FUJITSU

WHITE PAPER 2023

RECOMMENDATIONS BY "THE FUJITSU GROUP EXTERNAL ADVISORY COMMITTEE ON AI ETHICS" AND EXAMPLES OF FUJITSU'S PRACTICES

~Realizing safe, secure, and prosperous AI society~

Published in December, 2023, V1.0
Fujitsu Limited

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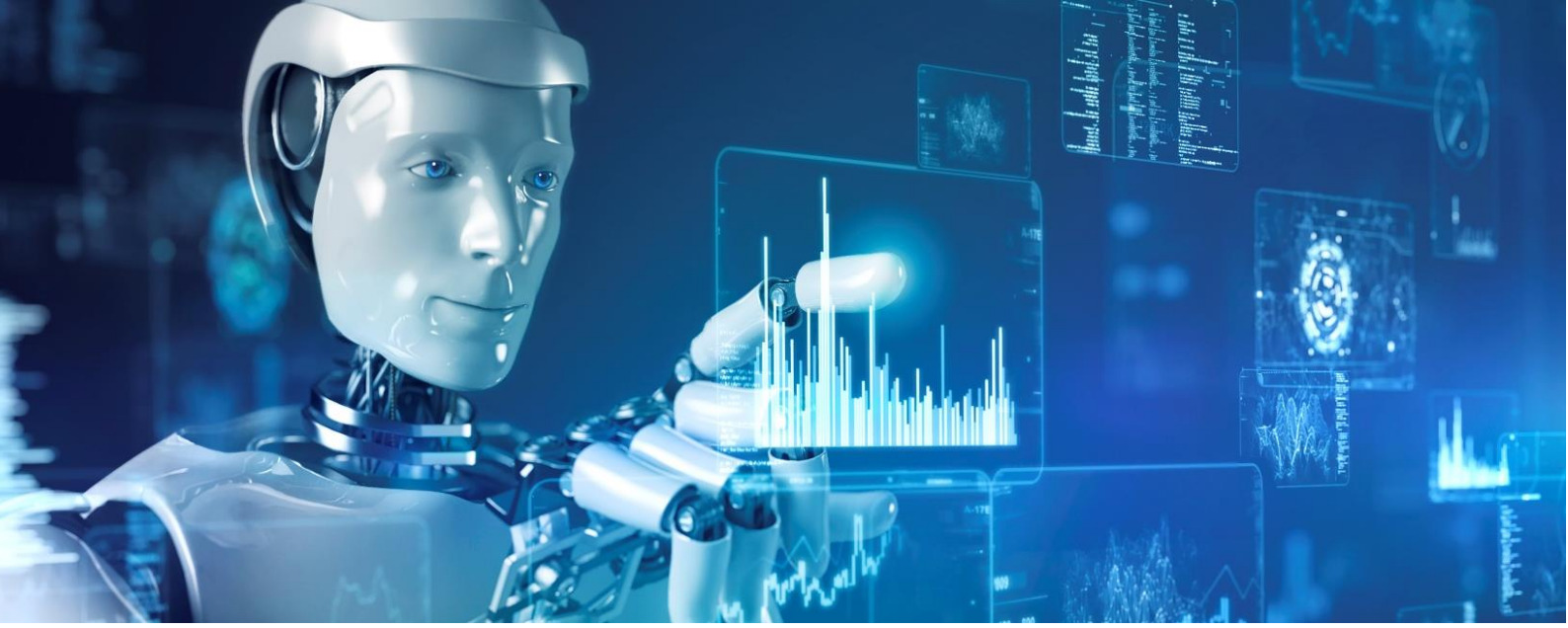


Introduction

AI（Artificial Intelligence）is one of the most powerful engines for further enhancing human capabilities and for new discoveries and revolutions. It is used for various businesses, and **it becomes essential for our life**.

On the other hand, AI by its very nature, tends to operate as a black box during the process of inference which shows unexpected outputs due to the contents of training data. Therefore, if the AI has not been designed or used properly, it may **cause ethical issues such as discrimination or unfairness**. These days Generative AI is featured, and it makes the speed of permeation of AI for Consumers rapider. However, the legal and ethical risks of generative AI are pointed out such as outputs' bias, copyright infringement, leak of personal data, and maluses. To prepare these risks, the viewpoints of "AI Ethics" beginning with awareness of transparency, fairness and human rights are important.

In particular, for the companies which use AI are strongly required to deal AI safely securely and properly with self-discipline **including viewpoints of AI Ethics so called "AI Ethics and Governance"**.

Under these circumstances, the Fujitsu Group (hereinafter Fujitsu), as an AI provider, has been working on "AI Ethics and Governance" and promoting various activities since the early days in Japan. **One of the most distinctive activities is the Fujitsu Group External Advisory Committee on AI Ethics established in 2019**. This committee includes not only technology field but diverse fields external experts and discuss various AI ethical issues and dealing in order to realize "TRUST" of Fujitsu's purpose.

In recent years, as the implementation of AI in society has progressed, society's interest in AI Ethics has increased. Therefore, this document not only introduces the activities of this committee, but also makes **some opinions obtained during the discussions of this committee widely available to companies using or developing AI**. (Proposals from the committee for Fujitsu) It is our pleasure, this “proposals” and “examples of Fujitsu's practices” are used for the people who interested in AI Ethics makes further contribute to the spread of safe and secure.

