



ASIA-PACIFIC TELECOMMUNITY
**The 23rd APT Policy and Regulatory Forum
(PRF-23)**
20 – 22 June 2023, Nadi, Republic of Fiji

Document No:
PRF-23/INP-28

21 June 2023

China

**DEVELOPMENT AND GOVERNANCE OF ARTIFICIAL INTELLIGENCE
IN CHINA**

Contact:

Email:



Ministry of
Trade, Co-operative,
Small and
Medium Enterprise
and
Communications

PRF-23

The 23rd APT Policy and Regulatory Forum

Development and Governance of Artificial Intelligence in China

June 2023

20 - 22 June 2023  Nadi, Fiji

Hosted by the Ministry of Communications, Fiji



PRF-23

The 23rd APT Policy and Regulatory Forum

CONTENTS

I. Development and application of Artificial Intelligence (AI) in China

II. Ethical challenges posed by AI and Chinese regulatory practices

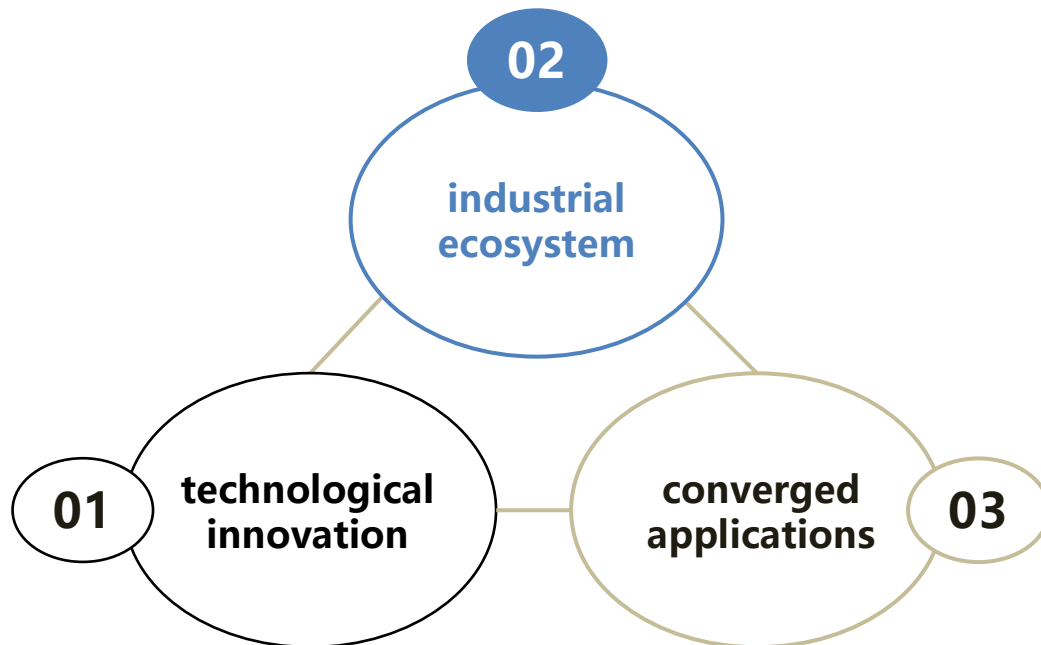
III. China's development planning and governance concept for AI

Hosted by the Ministry of Communications, Fiji



China attaches high importance to the development of artificial intelligence

- ◆ China attaches high importance to innovative development and takes new-generation AI as the driving force for scientific and technological development, industrial optimization and upgrading, and productivity improvement, with the aim to achieve high-quality development.



