Japan's Role :
AI Soft Law Globally Acceptable

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JAPAN'S INITIATIVE

G7 ICT Ministers' Meeting in Japan (April 29 & 30, 2016)

G7 ICT Ministers' Meeting
in Takamatsu, Kagawa

Friday, April 29 - 30, 2016
Kagawa International Conference Hall, Takamatsu Sunport
2-1, Sunport, Takamatsu, Kagawa, 760-0019, Japan

https://www.soumu.go.jp/joho_kokusai/g7ict/english/main_content/ai.pdf (Lat visited Mar. 25, 2022).

https://www.soumu.go.jp/main_sosiki/joho_tsusin/eng/pressrelease/2017/pdf/000507517.pdf (last visited Mar. 25, 2022).

Preliminary Draft of AI R&D PRINCIPLES
- Transparency
- User Assistance
- Controllability
- Security
- Safety
- Privacy
- Ethics
- Accountability

Conference on Networking among AIs in MIC

AI R&D GUIDELINES incl. PRINCIPLES
- Collaboration
- Transparency
- User Assistance
- Controllability
- Security
- Safety
- Privacy
- Ethics
- Accountability

CONFERENCE TOWARD AI NETWORK SOCIETY in MIC

- Japan's preliminary draft **aimed for** OECD Council Recommendation like the **OECD Privacy Protection Guidelines in 1980**.

∵ The latter **was influential**.
∵ The world has become **borderless**.

AI Principles ／ AI Guidelines

Japan Took an Initiative to Build Global Standards

G20
G20 AI Principles / Ministerial Meeting on Trade and Digital Economy **in Japan, June 2019**

OECD
- **OECD AI Principles** / Council Recommendation on AI **May 2019**
- **AIGO** Sep. 2018 to Feb. 2019

Cabinet Office   Apr. 2018 to Present
- **Council for Social Principles of Human-centric AI**

MIC: Ministry of Internal Affairs & Communications
- **Conference toward AI Network Society,** Oct. 2016 to Present
  - Conference on AI: Intelligent Machines, Smart Policies, Co-sponsored by MIC and **OECD**
  - Forum toward AI Network Society (Int'l Symposium) in Tokyo, Sponsored by MIC.
  - Conference on Artificial Intelligence and US-Japan Alliance Engagement, **Carnegie** Endowment for Int'l Peace (Embassy of Japan in the U.S.A. and MIC)
  - Technology Foresight Forum 2016 on AI, **OECD**
  - **G7 ICT Ministers' Meeting in Japan, Apr. 2016**

✓ **Conference on Networking among AIs,** Feb. to June 2016

Artificial Intelligence and U.S.-Japan Alliance Engagement

January 12, 2017
12:00 PM—5:00 PM EST
Washington, DC

Policy Issues toward AI Networking and Guiding Principles for AI Development

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Prof. Dr. Susumu HIRANO

Artificial Intelligence and U.S.-Japan Allia...

4:06 / 53:37

https://carnegieendowment.org/2017/01/12/artificial-intelligence-and-u.s.-japan-alliance-engagement-event-5464 (last visited Apr. 3, 2022).

Cabinet Office's Council for "SOCIAL PRINCIPLES OF HUMAN-CENTRIC AI"
Apr. 2018 to Present

内閣府 Cabinet Office

(1)	The Human-centric Principle
(2)	The Principle of Education/Literacy
(3)	The Principle of Privacy Protection
(4)	The Principle of Ensuring Security
(5)	The Principle of Fair Competition
(6)	The Principle of Fairness, Accountability, and Transparency ["FAT"]
(7)	The Principle of Innovation

humancentricai.pdf (cas.go.jp)

中央合同庁舎8号第8F特別大会議室

人間中心のAI社会即検討会展
5月8日 (火) 13:00～15:00

Social Principles of Human-Centric AI:
Goals shared by the government and companies

Guidelines to bridge the gap

Efforts to achieve goals

(meti.go.jp)
01_15_00 6 a.pdf

Each company's voluntary initiatives
(AI policy, organizational governance, etc.)

