

Outline of "Al Guidelines for Business Appendix Ver1.1"

Ministry of Internal Affairs and Communications Ministry of Economy, Trade and Industry (April 4, 2025)



Positioning of main part and appendix of Al Guidelines for Business

- The main part covers "the efforts to be made regarding AI (guiding principles = what)" based on "the ideal society while considering stakeholders' expectations (basic philosophies = why)" that are important for using AI safely and securely to maximize the benefits of AI.
- The appendix covers "the specific approach to be adopted (implementation = how)" to lead AI business actors to take actual implementation of the principles.

Main part (why, what)



Appendix (how)



The ideal society while considering stakeholders' expectations (basic philosophies = why)



The efforts to be made regarding AI (guiding principles = what)

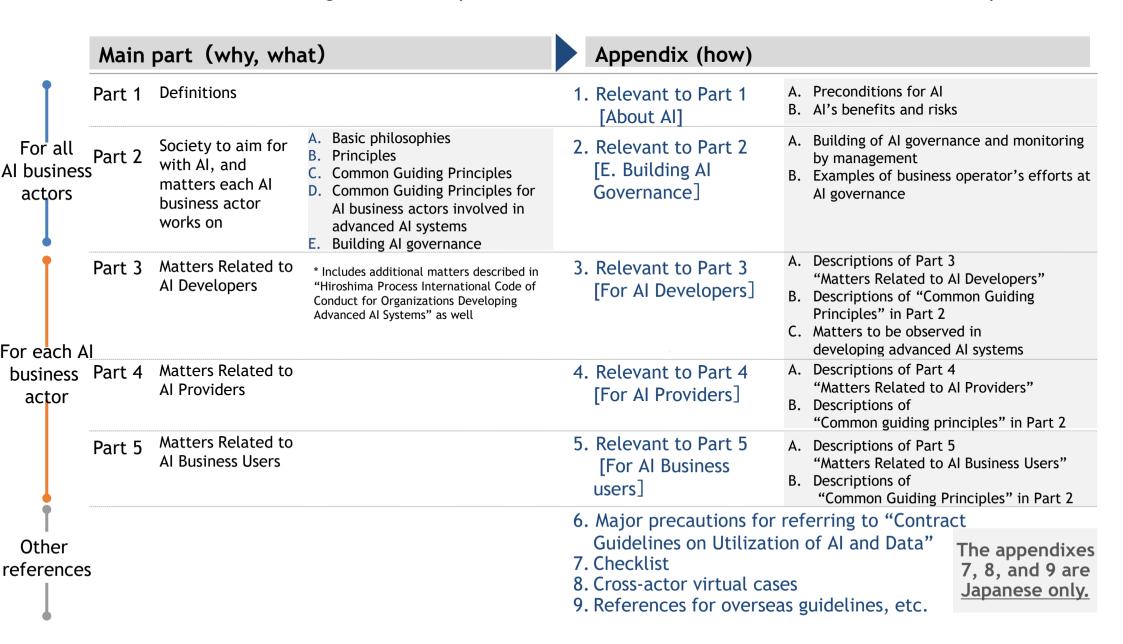


The specific approach to be adopted (implementation = how)



Structure of "Al Guidelines for Business"

• The descriptions in the Appendix correspond to those in the main part and serve as a supporting document for the reading of the main part and considerations and actions based on the main part.





Appendix 1. Relevant to Part 1

- Appendix 1 provides a detailed explanation of the premises related to AI and AI's benefits and risks
- Appendix 1 leads to a deeper understanding of the content of this guideline through these.
 explanations.

A. Preconditions for Al

- Flow of training and use of Al
 - The general flow of training and use of Al
- Overview of Al system
 - Scope of Al system
- Value chain of AI from development to use
 - The general flow of applying AI and responses of each AI business actor
- Examples of AI systems and services
 - Specific examples of typical AI systems and services and the actors involved
- Patterns of Al companies
 - Specific examples of AI value chain at the time of business utilization
- About data providers
 - Definitions of data providers and the like, that are not covered by the guidelines

B. Al's benefits and risks

- Al's benefits
 - Focus on end-users who will be primarily benefited
- Al's risks
 - Typical examples (including assumptions)
 - Systematic Classification of Risk Examples (tentative ver.) (Technical risks and social risks)
 - Key common guiding principles corresponding to each risk example, and examples of countermeasures taken by AI business actors.