1. About the Fujitsu Group External Advisory Committee on AI Ethics

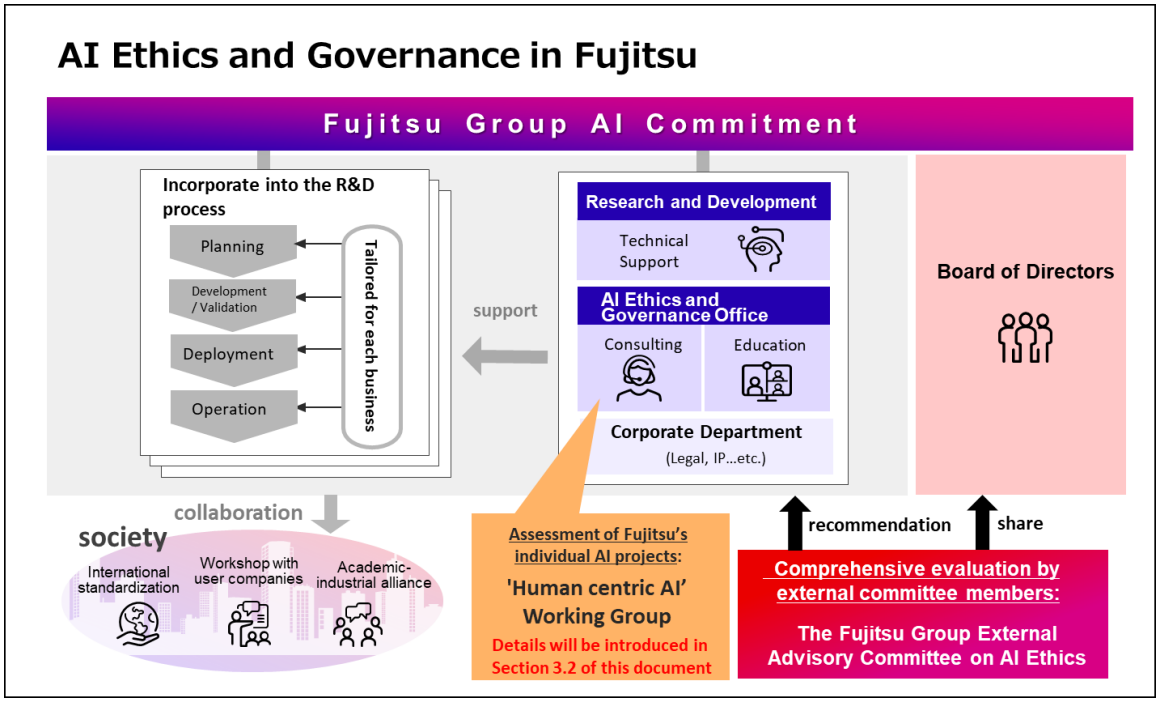
1.1 Goals and Characteristics of this Committee

Fujitsu has been leading AI research in Japan for more than 30 years since it commercialized the "FACOM α" [*2] a computer for AI in 1985. Since 2019, Fujitsu has promoted more than 6000 AI services both in Japan and overseas, while at the same time **strengthening its "AI Ethics and Governance" [*3] structure to develop "Trusted AI"** that reflects Fujitsu's purpose.

As a part of AI Ethics and Governance measures, Fujitsu established the Fujitsu Group External Advisory Committee on AI Ethics in September 2019. With the aim "To receive objective evaluations of Fujitsu's AI Ethics initiatives from a third party" and "To give considerations to user companies, consumers, and society as a whole", this committee **includes six well-known external experts to discuss various ethical themes**.

The discussion is not aimed at reviewing individual AI systems from Fujitsu like an advisory board. **The six members actively make recommendations from diverse and wide-ranging perspectives**. Furthermore, by incorporating the recommendations

into Fujitsu's company-wide governance, we are enhancing our initiatives with flexibility.



The most unique characteristic of this committee is that it does not leave AI Ethics up to business divisions, but **positions AI Ethics initiatives as an "important management issue"**. For this reason, **the President and other members of the management team attend the committee as observers**, and use the suggestions of the committee members as a reference for management. After the committee meeting, **the results of suggestions and discussions from the committee members are compiled into recommendations and shared with the Board of Directors,** as shown above. This mechanism to ensure the transparency of AI Ethics in the management of organizations is a unique feature of Fujitsu which has not equivalent in other companies.

1.2 Biographies of the Six Committee Members

This section introduces the six diverse committee members. AI Ethics encompasses not only technology but also human rights, law, and social issues, so it cannot be judged only by AI technology experts. For this reason, Fujitsu invited **external experts with high-level insight from various fields** such as information science, law, medicine, ecology, SDGs, and consumer affairs. The six Committee Members provide practical recommendations from wide range perspectives on Fujitsu's AI Ethics approach and activities (see Chapter 3 for details). These recommendations, rather than focusing on only on Fujitsu as a provider, take into account multiple considerations, as stated in the committee's purpose: "To expand consideration of AI Ethics to companies using AI, consumers and society as a whole".
(Biographies of each committee member are as of April 2023.)

■Chairman Junichi Tsujii

Ergonomics Fellow at the National Institute of Advanced Industrial Science and Technology, Director of the Artificial Intelligence Research Center, Professor Emeritus at the University of Tokyo, Professor at the University of Manchester, etc.

He is highly acclaimed worldwide, especially for achievements in the field of language processing. In April 2022, he was awarded the Order of the Sacred Treasure, Gold Rays with Neck Ribbon Spring in the Conferment of Decorations on Foreign Nationals.

In this committee, he has provided proactive opinions regarding AI Ethics problems and also provided highly professional advice about Fujitsu’s AI system based on his knowledge of information science.

■Ms. Yuko Kimijima

Professor at Keio University Faculty of Law/Graduate School of Law,
Director of Keio University Global Research Institute (KGRI),
Director of Japan Association of Industrial Property Law, and a Lawyer, etc.

Her specialized field is intellectual property law. She is actively engaged in research and lectures in Japan and abroad.
Also, she makes valuable efforts to promote the business-academia collaboration between Fujitsu and Keio University in the field of AI Ethics.