総務省 MIC
Ministry of Internal Affairs and Communications

AI R&D PRINCIPLES & GUIDELINES

AI UTILIZATION PRINCIPLES & GUIDELINES

AI expert Group at the OECD ("AIGO": "Ei Eye Go")

3rd Meeting at MIT, Boston, Jan. 17, 2019
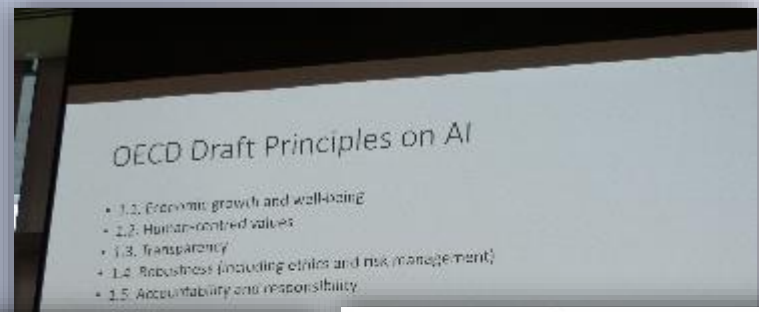
Steve Lohr, *How Do You Govern Machines That Can Learn? Policymakers Are Trying to Figure That Out*, The Mew York Times, Jan. 20, 2019, *available at* https://www.nytimes.com/2019/01/20/technology/artificial-intelligence-policy-world.html (last visited Mar. 12, 2022).

OECD.AI Policy Observatory

AI Principles ˅   Policy areas ˅   Trends & da[...]   中央大学

Home > OECD AI Principles overview

OECD AI Principles overview

The OECD AI Principles promote use of AI that is innovative and trustworthy and that respects human rights and de[...] standards for AI that are practical and flexible enough to stand the test of time.

OECD AI Observatory https://www.oecd.ai/ai-principles (last visited Mar. 12, 2022).

Values-based principles

- Inclusive growth, sustainable development and well-being >
- Human-centred values and fairness >
- Transparency and explainability >
- Robustness, security and safety >
- Accountability >

Recommendations for policy makers

- Investing in AI research and development >
- Fostering a digital ecosystem for AI >
- Sha[...] env[...]
- Bui[...] pre[...] tra[...]
- Inte[...] trus[...]

Continued Studies at MIC:
Post OECD/G 20 AI Principles
After May/June 2019

- MIC's **Conference toward AI Network Society** continued (approx. bi-monthly).

- Publishing Reports yearly (2017– 2021; 5 Rprts in total).

- To share the **best practices**, **interviews** conducted with:

    e.g., **IBM Japan; Google LLC; Microsoft Japan Co., Ltd.; Sony Group Corp.; NEC Corp.; FUJITSU LIMITED; Toshiba Corp.; Hitachi, Ltd.; NTT Data; Oki Electronic Industry Co., Ltd.;   Sumitomo Co.; Sumitomo Mitsui Financial Group (SMFG); Japan Broard Casting Corp. (NHK); Tokyo-Metropolitan Government; Yamaha Corp.; Tokio Marine & Nichido Fire Insurance Co., Ltd.; Sompo Japan Insurance Inc.;   Japan Post Holdings Co., Ltd.; and National Institute of Information and Communications Technology (NICT).**

- The 2021 Report refers to Chuo Univ. ELSI Center's collaboration with the Conference ;-).
  Hōkokusho [Report] 2021 at 54 n.86 (in Japanese)
  https://www.soumu.go.jp/main_content/000761967.pdf (last visited Mar. 20, 2022).