In recent years, China's AI industry has witnessed positive progress in technological innovation, industrial ecosystem and converged applications, **making China one of the leading countries in AI.**



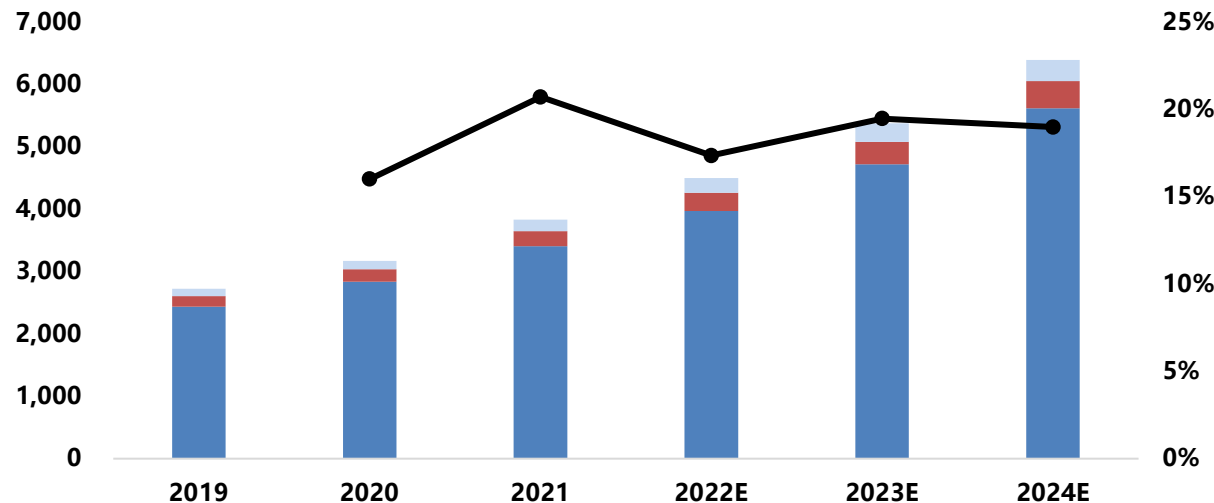
PRF-23

The 23rd APT Policy and Regulatory Forum

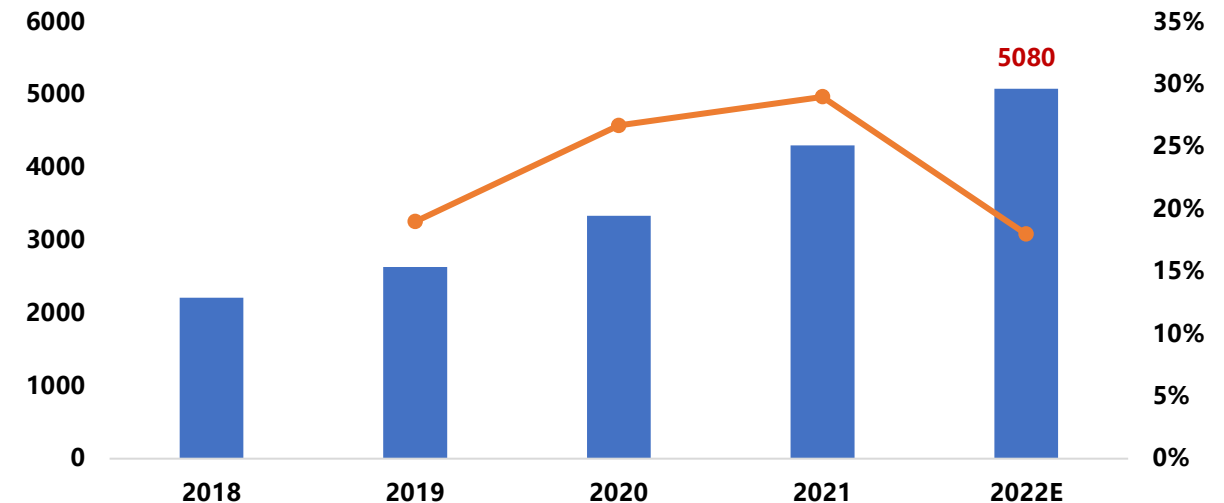
The size of China's core AI industry maintained rapid growth.