In this committee, she has provided valuable advice in relation to human rights guaranteed in the constitution as a jurist.

■Ms. Hiroko Kuniya

Journalist, Trustee at Tokyo University of the Arts (Head of SDGs Promotion Office), etc.

She served as an NHK newscaster for the popular broadcast such as “world news” and “Today's Close-Up”. In recent years, she also focused on reporting and disseminating information about SDGs based on her extensive international knowledge.

In this committee, she has sharply pointed out Fujitsu's principles and governance structure from her broad perspective based on the global trend of sustainability.

■Mr. Takanori Takebe

Professor at the Research Institutes at Tokyo Medical and Dental University,
Director of the Communication Design Center at Yokohama City University,
Deputy Director of the Center for Stem Cell & Organoid Medicine at Cincinnati Children's Hospital, Professor of Graduate School of Medicine at Osaka University, etc.

At the age of 26, he generated a mini-liver from iPS cells and published the results in the scientific journal "Nature". In recent years, he has also been promoting the creation of an ecosystem to discover the next generation of researchers.

In this committee, he, as a researcher at the forefront of regenerative medicine, has ensured that the developments of clinical practice and biomedical ethics are embedded in Fujitsu's direction and governance discussion.

■Ms. Kumiko Bando

Governor of the Japanese Red Cross Society, Director of Save the Children Japan, etc.

She was in charge of promoting university reform at the Ministry of Education, Culture, Sports, Science and Technology. Also, she holds positions such as the Deputy Minister of Education, Culture, Sports, Science and Technology, Commissioner of the Consumer Affairs Agency, and President of the Japan Legal Support Center.

In this committee, she has offered critical suggestions from the viewpoint of consumers, based on great deal of experience in administrative work at government agencies.

■Mr. Takakazu Yumoto

Professor Emeritus at Kyoto University, Visiting Professor at Chubu University, President of Japan Food Studies College, Director of Kyoto Biodiversity Center, etc.

He has visited rainforests around the world and devoted himself to research on "the interaction between animals and plants" and "the interaction between humans and nature".

In this committee, he has referred to the challenges faced by companies in promoting the SDGs from a professional perspective as an ecologist.

2. Main topics of the past four years

The Fujitsu Group External Advisory Committee on AI Ethics has been held eight times since its first meeting in September 2019 to the present (February 2023). In this section, we will **introduce a summary of the major topics discussed in the eight meetings**. The aim of this committee is neither to review Fujitsu's individual AI business nor to pursue "ethics" itself. A major feature of the committee is to **discuss and evaluate Fujitsu's initiatives of AI Ethics objectively and comprehensively so that AI which provided by Fujitsu can be accepted by society**.

【The 1st conference】 AI that is Not Only Technologically Neutral but also Trusted by Society

In September 2019, the first conference was held. First, Fujitsu members introduced Fujitsu's AI technology trends to committee members. After that, the participants discussed Fujitsu's AI Ethics initiatives, including "the Fujitsu Group AI Commitment" as an ethical core principle (see the outline below). There are AI ethical challenges that data

bias and human malice distort the behavior of AI, which has inherently technological neutrality. In order to deal with it, the committee members made various suggestions on which risk mitigation measures **Fujitsu should take with building trust in the future**.

【The 2nd conference】Can AI Care for Employees' Mental Health?

The second conference was held in March 2020. In this session, the committee members discussed the considerations required from the perspective of AI Ethics when AI is used for Work Style Reform, including mental health care for employees. It was considered that some elements cannot be translated into data point in AI, and that some fluctuating elements, such as mental disordered occurred by human relationship, are difficult to quantify. If people rely only on the outputs made by AI, there is a risk of overlooking important elements, and this may end up in a detriment to the employees. For these reasons, the committee members reached the important conclusion that **people should not rely solely on the predictions of AI, and human judgment such as by experts in psychology and medicine should also be involved**.

【The 3rd Conference】For Providing Appropriate Medical Care to All

The third conference was held in September 2020. External expert in medical technology ethics gave a keynote talk about ethics related to the genome analysis and advanced medical treatment using AI. He pointed out that although larger hospitals can offer patients advanced medical care used cutting-edge technologies including AI, smaller hospitals can't, and this difference causes an unfair situation for patients. The

committee members also offered their opinions that **it was essential to correct the disparities in the ability to respond in each medical field** to provide all patients equal access to advanced medical care. The conference continued with an enthusiastic and thought-provoking discussion.

【The 4th Conference】Necessary Ambition to Create a Well-Being Society

The fourth conference was held in December 2020. This session focused on Fujitsu's AI businesses in health care industry. The committee members discussed ethical issues such as the use of patients' medical data. Moreover, committee members discussed businesses that focus on the theme of AI Ethics and SDGs, such as racial, gender and minority fairness, beyond the health care industry. The committee members also advised, "**even if the business may not be immediately profitable, it is very important to promote it with ambition for social significance**".

【The 5th Conference】What AI providers (AI vendors) need to protect the dignity of individuals

The fifth conference was held in October 2021. Fujitsu members presented Fujitsu's technical initiatives for implementing AI Ethics. Based on Fujitsu's initiative, the committee members discussed the importance of **ensuring the ethical development and use of AI in business whilst also considering the circumstances of each company and stakeholder using the AI system**. Specifically, the committee members pointed out "the importance of activities to cooperate with academia and stakeholders in society and to transmit information to society", "the way to formulate AI Ethics rules for the AI businesses" and the aim "to improve the value of AI business by respecting each individual when analyzing large amounts of data with AI".

【The 6th Conference】What is an ethics model for realizing symbiosis between AI and human

During the sixth conference we discussed Fujitsu's efforts to provide internal

consultation desk and the "AI Ethics Impact Assessment" [*4], which is freely available externally. The committee members pointed out measures to standardize methods and technologies to ensure AI Ethics, including the AI Ethics Impact Assessment. They emphasized the **importance of identifying and eliminating biases, respecting values**, and incorporating these considerations into business practices, keeping in mind that "Different countries, regions, and individuals have diverse ethical norms and values to respect."