Ministry of Economy, Trade and Industries (METI)

July 2020; July 2021

経済産業省
Ministry of Economy, Trade and Industry

GOVERNANCE INNOVATION
Redesigning Law and Architecture for Society5.0

GOVERNANCE INNOVATION Ver.2

Figure 5 | Governance based on intermediate guidelines and standards established by multi-stakeholders
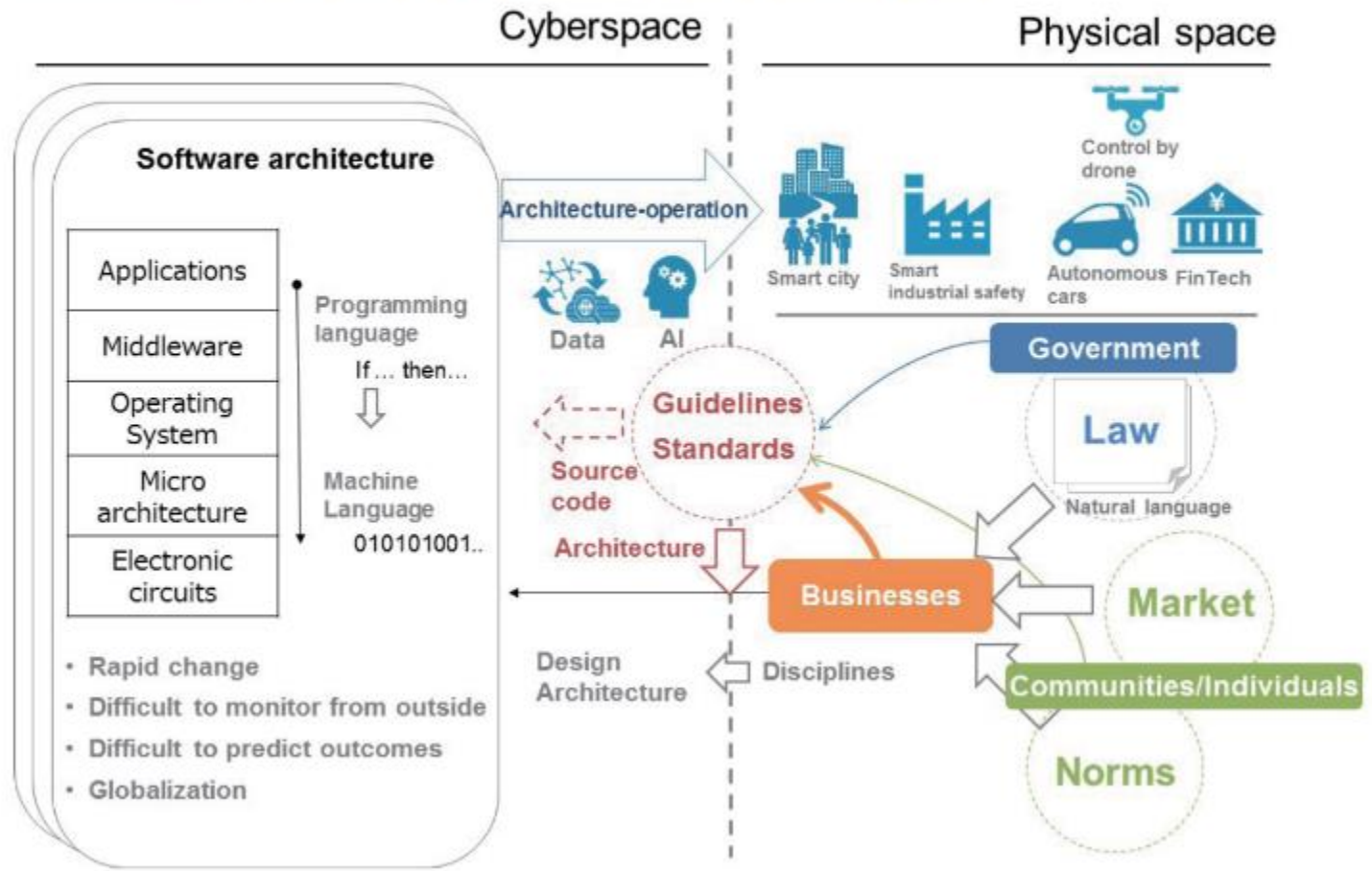
GOVERNANCE INNOVATION, ver. 2 https://www.meti.go.jp/press/2021/07/20210730005/20210730005-2.pdf (last visited Mar. 18, 2022)(emphasis added).