- In 2022, the revenue of the global AI industry reached nearly \$450 billion, up 17.3% year-on-year. The size of China's core AI industry reached **508 billion yuan**, up **18%** year-on-year .

Global AI Industry Revenue



China's AI Industry Revenue

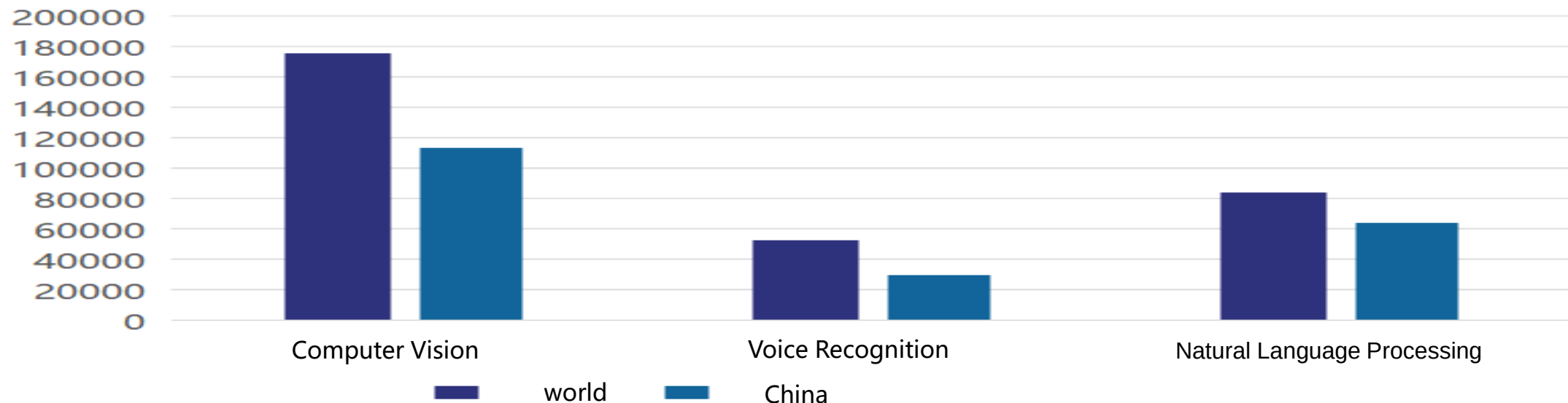




China ranked first in the world in terms of AI patent applications.

- From 2013 to March 2023, the total number of AI patent applications reached 715,000, among which **484,000** were filed by China, accounting for **68%** of the world's total .
- China has developed a leading edge in computer vision, natural language processing and voice recognition.

2013-Q12023 The number of global AI patent applications for different technologies