【The 7th Conference】SDGs in the field of ecology and AI practice

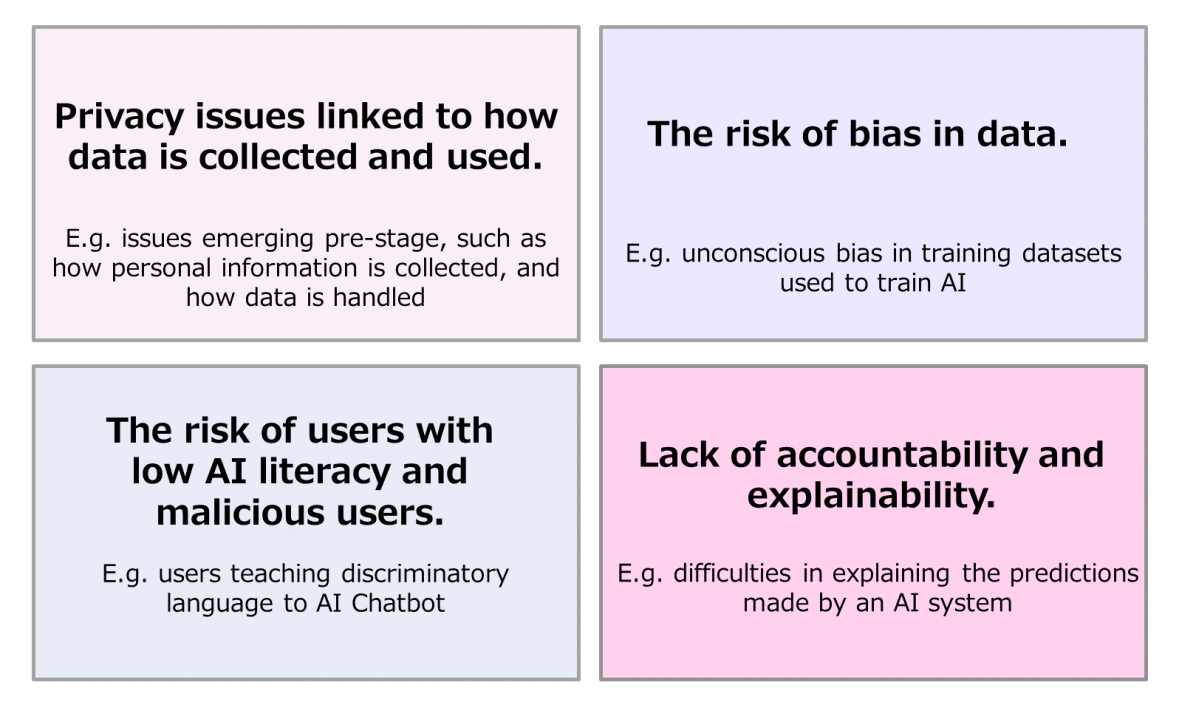
Based on his own experience as an ecologist, **Mr. Yumoto gave a lecture on "Expectations for Fujitsu and AI from the perspective of SDGs, especially biodiversity."** He gave valuable suggestions on how the latest technologies such as AI, which manage large amounts of data, can contribute to the global environment, not only from the perspective of AI Ethics, but also from the perspective of problems that companies tend to fall into, such as pretended environmentalism (greenwashing).

【The 8th Conference】SDGs in the field of ecology and AI practice

We discussed Fujitsu's AI Ethics initiatives and social conditions in the fiscal year of 2022. In particular, the committee members pointed out that **it is important to improve the literacy of not only companies involved in AI but also society as a whole including consumers**, in light of the recent rapid penetration of generative AI such as ChatGPT into society. In order to achieve this, we have received suggestions that we should actively engage consumers and society, including through the AI risk review process and the external disclosure of educational materials for employees.

(Reference) Typical factors that cause AI ethical problems

In September 2019, at the first meeting of the Fujitsu Group External Advisory Committee on AI Ethics, the committee members proposed **4 typical factors that cause problems in AI Ethics**. In order to effectively address these factors, Fujitsu has taken various risk reduction measures based on recommendations from committee members (see the next chapter for details).



3. Recommendations from the Committee and examples of Fujitsu's practices

Sections 3.1 to 3.3 **highlight some of the points that are deeply relevant not only to Fujitsu but also to companies that use AI,** and introduce them as "recommendations from the committee." Such sections also introduce **AI Ethics "examples of Fujitsu's practices", that Fujitsu has implemented.** For the past four years, Fujitsu has been continuing to use the outcomes of discussions in this committee to inform its own AI Ethics and Governance activities.

We at Fujitsu hope that the readers will refer to the "examples of Fujitsu's practices" to see how Fujitsu is working to develop AI Ethics and promote the ethical implementation of AI systems.

Reference: Fujitsu 's AI Ethics and Governance Framework

Fujitsu's AI Ethics practice is characterized by a **combination of approaches on both the "Technology" and "Governance" sides**. Looking at a technology side, Fujitsu Research Laboratories is leading the research and development of cutting-edge technological tools, including the "AI Ethical Impact Assessment", which detects the

ethical risks that individual AI poses to society. However, when considering corporate activities, technical tools and internal rules may not be enough to avoid the ethical risks associated with AI. Nowadays AI technology is used in all kinds of software, so established technology tools or internal rules may be left behind development of technologies.