Thank you for your attention.

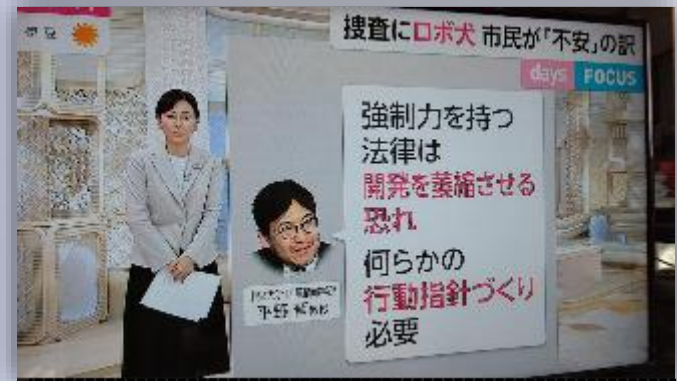# Features of Japan's AI Principles and Guidelines

- **Soft Law** (*)
  - Non-regulatory and non-binding approach
  - So-called "Principles" or "Guidelines"
    (*) The term, "soft law," means non-binding norms or rules such as principles or guidelines, while "hard law" means binding norms or rules such as statutes or case law.

Live News Days, Fuji TV, on Dec. 4, 2019.

- **Multi-Stakeholders' Participation**
  - Academia, Corporations, and Consumer Organizations

- **Efforts by Japanese Gov't to Contribute to Build Global Standards** （**Japan → G7 / OECD → G20**）
  - Governmental organizations such as Cabinet Office and MIC collaborated to contribute to OECD, G7, and G20.

Continental European Law
v.
Anglo-American Law

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EU		US
CODE **STATUTORY LAW**	**versus**	*Case Law* *Common Law*

Ex ante →

→ *Ex post*

(inductive reasoning)