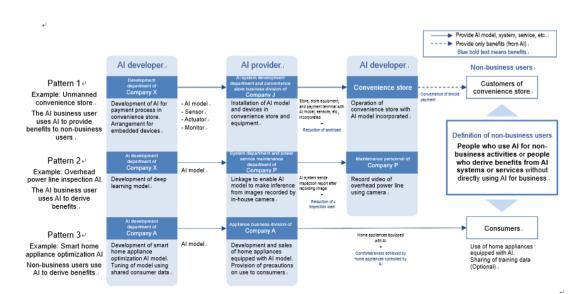
Appendix 1 A. Preconditions for Al

• To deepen the understanding of AI itself, the contexts in which it is utilized, and the roles of each AI business actor, terms such as "AI systems," "AI business actors," and "data providers" are explained with specific examples (the following is an excerpt of the content).

Examples of AI systems and services (excerpt)

Case name &	Used Al ₽	Overview <i>∂</i>	AI↓ developer ₽	Al↓ provider <i>⊍</i>	Al↓ business user ∉	Non- business↓ user ₽
Recruitment AI €	Text↓ analysis₽	The recruit department of each foreign subsidiary of Company A Group uses an Al service that provides reference information for conducting the applicant screening process based on applicants' applications. * The Al development department of Company A has created an Al model that receives past application data and decision of acceptance (judgment on whether to employ each applicant) from the recruit department of Company A (Al business user; including the recruit departments of overseas group companies) and processes them through machine learning (classification model) for supporting in making acceptance decisions. *	Company A 4 (Development department) &	Company A ↓ (System department and human resource development department) &	Company A Group (Recruit department) ↔	Applicants for recruitment •
Unmanned ↓ convenience store ↔	Image ↓ analysis ₽	Company J, which holds convenience store franchises across Japan, operates unmanned convenience stores in which image recognition Al is used. In the unmanned convenience stores, Al calculates the price for items taken by each customer and carries out the payment process for all the items through digital money, etc., when the customer leaves the store. An Al system for unmanned convenience stores developed by Company X is incorporated into the Al service. 4'	Company X ↓	Company J ↓ (Al system development department and convenience store business division) ₽	Convenience stores φ	Customers of convenience stores ↓
Cancer↓ diagnosis Al &	Text and image analyses ₽	Using the multimodal learning, this system imports "information of the medical history, genes, etc., of a patient (data 1)" and "endoscopic image (data 2)" to highlight areas that are highly possibly affected by cancer in real time during an endoscopic examination. It enables physicians to observe output images and diagnose potential cancer. «Company A has developed AI and provides the cancer diagnosis AI system to health facilities. «V	Company A ↓ (AI development department) ϵ^2	Company A ↓ (Healthcare IT service department) ↔	Health facilities↓ (System department and gastroenterology)	Patients examined &

Patterns of Al business actors





Appendix 1 B. Al's benefits and risks (Al's benefits)

• Focusing on the end-users who will benefit from AI, the benefits of AI are organized by industry and business operation.

	Development←	Marketing⊬	Sales⊬	Logistics/distribution←	Customer support←	Legal	Finance⊬	HR←
Examples of benefits available conventionally (Improved by generative AI)	Automation of code verification and documentation ←	Automatic distribution of ad emails⊎	Support after order intake ← Automatic transmission of emails, etc. ←	Optimization of production and inventory based on demand prediction⊷	Automatic response through chat bot⊬	Translation←	Automatic creation of financial statements←	Automation of payroll calculation, etc.44
	Extraction and verification of similar code and data⊎	Personalized ad based on data⊎	Sales prediction for each channel and need↔	Optimization of delivery route←	Creation of FAQ based on past inquiries↔	Review of legal text⊍	Future prediction based on past records, and detection of malpractices⊎	Human resources demand matching based on résumés, etc.↔
Examples of benefits unique to generative Al-	Generation of training data, coding assistant, brainstorming for new products ←	Automatic creation of sales promotion (marketing materials, sales copy, etc.)↔	Automatic creation of sales talk script⊎	Assistant for negotiation for logistics conditions⊎	Automatic generation and summarization of transcription of support	Automatic generation of draft of contract based on stipulations⊬	Response to in- house inquiry according to contexté	Holding human resources interview according to contexté



Appendix 1 B. Al's benefits and risks (Al's risks)

• Al's risks have been systematically organized to help Al business actors comprehensively understand and consider countermeasures for these risks.