Therefore, sections 3.1 to 3.3 focus on the side of “Governance” which cannot be solved by "technology" alone, and **provides "recommendations" and "examples of Fujitsu's practices" focusing on the cultural and organizational development as a company.** To begin with, the image below shows Fujitsu’s AI Ethics and Governance framework. This framework provides a concise overview of the Fujitsu “examples of Fujitsu's practices” which will be further explained.

3.1 Human Rights of Customers and Consumers

To protect the dignity of every individual who related to AI, the committee recommends to consideration the field of Fujitsu providing cutting-edge technologies such as AI.

An Explanation of Recommendations

While cutting-edge technologies like AI can bring great value when used well, they are also at relatively high risk of being exploited for malicious fake news or cyberattacks. It follows that how to achieve appropriate use is a difficult question.

In addition, even when properly used, the existence of unintentional bias in the training data or the lack of users' literacy might result in **violations of human rights.** For instance, if the training dataset used for the recruitment AI is biased, some candidates might be discriminated because of their place of birth, gender, age or other characteristics. Or, even if the data is unbiased, a business could run for inappropriate uses, such as to "analyze the profiles and the behaviors of people caught on surveillance cameras in public spaces (such as stations) and use them for other purposes, such as marketing, without their permission". This, therefore, would result in legal or ethical issues such as an infringement of privacy.

Therefore, while using an AI technology, it is necessarily to carefully consider in advance if there are risks of violating human rights or adversely affecting society. Committee members suggested that **Fujitsu should not only consider what the company itself wants to achieve with AI, but should also re-establish a policy of "providing cutting-edge technologies, such as AI, only in fields that do not violate human rights."** Specific suggestions are outlined below.

The suggestions from the committee that led to the recommendation above

At the second committee in February 2020

A company which focuses on "B to B to C" business like Fujitsu, shall also consider

consumers' human rights and the relevant issues that might arise. To prevent violating privacy or human rights, **Fujitsu as an AI provider, should mark clearly in which business field it is ethical to provide or not provide AI**.

At the second committee in February 2020

Concept of values such as privacy or fairness are different in different countries or areas, consequently a flexible approach to AI Ethics is needed. However, as a general premise, **the rule "not to use AI in fields where its use can clearly have a negative impact" should be established.**

(Reference) Coherence of AI Guidelines from Government Agencies

The committee's recommendation to respect human rights when providing cutting-edge technologies such as AI is in line with AI guidelines formulated by government agencies and academia, and **it is consistent with the approach taken by numerous policies.** For instance, the "Social Principles of Human-Centric AI" formulated by the Cabinet Secretariat in Japan March 2019 clearly states on chapter 4.1 (1) entitled "The Human-Centric Principle" that "The utilization of AI must not infringe upon the fundamental human rights guaranteed by the Constitution and international standards."

Examples of Fujitsu's Practices

To respond to the recommendations of the committee, Fujitsu formulated "Basic Policy for AI Ethics Commentary on the Fujitsu Group AI Commitment" (hereafter Basic policy for AI Ethics) to **clarify the Fujitsu 's stance and policy that allows only the provision of "technologies for the business field or usage which does not violate human rights."** Here are details below.

Fujitsu made “Basic Policy for AI Ethics”

In FY2022, **Fujitsu made “Basic Policy for AI Ethics”** which contains key recommendations that all employees need to consider when providing and developing AI systems. This basic policy for AI Ethics rearranges the internal bylaws that have been used as criteria for conducting ethical reviews, so that can be used as criteria for **"minimum compliance when providing AI" by Fujitsu employees.**

To rearrange the internal bylaws, both national and international AI related documents which aims to be universal and objective, such as the "Social Principles of Human-Centric AI” formulated by the Cabinet Secretariat in Japan and the EU "AI Act,” have been used.

1. We do not use or provide AI to make discriminatory results.
We do not use or provide AI for the purposes that could possibly lead to discriminatory results which defines superiority or inferiority based on attributes such as race or gender.

2. We do not use or provide AI that could lead to misuse and abuse.
We acknowledge the fact that AI can be misused, and we take measures to minimise such risk and any damage. Additionally, if we detect an attempt to use the AI system for purposes other than those originally intended, we will promptly notify the users and address the situation.

⋮

Fujitsu aims to respect business practices, cultural and ethical aspects in each country or area involved in its business. **Fujitsu cannot accept any AI system which harm individual dignities in any circumstance.** Hence, Fujitsu allows business units to create guidelines that best address the context in which they operate, but also requires **that the requirements outlined in “Basic Policy for AI Ethics” are respected as a company-wide premise.**

When engaging in business negotiations, **it is important to keep the Basic Policy for AI Ethics in mind, ensuring that the needs of stakeholders and companies are met**. When promoting and pursuing AI business opportunities, Fujitsu carefully considers the impact and risks of providing AI. Completing the ethical risk assessment may be a difficult task for the business departments, so the next section 3.2 “Internal Governance” explains the internal processes and mechanisms in place to support

business departments.

N.B. Fujitsu believes it is appropriate to present guidelines such as the Basic Policy for AI Ethics as guidelines aimed at supporting corporate decision-making, rather than treating them as strongly binding rules. The aim of such guidelines is to support balanced judgments to prioritize the rights of customers and consumers, without hindering innovation.
AI Ethics does not always present clear judgeable cases regarding what we must not do. The subtle difference of specifications and conditions in usage of AI can effect on the ethical judgment. If Fujitsu were to create strict rules or regulations out of fear of risks, we might need to ban some AI systems simply because it is formally applicable, despite AI offers great benefit to society. **It is crucial to make balanced judgments to prioritize the rights of customers and consumers.**

Reference: the internal guideline of Generative AI

As mentioned above, it is very important to establish practical guidelines for all employees. **Fujitsu had shared company-wide in-house guidelines for generative AI, such as ChatGPT, in 2023**.

