboration of Standards and open-source, copy right issue is one of them.