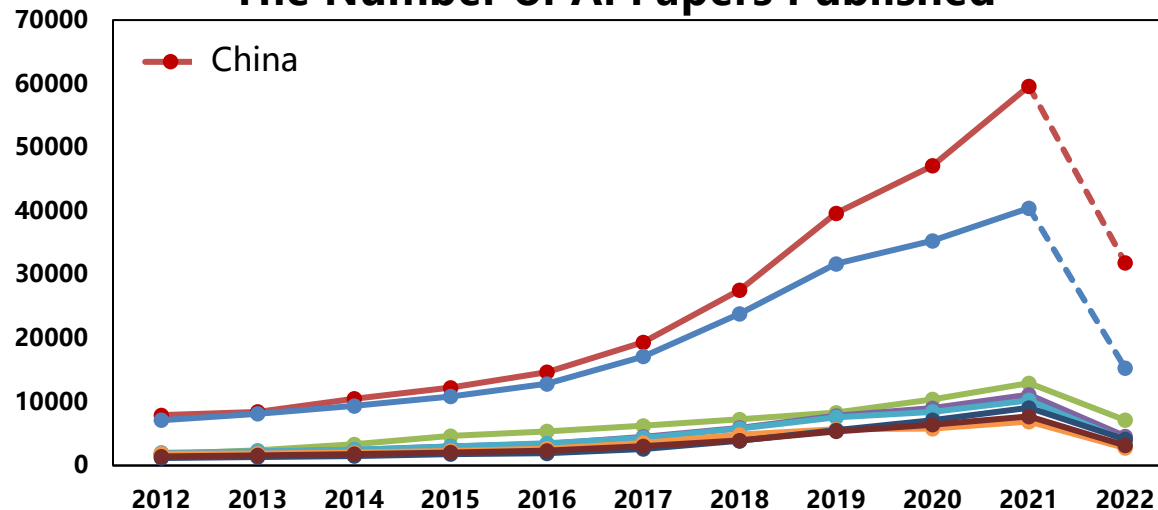
PRF-23

The 23rd APT Policy and Regulatory Forum

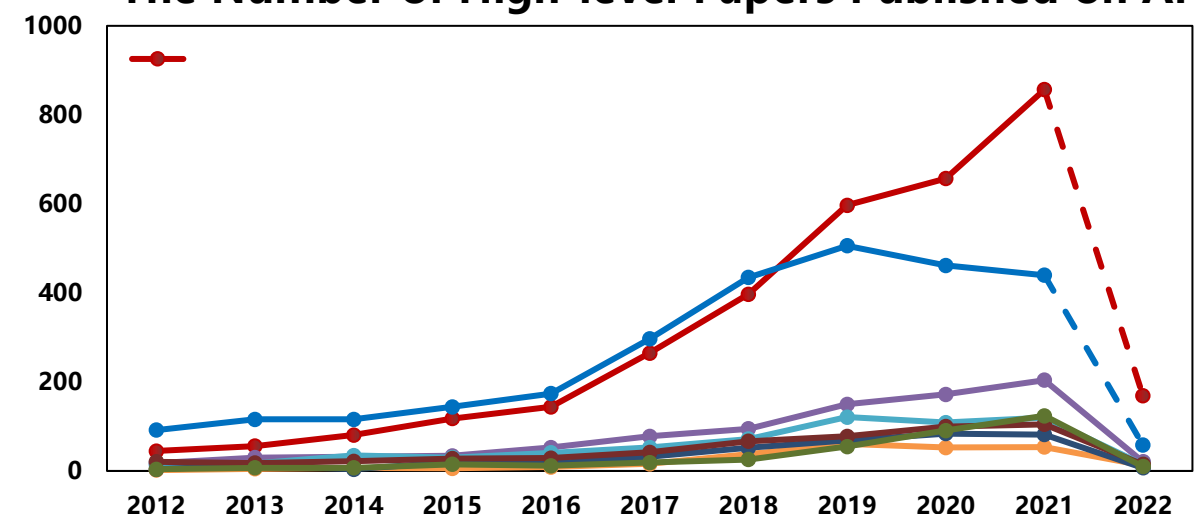
China ranked first in the world in the number of research papers on AI published

- From 2012 to September 2022, the total number of papers published in the field of AI was about 1 million worldwide, of which China accounted for 28%.
- Specifically, China's share in the global high-level AI papers grew from 20.36% in 2012 to **50.71%** in 2021. Moreover, the top AI scholars were mainly concentrated in the United States and China. China accounted for **37%** of the top 2000 scholars worldwide.