Table 3. Systematic Classification of AI-related Risk Examples (tentative ver.)

- The table below does not cover all AI risks and includes hypothetical cases, and it is expected to be recognized as just one example.
- The table below also includes risks that require responses and discussions from society as a whole, including governmental and public institutions.

Major categories	Subcategories	Risk examples			
Technical Risks	Risks during the learning and input stages of Al	Attacks on AI systems such as data poisoning attacks			
(=risks primarily	Risks during the output stage of Al	Biased outputs, discriminatory outputs, and inconsistent outputs			
associated with Al		Incorrect outputs due to Hallucinations and similar issues			
systems)	Risks during the postresponse stage	Black-boxing and inadequate explanations of decisions			
	Risks related to ethics and law	Inappropriate use of personal information			
		Occurrence of accidents related to lives, etc.			
		Discrimination in triage			
		Excessive dependence			
		Misuse			
	Risks related to economic activities	Infringement of intellectual property rights, etc.			
		Financial loss			
Societal Risks		Leak of confidential information			
(=existing risks that may also arise in Al or		Unemployment of workers			
be amplified by AI)		Concentration of data and profits			
, , ,		Infringement of qualifications, etc.			
	Risks related to the information space	Distribution and diffusion of disinformation			
		Negative influence on democracy			
		Filter bubble and echo chamber phenomena			
		Loss of diversity and inclusion			
		Reproduction of biases			
	Risks related to the environment	Energy consumption and environmental load			

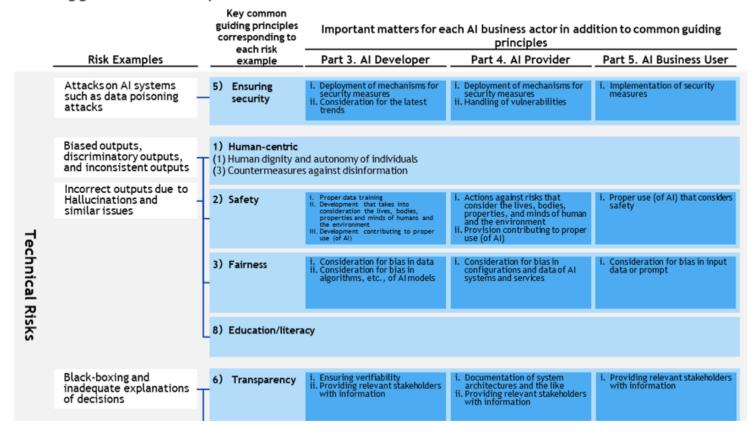


Appendix 1 B. Al's benefits and risks (Al's risks)

• To further connect the identified risks to the consideration of countermeasures by AI business actors, the key common guiding principles corresponding to each risk and examples of countermeasures by AI business actors have been described*1.

Table 4. Mapping of AI's Risk Examples, Common Guiding Principles, and Important Matters for Each AI Business Actor

- The table below does not cover all AI risks and includes hypothetical cases, and it is expected to be recognized as just one example.
- The table below also includes risks that require responses and discussions from society as a whole, including governmental and public institutions.



^{*1:} It is advisable to refer to the relevant sections of Parts 3 to 5 of the main text and Appendices 3 to 5 for measures and specific methods for each entity.



Appendix 2. "Section 2. E. Building Al Governance"

- Appendix 2 includes "Behavioral Goals" and "Practice Guidelines" for establishing "I Governance, as well as corresponding hypothetical "Practical Examples" and examples of actual company initiatives.
- Specific examples will enable each business to consider how to establish its own AI governance.

A. Creating Al governance and monitoring by management

- Behavioral Goals
 - The general and objective goals
- Practice Guidelines
 - Based on the "Governance Guidelines for Implementation of AI Principles," incorporating elements from national and international guidelines, ISO, etc.
- Practical Examples
 - Includes examples based on hypothetical cases
 - Incorporates examples of responses to the latest trends in generative AI, etc.