JP

Hybrid of Continental & Common Law

Copy & Pated	Influenced by
CONTINENTAL LAW	*American Law*
(Esp. German Law)	(*E.g.*, JP CONSTITUTION)
19th Century	Post-WWII
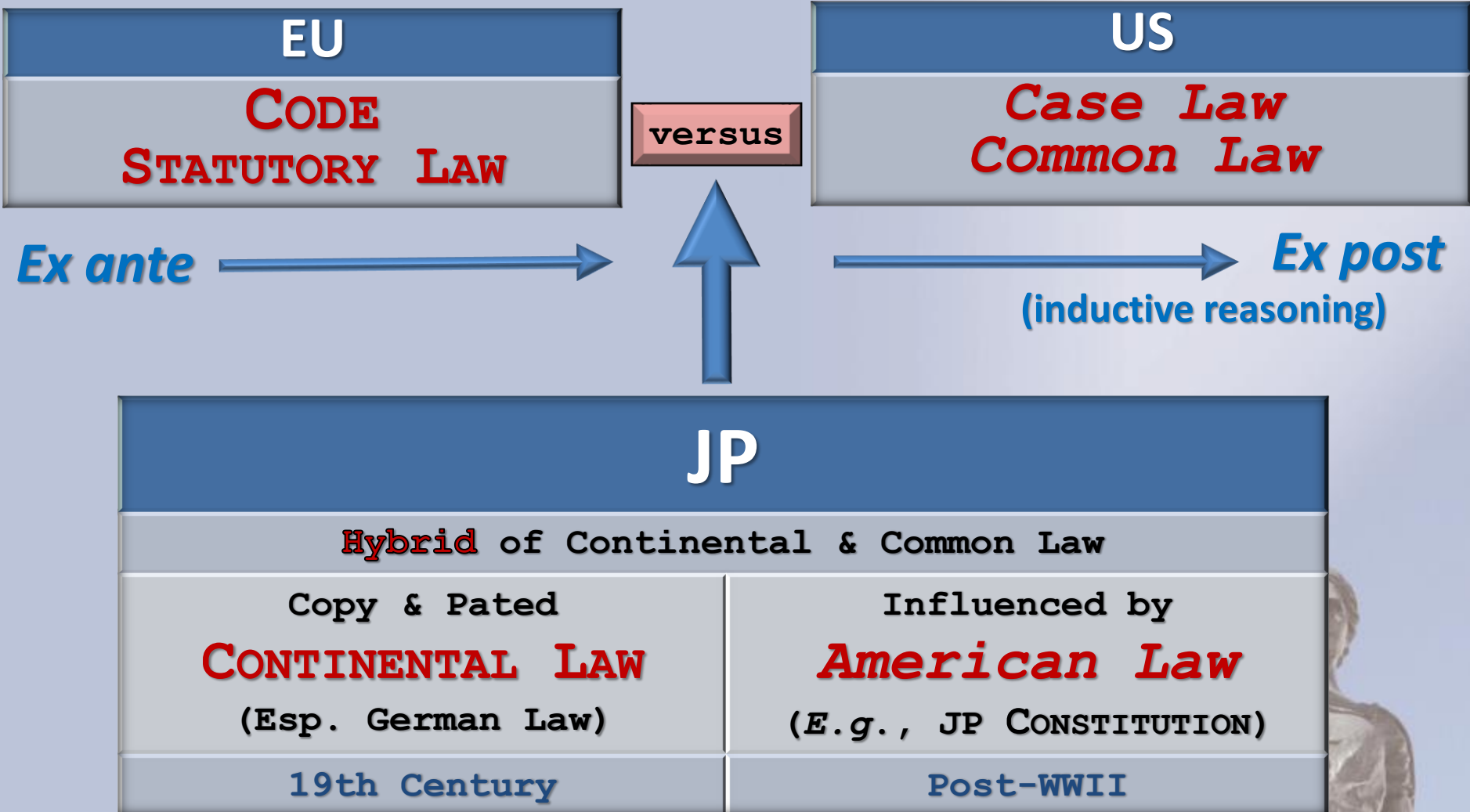
Japan's Role: Globally Acceptable Soft Law

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EU		US
Precautionary Principle	versus	**Permissionless Innovation**

Ex ante ⟶ ⟶ *Ex post*

(inductive reasoning)
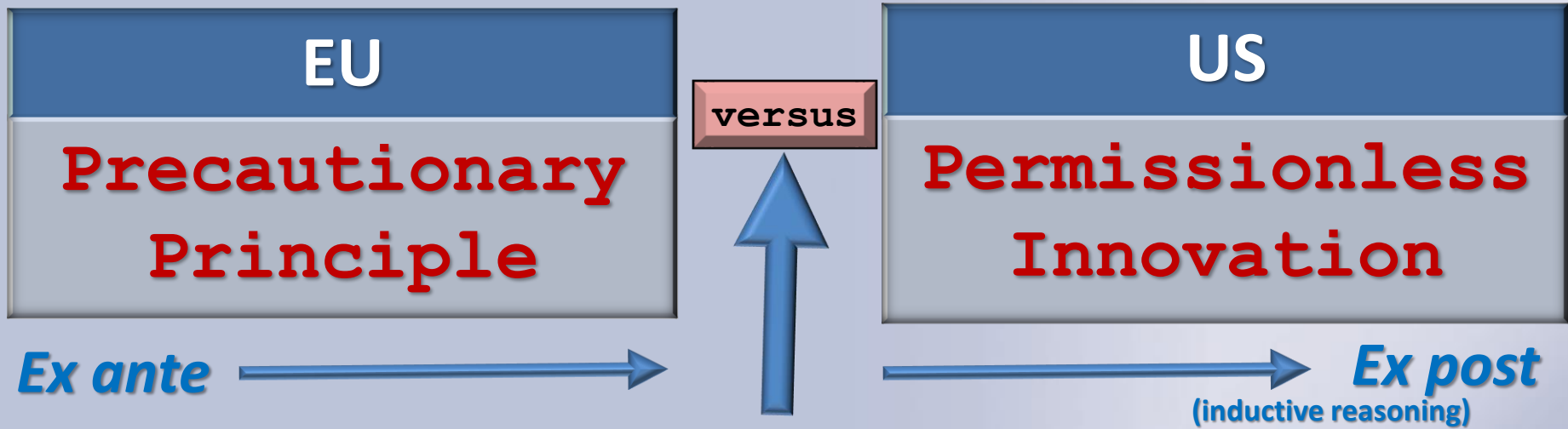
和をもって貴しと為す ／ "Harmony is to be valued."
SEVENTEEN-ARTICLE CONSTITUTION, A.D 607.