The Number of AI Papers Published



The Number of High-level Papers Published on AI



Data sources: Web of Science, and Tsinghua University

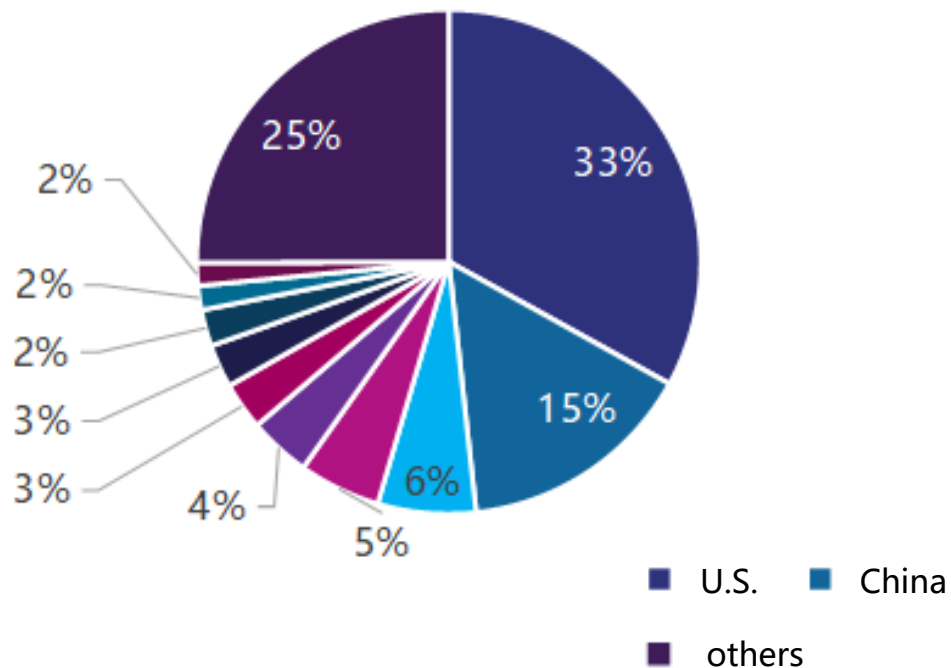


PRF-23

The 23rd APT Policy and Regulatory Forum

China ranked second in the world in terms of the number of AI companies

The number of AI companies by country



- In recent years, AI has developed rapidly in China. As of March 31, 2023, the number of AI companies in China reached **4,394**, accounting for **15%** of the global total and ranking second in the world after the United States.
- Chinese enterprises have made important breakthroughs in key core technologies such as **application algorithms, smart chips** and **open-source frameworks**. China was among the leading countries in application technologies such as image recognition and voice recognition, and some iconic products such as smart sensors and intelligent connected vehicle (ICV) have been effectively landed in China.



The application of AI in the real economy accelerated

- China has created a wealth of AI application scenarios in the process of smart upgrading of the real economy.
- For example, companies and healthcare institutions in China are actively promoting AI approaches and models for healthcare. iFLYTEK, a Chinese AI company and Tsinghua University developed a smart medical assistant system, which can help doctors diagnose **1,400** diseases and has assisted **56,000** primary care doctors in about **400** districts and counties nationwide with diagnostic services. To date, the system has provided more than 560 million AI-assisted medical diagnoses.