B. Examples of business operators' Al governance initiatives

- Examples of business operators
 - Columns of 9 entities' (8 companies and 1 local government) Al governance initiatives based on the "Governance Guidelines for Implementation of Al Principles"
 - Describes perspectives that many companies encounter when promoting Al governance

List of entities Featured in the Column (in order of appearance)

ABEJA

- Softbank
- NEC Group
- NTT DATA
- Toshiba Group
- Ubie, Inc.
- Panasonic Group
- · Kobe City
- Fujitsu Group



Appendix 2 A. Building of Al governance and monitoring by management (Content)

• Support the establishment of AI governance by ensuring that each AI business understands the significance of and utilizes the governance behavioral goals.

Category	Behavioral Goals ** Some are further subdivided like [3-1-1] 1-1 Understanding benefits/risks 1-2 Understanding social acceptance of Al 1-3 Understanding company's Al know-how				
1. Environmental and risk analysis					
2. Goal setting	2-1 Setting Al governance goals				
3. System design	 3-1 Requiring evaluation of goal deviation and measures to minimize it 3-2 Improving literacy of those in charge of the AI management system 3-3 Enhancing AI management through cooperation between AI business actors and divisions 3-4 Reducing burden related to incidents involving AI Business Users and non-business users through preventive and prompt action 				
4. Operation	 4-1 Ensuring that the operation of AI management system is explainable 4-2 Ensuring that the operation of each AI system is explainable 4-3 Considering proactive disclosure of AI governance practices 				
5. Evaluation	5-1 Verifying AI management system functions 5-2 Considering opinions of outside stakeholders				
6. Environment and risk reanalysis	6-1 Reimplementing Behavioral Goals 1-1 to 1-3 at an appropriate time				



Appendix 2 A. Building of Al governance and monitoring by management (Structure)

- Organize "Practice Guidelines" and "Practical Examples" for each "Behavioral Goal."
- Enables each AI business to consider AI governance by referring to them according to the type of AI to be employed and the degree of risk.

Appendix Content

Behavioral Goal 1-1 [Understanding benefits/risks]

Al business actors will, under the leadership of the management team, clarify the purpose of development, provision and use of Al, specifically understand that there are not only benefits offered by Al, but also unintended risks, report them to the management, share with the management and update the understanding at an appropriate time.

[Practice Guidelines]

Al business actors will, under the leadership of the management team, take the following measures:

- Specifically understand the benefits and risks including unintended risks in a way that is relevant to a company's own business.
- Establish a system for promptly reporting to / sharing with the management. "Risks" include the following examples:
- Common risks of AI in general: Output of biased results or discriminative results, filter bubbles, echo chambers, disinformation, handling of inappropriate personal data, data pollution attacks, obscuring, leak of confidential information, abuse of AI system services, energy consumption and environmental burden, reproduction of bias, etc.

[Practical Examples]

[Practical Example i: Understanding benefits and risks]

It is important that AI business actors examine not only benefits, but also risks under the leadership of the management (including the examination the management itself implements by taking the lead instead of leaving it up to an officer in charge or staff in charge), share the results of examination and update the understanding at an appropriate time.

Descriptions

Behavioral Goal

- Provides general and objective goals that are important for AI businesses to work toward
- Provides material for each AI business to consider when reviewing its policies

Practice Guidelines

- Summarizes important matters and points to keep in mind to implement the above action goals
- Provides material for each AI business to consider specific actions

Practical Examples

- Provides examples of hypothetical cases in practice
- Makes it easier for each business operator to take action by having a specific example

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Appendix 3-5. For each AI business actor (Content)

- Attachments 3 through 5 provide detailed explanations in the main part for each AI business actor.
- It can be used in conjunction with the main part to refer to and discuss specific approaches related to the main part's content.

A. Descriptions of Part 3-5

B. Descriptions of "Common Guiding Principles" in Part 2

C. Matters to be observed in developing advanced Al systems **Only in Appendix3. For Al developers

Points

- Supplements important points in addition to those described in the main part
- Specific Methods
 - Specific explanations with reference to other guidelines, etc.
- References
 - List other references (e.g.)
 - Digital Agency "Data Quality Guidebook (B Edition)" (June 2021)
 - National Institute of Advanced Industrial Science and Technology "Guidelines for Machine Learning Quality Management, 4th Edition" (December 2023)
 - Consortium of Quality Assurance for Artificial-Intelligence-based Products and Services "AI Product Quality Assurance Guidelines" (April 2024)
 - NIST, "AI Risk Management Framework Playbook" (January 2023)
 - Council of Europe, "Risk and Impact Assessment Method for AI Systems from the Perspective of Human Rights, Democracy, and the Rule of Law (HUDERIA)" (November 2024)