In general, when formulating internal guidelines, corporate departments, such as legal departments, want more stringent regulations to put the business on the safer side, while business units want less stringent regulations to speed up business developments. This situation can result in conflicting opinions within the company. However, at Fujitsu we have been involved management in promoting AI Ethics initiatives for several years. Thanks to such initiatives, the ethical and legal risks associated with cutting edge technologies such as generative AI were **quickly embedded in the guidelines through a top-down approach** across the company.

In this way, it is possible to respond quickly and flexibly in new situations, such as the rise of Generative AI, by **promoting and practicing AI Ethics normally**.

In order to maximize the value of AI to society, Fujitsu has established a company-wide policy that **does not uniformly restrict the use of generative AI in business**, but actively promotes its use while taking appropriate risk mitigation measures.

3.2 Internal Governance

Considering the consumers and users as the top priority, we recommend conducting risk assessments for all AI systems.

Explanation of the proposal of the committee

Traditionally at Fujitsu, the teams providing AI systems are appropriately supported by the research and development department with extensive ethics expertise in order to prevent and mitigate ethical risks. However, **to ensure timely provision of AI systems in response to the rapid expansion of AI business**, Fujitsu is currently promoting the development of a wide range of AI talents. In the future, it is expected that there will be an increase in projects providing AI led by the business department without relying on support from the research and development department. Even in such a situation, it will be essential not to neglect the management of ethical risks.

Therefore, we believe that **some kind of ethical review process should be established for all AI systems**. Fujitsu has already been **operating the ethical review process in some departments that manage AI frequently**, but as stated in section 3.1 of the "Basic Policy for AI Ethics," the committee suggested that it should be applied to the entire company, not just some departments. There were some proposals for how to conduct the review process, described below.

The suggestions from the committee that led to the recommendation above

At the 6th committee in February 2022

A management system that can make objective judgments, such as the presence of an "AI Ethics Leader" in each department, should function properly within the company. This will prevent the risk of having AI systems that deviate from social norms

or “the Fujitsu Group AI Commitment”.

At the 7th committee in September2022

In the field of AI Ethics, there are many ambiguous situations, making it difficult to determine whether there is a risk or not. Therefore, it is not desirable to recognize mistakes only after reaching an irreversible situation. It is ideal to create **an inclusive system that can prevent and correct risks as soon as the mistakes are identified**. When promoting an AI project, **by clarifying a clearance process** that involves conducting specific checks to mitigate risks as much as possible, and not proceeding to the next stage without permission, transparency can be ensured while preventing and correcting risks.

Examples of Fujitsu’s Practices

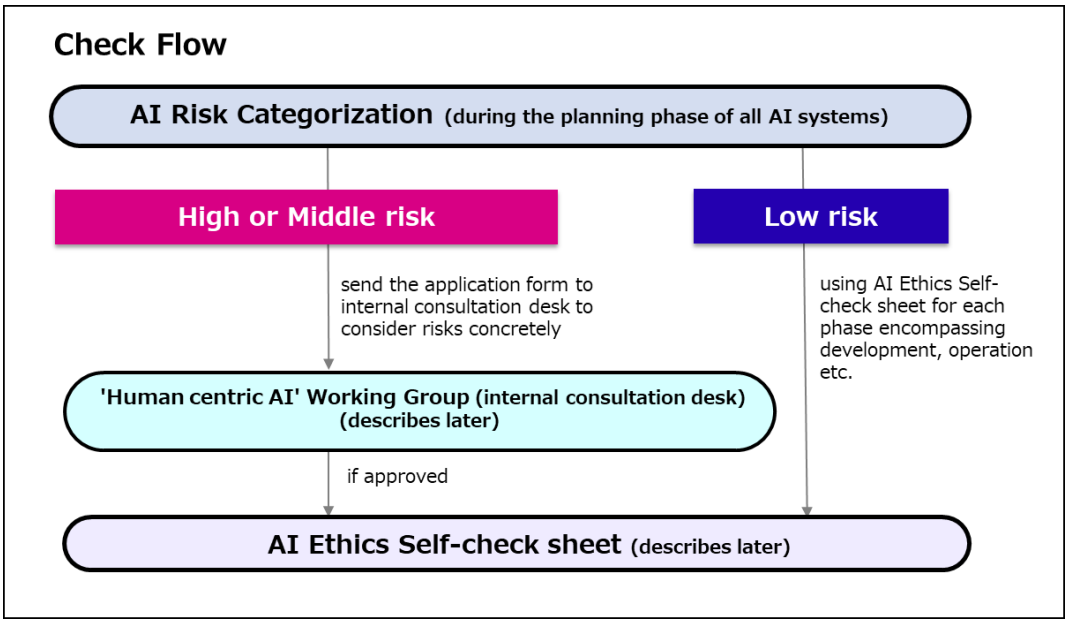
On the one hand, Fujitsu, having the purpose of “building trust in society”, believe it is extremely imperative to deliver safe and secure AI services to our customers, effectively utilize them for human rights and environment, and **ensure the safety of consumers and users throughout the process**. On the other hand, if Fujitsu has an overly excessive AI review process, it may compromise the speed of AI business development.

Hence, **Fujitsu has introduced an ethical review process based on a risk-based approach**, tailored to the risk level of each individual project. We will explain the specific contents of this process as follows: (1) Risk check during the promotion of AI business (2) Promotion of a 'Human centric AI' Working Group (an internal consultation desk).

(1) Risk check during the promotion of AI business

In Fujitsu, for AI systems with sensitive or socially important impacts, ethical review operations have been carried out simultaneously from an ethical perspective on matters of concern during the process of contract review by the legal department. However, based on the suggestions from the previously mentioned by the committee, **Fujitsu is implementing an “AI Risk Categorization” to apply a new ethical review process to all AI systems we provide**.