総務省
MIC Ministry of Internal Affairs and Communications

内閣府 Cabinet Office
経済産業省 Ministry of Economy, Trade and Industry

JP
Soft Law / Non-binding Norms

See SUSUMU HIRANO, ROBOT LAW, 267-68 (*Kobundo* 2d ed. 2019 in Japanese).

"In Japan's history, the ability of creating harmony — and cultivating it — is extraordinary."
Ukraine President Zelenskyy's Address to Japan's Parliament Mar. 23, 2022.

Draft of the AI Utilization Principles

総務省 MIC Ministry of Internal Affairs and Communications

The Conference toward AI Network Society
17 July 2018 ✓

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See https://www.soumu.go.jp/main_content/000581310.pdf and https://www.soumu.go.jp/main_content/000637844.pdf (last visited Mar. 13, 2022) (emphasis added).

Principle of	Description
1. **Proper Utilization**	Users should make efforts to <u>utilize</u> AI systems or AI services <u>in a proper scope and manner, under the proper assignment of roles between humans and AI systems</u>, or among users.
2. **Data quality**	Users and data providers should pay attention to the <u>quality of data</u> used for learning or other methods of AI systems.
3. Collaboration	AI service providers, business users, and data providers should pay attention to the collaboration ... might occur and ...
4. Safety	...
5. Security	...
6. Privacy	...
7. Human dignity and individual autonomy	... of AI systems or AI ...
8. **Fairness**[1]	AI service providers, business users, and data providers should pay attention to the possibility of bias inherent in the judgements of AI systems or AI services, and take into consideration that individuals and groups will <u>not be unfairly discriminated</u> against by their judgments.
9. Transparency[2]	AI service providers and business users should pay attention to the verifiability of inputs/outputs of AI systems or AI services and the explainability of their judgments.
10. Accountability[3]	Users should make efforts to fulfill their accountability to the stakeholders.

5-C) Attention to security vulnerabilities of learned models 23

Detailed Explanation on Key Points Concerning AI Utilization Principles

- AI service providers, business users, and data providers a... models in AI might be vulnerable in their generation and m... users in advance the existence of such risks.

[Example risks]
- A risk that can mislead a learning model away from accurate judgments as a result of insufficient learning by deliberately inputting data with a slight change that cannot be noticed by humans into the learning model (e.g., adversarial example attack).
- A risk of making learning (models) fail by mixing incorrect labeled data in supervised-learning.
- A risk that learning models can be easily replicated.
- A risk that can reverse-engineer data used for learning from learning models.

Adversarial Example (AX) / Crafted AXs (result in "speed limit 45")

https://www.soumu.go.jp/main_content/000658286.pdf (last visited Mar. 26, 2022).

<Reference>
- *Consumer users are recommended to pay attention to the risk that AI might become vulnerable in the generation and management of learning models, with consideration of information provided by developers, AI service providers, and data providers.*
- *Furthermore, if there are security concerns when using the AI, they are recommended to report them to developers, AI service providers, and data providers.*