 Hiroshima Process International Code of Conduct for Organizations Developing Advanced AI Systems



Appendix 3-5. For each Al business actor (Structure)

• For each important matter of each AI business actor, "Points," "Specific methods," and "References" are provided in the following structure:

Appendix Content

A. Descriptions of Part 3 "Matters Related to Al Developers"

[Contents of the main part (repeat)] During data preprocessing and training

D-2) į. Proper data training

- Properly collect training data through privacy-by-design, etc., and if it contains third-parties' personal data, data requiring attention to intellectual property rights, etc., ensure that such data is properly handled in compliance with laws and regulations throughout the lifecycle of AI ("2) Safety," "4) Privacy protection," "5) Ensuring security").
- Implement proper protective measures before and across training by, for example, considering the deployment of any data management and restriction function that controls access to data ("2) Safety," "5) Ensuring security").

'Points1 ←

In <u>order to</u> improve the quality of AI models, it is important for AI Developers to pay close attention to the quality of data used for AI training, etc.

 Pay close attention to the quality (accuracy, integrity, etc.) of the data used for AI training, etc., in view of the characteristics and applications of the AI to be used.

Specific methods|←

- Verify that the data does not contain personal data, confidential information, rights including copyrights or legally protected interests.
 - ➤ Extraction of unique expressions

[References]←

- National Institute of Advanced Industrial Science and Technology "Guidelines for Machine Learning Quality Management, 4th Edition" (December 2023)
 - NIST, "AI Risk Management Framework Playbook" (January 2023)

Descriptions corresponding to Part 2

Descriptions

Part 3-5 in

the main part

corresponding to

Specific approaches of each AI business actor regarding the Common Guiding Principles

B. Descriptions of "Common guiding principles" in Part 2

Although not mentioned in the Main Part, "Part 3 Matters Related to Al Developers," specific methods for the Main Part, "Part 2" "Common guiding principles," which are especially important for Al Developers, are explained here. ←

Descriptions

Repeat of main part content

Points

 Supplements important points in addition to those described in the main part

Specific methods

 Specific explanations with reference to other guidelines, etc.

References

 Provide references to "Points" and "Specific methods"



Appendix 6. Major precautions for referring to "Contract Guidelines on Utilization of Al and Data"

- Appendix 6 contains the precautions for referring to the "Contract Guidelines on Utilization of AI and Data" as of March 2025, the first edition of which was formulated and published in June 2018, due to changes in the situation regarding the development and use of AI and new technological advancements.
- By clearly defining the rights and obligations of the parties through contracts, transactions related to AI can be facilitated and unnecessary disputes can be prevented.

Contract Guidelines on Utilization of Al and Data





Emergence of new technology

Contract Checklist for Al Utilization and Development

Appendix 6. Major precautions for referring to "Contract Guidelines on Utilization of Al and Data"

The following matters should be considered in light of changes in the situation since the release of the Contract Guidelines:

- (1) Diversification of contract models
 - Contracts related to the use and development of AI can be broadly classified into the following three types, with each type having different contractual considerations and negotiation points.
 - Type 1: General-purpose AI Service Usage
 - Type 2: Customization
 - Type 3: New Development
- (2) Risk distribution under a complex value chain
 - Responsibilities based on diversity or complexity of value chain needs to be considered.
- (3) Development, provision and use of AI, and accountability
 - The following are beneficial points to consider contractually in relation to accident risk; Organizing new types of risks, Implementation of reasonable explanations, Presentation of objective evidence.



Appendix 7. Checklist (Content)

• Appendix 7 provides a "checklist" and "worksheet for specific approaches" to ensure the planning and implementation of initiatives to reduce risks and reap benefits from AI.

Main part∙ Appendix 1~5



Checklist



Worksheet for specific approaches







Understand the importance of Al governance and what is expected of each Al business actor by reading the main part and the Appendix.