About AI Risk Categorization



This “AI Risk Categorization” has the primary goal of providing safety and trust to consumers and users and is mandated for all AI systems within Fujitsu Group in Japan (with plans to expand globally in the future).

The flow, listed in bullet points, is as follows:

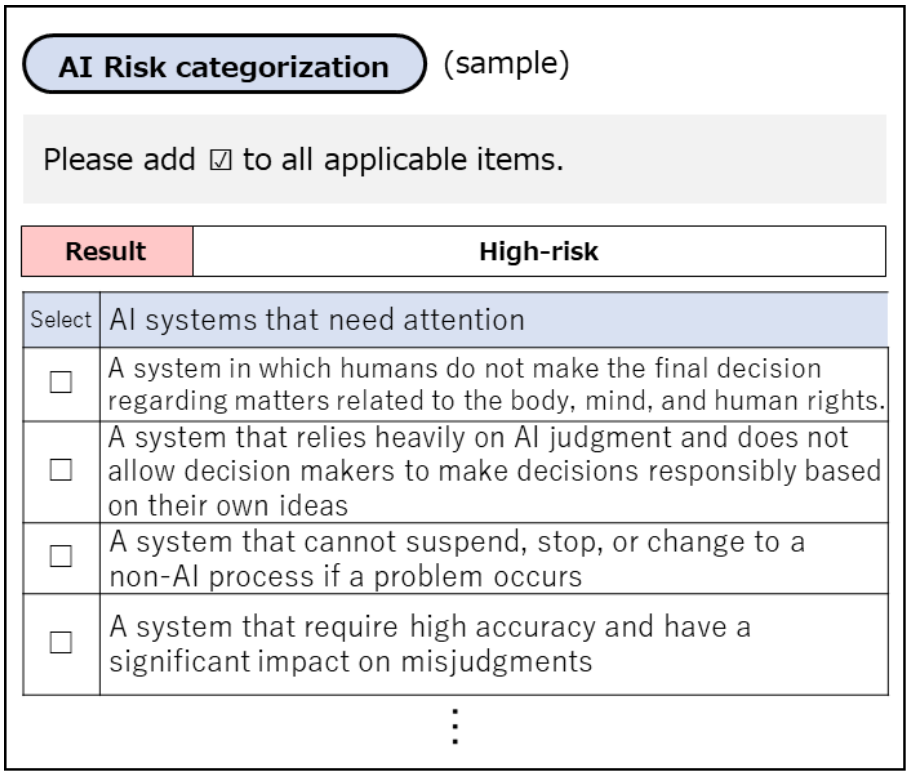
- The project manager conducts a risk check using the "AI Risk Categorization Sheet."
- If the AI is classified as "Low-risk," the business proceeds with reference to the "AI Ethics Self-Check Sheet" mentioned later.
- If the AI is classified as " High-risk " or "Middle-risk," it is mandatory to consult the internal consultation desk mentioned later.
  If the consultation results allow for business promotion, proceed with reference to the "AI Ethics Self-Check Sheet" mentioned later.

Explaining the step-by-step process in detail:

First, at the planning stage of the AI system, **the project manager (such as sales or system engineers) conducts a risk check for the system using the designated document, the “AI Risk Categorization Sheet”.**

The items in the "AI Risk Categorization Sheet" are comprehensive, considering the perspectives of the "Basic Policy for AI Ethics” mentioned in the previous section 3.1, a sample is provided below. If checks are marked in the specified items, the AI system is classified as “High-risk” or “Middle-risk” and **requires consultation with the internal consultation desk which will be described later**. Although the system is evaluated

and examined from various perspectives and appropriate measures are taken at the internal consultation desk, if a system still cannot eliminate serious risks, it may be considered “unable to continue business” and sent back for reconsideration.



AI Risk categorization (sample)

Please add ☑ to all applicable items.

Result	High-risk

Select	AI systems that need attention
☐	A system in which humans do not make the final decision regarding matters related to the body, mind, and human rights.
☐	A system that relies heavily on AI judgment and does not allow decision makers to make decisions responsibly based on their own ideas
☐	A system that cannot suspend, stop, or change to a non-AI process if a problem occurs
☐	A system that require high accuracy and have a significant impact on misjudgments

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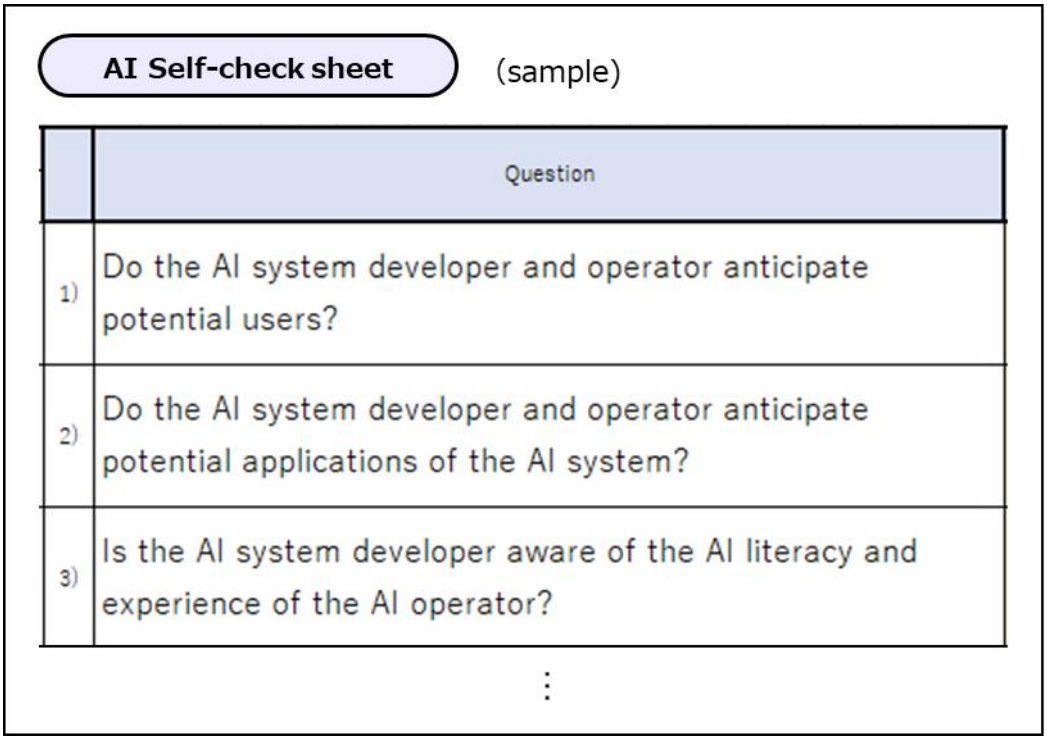
The feature of this “AI Risk Categorization” process is that **it adopts a “risk-based approach" to determines the level of response depending on the magnitude of the risks** while targeting all AI systems. In the "risk-based approach," Low-risk AI systems can complete the ethical review process at an early stage, making it more efficient as well. For AI systems that are found as unlikely to pose ethical risks, encompassing minimal impact on human rights and society and difficulty in repurposing, **strictly enforcing a clearance process may be excessive and not the best approach**.