PRF-23

The 23rd APT Policy and Regulatory Forum

CONTENTS

I. Development and application of Artificial Intelligence (AI) in China

II. Ethical challenges posed by AI and Chinese regulatory practices

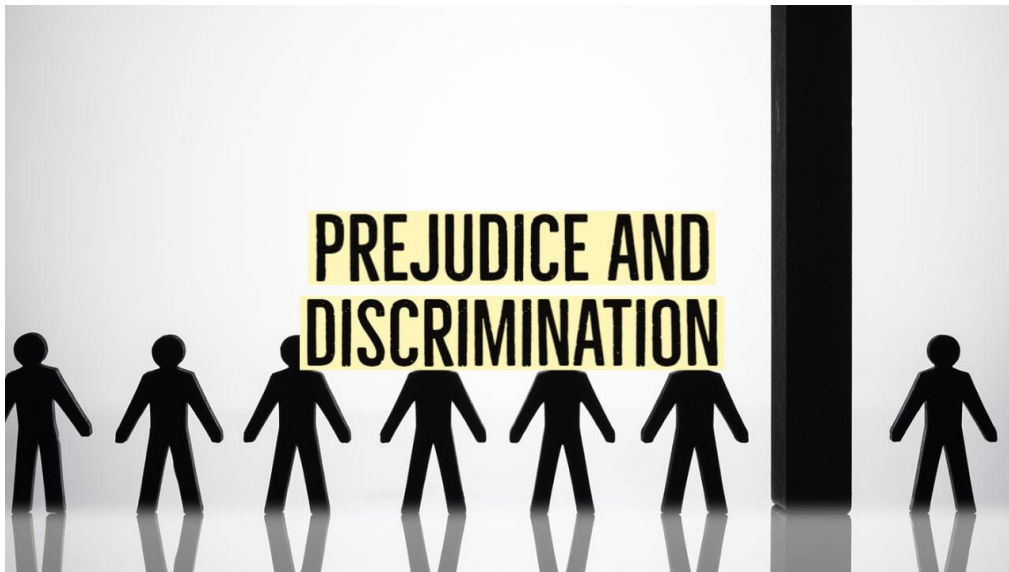
III. China's development planning and governance concept for AI

Hosted by the Ministry of Communications, Fiji



Artificial intelligence causes a series of ethical concerns

- ◆ As the most representative disruptive technology, AI has the potential to deliver huge development dividends to human society, however, its uncertainty also causes a series of ethical concerns.



- Due to the quality and integrity of data sets processed by AI algorithms, the subjective emotional bias of algorithm designers, the inherent bias of human society, and even cultural differences between different regions, AI has also generated discrimination and bias in its application, which is manifested in discrimination on the basis of race, gender, price, group, and many other dimensions.



Artificial intelligence causes a series of ethical concerns

privacy risk

- In order to obtain good performance, AI needs a huge amount of data for training, especially with the popularity of applications such as face recognition and iris recognition, using AI for the collection and use of personal information increases, leading to the increased risk of personal privacy leakage.

the challenge of subject responsibility

- With the evolution and development of machine learning technologies, AI can independently summarize the patterns and characteristics behind the data based on the learning from a massive amount of data. In this process, a technical black box exists for the code and algorithm behind AI, which is beyond human comprehension. As a result, algorithmic results are not always in line with human expectations or controlled by human beings. This will cause the difficulty in responsibility determination and attribution for AI security incidents.

the risk of abuse

- This includes the use of deep forgery to synthesize videos and pictures, so that disinformation is presented to the public in a "highly credible" way. Deep forgery technology is also used to achieve face swap and forge realistic fake scenes or used by law breakers as a tool to slander and defame others.



PRF-23

The 23rd APT Policy and Regulatory Forum

China attaches great importance to the security risks and challenges AI may bring

- **First, to improve the top-level design of AI governance..**
- In 2019, the Ministry of Industry and Information Technology (MIIT), together with the Ministry of Science and Technology (MOST), established **a national professional committee on next generation AI governance.**
- In June 2019, the committee issued the "**Principles of New-Generation AI Governance - Developing Responsible AI**", which outlines eight principles for AI governance, such as harmony and friendliness, fairness and justice.
- In September 2021, the committee again issued **the Code of Ethics for New Generation AI**, aiming to integrate ethics into the whole life cycle of AI and actively guide the whole society to carry out AI research, development and application activities in a responsible manner.





PRF-23

The 23rd APT Policy and Regulatory Forum

China attaches great importance to the security risks and challenges AI may bring



- **Second, to carry out targeted work to address key AI governance issues.**
- In response to the increased risk of leakage and misuse of citizens' personal information due to AI, MIIT launched special rectification actions against the infringement upon users' rights and interests by Apps.
- In October 2019, MIIT issued the **Notice on Carrying out Special Rectification Actions against the Infringement upon Users' Rights by APPs** and conducted inspection and investigation on key issues, such as illegal collection and use of users' personal information, unreasonable request for permission, and hard to terminate an account.
- In July 2020, MIIT again issued the **Notice on Carrying out Special Rectification Actions in Depth against the Infringement upon Users' Rights and Interests by Apps**, focusing on the targeted rectification of APP's illegal processing of users' personal information.