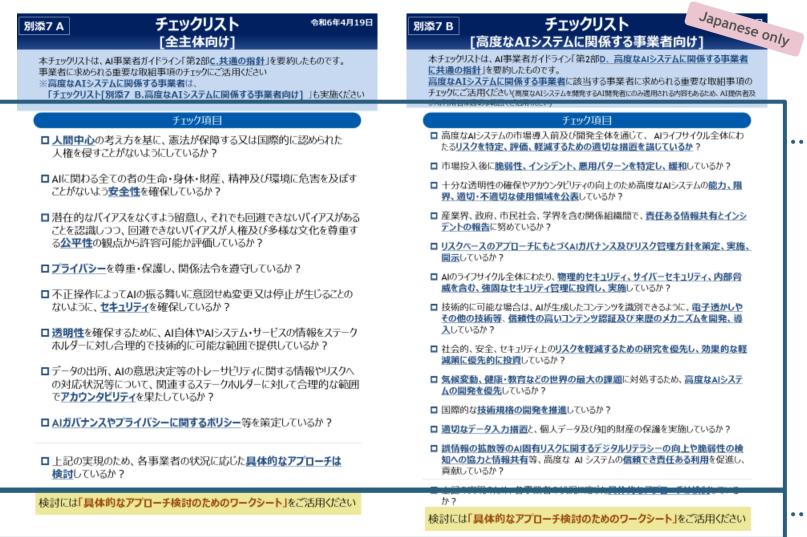
Confirm the approaches ("What") of each Al business actor by using the checklist.

Use the "worksheet for specific approaches" to discuss the specific approaches ("how") of each entity.



Appendix 7. Checklist Utilization

- All AI business actors confirm an overview of their own efforts by using "Appendix 7. Checklist A [for all AI business actors]."
- If the business actor is concerned with advanced AI systems, refer also to "Appendix 7. B Checklist [for AI business actors concerned with advanced AI systems]."

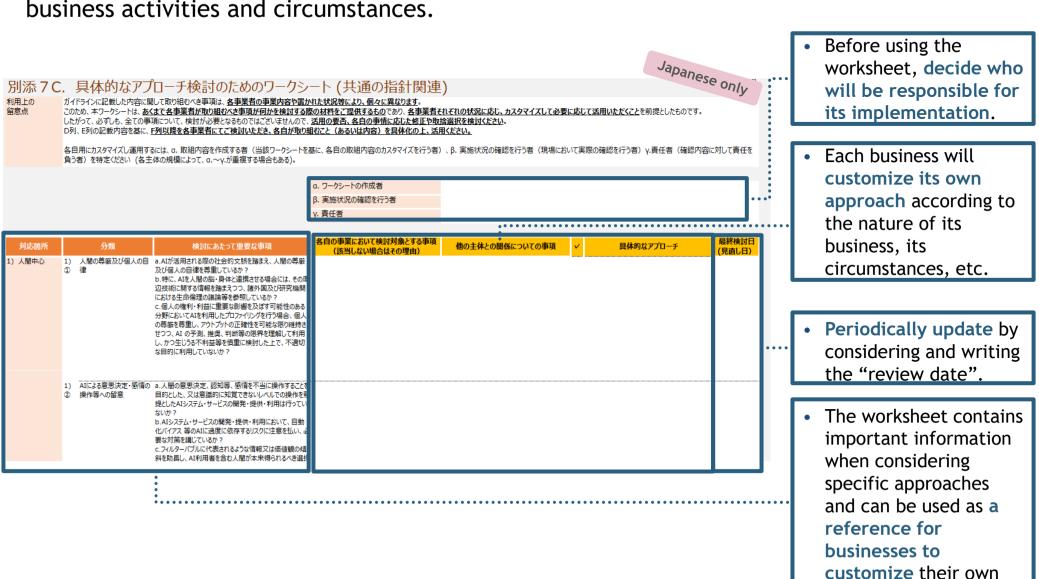


- The checklist is a summary of the main part
- With the checklist, an overview of the status of their own initiatives can be obtained

Utilize the
 "worksheet for
 specific
 approaches" to
 examine specific
 practices (see next
 page for how to
 utilize the
 worksheet).

Appx. Appendix 7. Worksheet for specific approaches Output Description Output Description

- Describes important matters when considering specific approaches to the guideline content.
- Presumes that each business will customize and utilize this worksheet according to its own business activities and circumstances.



approaches.



Appendix 8. Attachment 8. Hypothetical case study across Al business actors (Overview)

- Attachment 8. provides a "hypothetical case study across AI business actors" in which AI developers, AI providers, and AI business users consider important matters in accordance with the guideline.
- Enables each actor to recall specific cases in which they actually incorporated the content of the guideline and clarify the points where cooperation is essential.