PRF-23

The 23rd APT Policy and Regulatory Forum

China attaches great importance to the security risks and challenges AI may bring

- **Third, to guide industry organizations to carry out self-disciplinary activities.**
- In May 2019, MIIT guided the Artificial Intelligence Industry Alliance (AIIA) to develop and release the **Joint Pledge on the Self-Discipline in the AI Industry**, which identifies the principles of the development of AI industry, such as security/safety and controllability, transparency and explainability, privacy protection, clear division of responsibility, and diversity and inclusion and aims to guide the industry to establish a right concept on AI development.
- MIIT guided AI companies to actively exercise self-discipline, practice the basic principles, such as tech for good and human-centric and introduce self-discipline requirements at the corporate level. MIIT supported **Tsinghua University** to establish an **international governance research center** to actively carry out research on AI governance and sustainability topics and promote AI governance practices.





PRF-23

The 23rd APT Policy and Regulatory Forum

CONTENTS

I. Development and application of Artificial Intelligence (AI) in China

II. Ethical challenges posed by AI and Chinese regulatory practices

III. China's development planning and governance concept for AI

Hosted by the Ministry of Communications, Fiji



PRF-23

The 23rd APT Policy and Regulatory Forum

China will continue to promote the development of AI technology

- ◆ China will accelerate the growth of AI industry and prioritize the development of general AI during the 14th Five-Year Plan period. Specific initiatives include:

01

1. organizing innovation consortia with the participation of large, medium and small enterprises, industry, academia and research institutes, promoting breakthroughs in key core AI technologies, and improving the level of smart chips, development frameworks, and typical smart products;

02

1. accelerating the application of AI in manufacturing, transportation, energy and other fields, and promoting smart transformation in key fields;

03

1. creating industrial clusters, cultivating a number of leading enterprises with international competitiveness in AI, developing a number of innovative and specialized enterprises, and relying on the pilot areas to build a highland for industrial clustering and development.



PRF-23

The 23rd APT Policy and Regulatory Forum

China will continue to strengthen the ethical governance of AI

- China is committed to building a community with a shared future for mankind in the domain of AI, advocating a people-centered approach and the principle of AI for good.
- China finds it important to enhance the understanding of all countries on AI ethics, and ensure that AI is safe, reliable, controllable, and capable of better empowering global sustainable development and enhancing the common well-being of all mankind.
- To this end, China calls on all parties to uphold the principles of extensive consultation, joint contribution and shared benefits, and advance international AI ethical governance.



PRF-23

The 23rd APT Policy and Regulatory Forum

China will continue to strengthen the ethical governance of AI

China, in light of our own policy practice in the field of ethics of science and technology, and with reference to the relevant achievements of the international community, puts forward the following propositions in terms of AI regulation, R&D, use and international cooperation.



01

First, AI governance should prioritize ethics first, and promote ethical regulation of AI through institutional building, risk control, and collaborative governance.

02

Second, we should strengthen self-discipline, improve algorithm security and data quality in the process of AI research and development, and reduce bias and discrimination.

03

Third, we should advocate the responsible use of AI, avoid misuse, abuse and malicious use, and strengthen public awareness and education.

04

Fourth, we should encourage international cooperation and promote the development of international AI governance frameworks and standards with broad consensus on the premise of fully respecting the principles and practices of national AI governance.



PRF-23

The 23rd APT Policy and Regulatory Forum

谢谢大家!

Thank You!

20 - 22 June 2023  Nadi, Fiji

Hosted by the Ministry of Communications, Fiji