Japanese only

Case 採用AI

機械学習モデル:XGBoost(エントリーシートの文章で、応募者に対して合否を判断する)

https://ifi.u-tokyo.ac.jp/wp/wp-content/uploads/2022/10/RCModel Case01 Recruitment-AI JP.pdf

nttps://iii.u-tokyo.ac.jp/wp/wp-content/upioads/2022/10/RCModer Case01 Recruitment-A1 3F.pdi							
AI開発部門	人材採用部門(採用AIチーム)	人材採用担当者					
AI開発者	AI提供者	AI利用者					
本UCにおいて主体が実施している活動	本UCにおいて主体が実施している活動	本UCにおいて主体が実施している活動					
軍項を含む全ての取り組むべき事項が導出される土台として、少な	くとも憲法が保障する又は国際的に認められた人権を侵すことが	「ないようにすべきである。また、AIが人々の能力を拡張し、多様)					
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ルの性能評価等は、AI開発者だけで完結せず、AI提供者側で	否)を行えるようになっている(Human-in-the-loop)	否)を行えるようになっている(Human-in-the-loop)					
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AIシステムの開発において、実際の予測結果を学習データに用い	AIシステムの開発において、実際の予測結果を学習データに用い	AIシステムの開発において、実際の予測結果を学習データに用い					
る際には個人情報の取扱いに関わる誓約書の締結やアクセス権	る際には個人情報の取扱いに関わる誓約書の締結やアクセス権	る際には個人情報の取扱いに関わる誓約書の締結やアクセス権					
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	AI開発部門 AI開発者 本UCにおいて主体が実施している活動 可を含む全ての取り組むべき事項が導出される土台として、少な AIシステムの開発において、学習データの収集やラベリング、モデルの性能評価等は、AI開発者だけで完結せず、AI提供者側で脳・身体と連携するケースではないため対象外 AIシステムの開発において、実際の予測結果を学習データに用いる際には個人情報の取扱いに関わる誓約書の締結やアクセス権管理等を実施している。 ※公平性とプライバシーについては、「3)公平性」「4)プライバシー保護」を参照 本ケースに関しては、2)①-3と同じ論点になる	AI開発部門 人材採用部門(採用AIチーム) AI開発者 本UCにおいて主体が実施している活動 本グースに関しては、2)①-3と同じ論点になる 本グースに関しては、2)①-3と同じ論点になる 本グースに関しては、2)①-3と同じ論点になる 本グースに関しては、2)①-3と同じ論点になる					



Appendix 9. Comparison with international guidelines (Overview)

- Appendix 9. summarizes the correspondence between the elements of the guideline and other guidelines, etc.
- This is to be used to clarify the correspondence between the guideline and other (domestic and international) guidelines, etc., when the AI business actor is considering more detailed content.

Primary guidelines, etc. used as references



- Ethics guidelines for trustworthy AI (April 2019, EU)
- Recommendation of the Council on Artificial Intelligence (May 2019, OECD Cabinet Meeting)
- Recommendation on the Ethics of Artificial Intelligence (November 2021, UNESCO)
- Blueprint for an AI Bill of Rights (October 2022, THE WHITE HOUSE)
- Artificial Intelligence Risk Management Framework (AI RMF 1.0) (January 2023, NIST)
- Advancing accountability in AI (February 2023, OECD)
- Proposal for a Regulation laying down harmonized rules on artificial intelligence (AI Act) (April 2021, EU)
- Al Product Quality Assurance Guidelines (April 2024, Consortium of Quality Assurance for Artificial-Intelligence-based Products and Services)
- Guidelines for Machine Learning Quality Management, 4th Edition (December 2023, National Institute of Advanced Industrial Science and Technology)

Guidelines, etc. cited or integrated into the guideline

- Human-centered AI social principles (March 2019, Integrated Innovation Strategy)
- The Draft AI R&D GUIDELINES for International Discussions (July 2017, The Conference toward AI Network Society)
- Al Utilization Guidelines -Practical Reference for Al utilization (August 2019, The Conference toward Al Network Society)
- Governance Guidelines for Implementation of AI Principles Ver. 1.1 (January 2022, Expert Group on How AI Principles Should be Implemented)
- Contract Guidance On Utilization Of Al And Data (March 2018, Ministry of Economy, Trade and Industry)
- The Hiroshima AI Process Comprehensive Policy Framework (December 2023, G7)