AI Ethics Self check sheet

If the "AI Risk Categorization Sheet" classifies the AI as "Low-risk," or if the AI is classified as "High-risk" or "Middle-risk" but business promotion is approved after consulting the internal consultation desk mentioned later, the project will proceed using the "AI Ethics Self-Check Sheet." **The "AI Ethics Self-Check Sheet" organizes matters that should be considered from ethical perspective for each phase encompassing development, operation etc**.



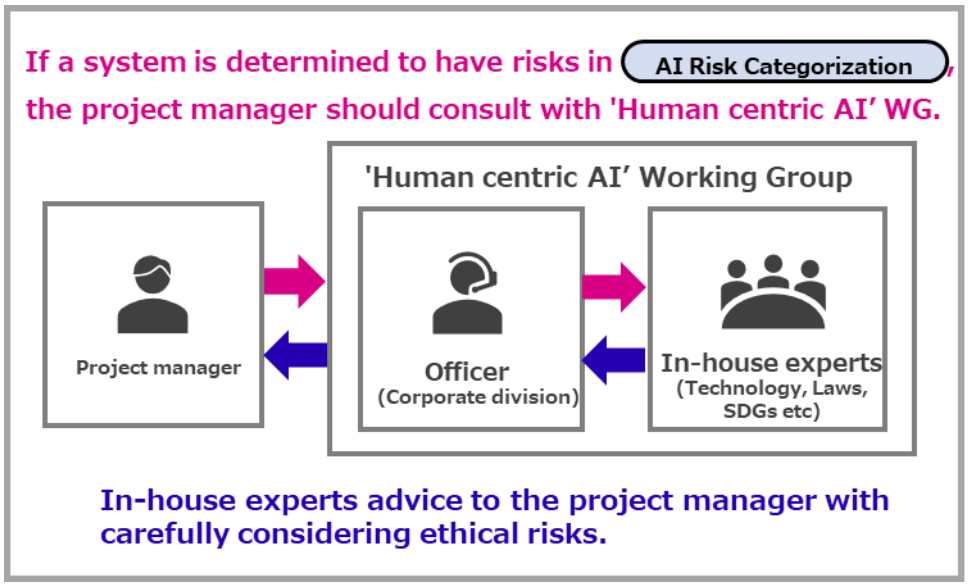
This Self-check sheet is created by referring to domestic and international governance guidelines, such as “Ethics guidelines for trustworthy AI”（April 2019）by EU and "Governance Guidelines for Implementation of AI Principles" (January 2022) by Ministry of Economy, ensuring objectivity.

However, the risks of AI Ethics also may occur during the development and operation of AI systems due to changes in specifications or applications. Therefore, people in charge (sales and system engineers) in Fujitsu are required to not only use a self-check sheet once in the early stages of the project, but also **repeat the necessary checks throughout each phase of providing and operating the system, taking into account changes in business situations**.

(2) Promotion of a 'Human centric AI' Working Group (an internal consultation desk)

'Human centric AI' Working Group accepts consultations for systems that have been categorized as “High-risk” or “Middle-risk” using the “AI Risk Categorization Sheet” introduced in (1). This Working Group was established 2020 as an internal consultation desk for AI and data ethics. Since its establishment, it has been functioned as a consultation desk where **employees can consult, providing answer to their**

concerns various perspectives. This time, by incorporating this desk into the business process after the “AI Risk Categorization,” it has become possible to mitigate risks more effectively from AI systems.



AI Ethics involves a wide range of perspectives. Therefore, at 'Human centric AI' Working Group, **the corporate department coordinates and provides a comprehensive response for internal consultations by collaborating closely with related departments** such as technology, society, law and sustainability. The consultation content is carefully examined for ethical risks and appropriate measures, including whether it does not violate Fujitsu's "Basic Policy for AI Ethics" (Section 3.1), and by proposing to the consultant, we are trying to provide safe and trustworthy AI.

From now on, Fujitsu aims to continue maintaining and improving this comprehensive support system for business department, so that each employee can be aware of the importance of AI Ethics, **maintain trust and enhance their “self-discipline.”**

N.B., the appropriate rules and internal support systems may vary depending on the company and the nature of the business. In building proper governance, it is imperative not only to discuss and decide within the management team and corporate departments but also to gather opinions from employees in business divisions and those closer to the customers.

3.3 Collaboration with society

We recommend creating a community that involves not only AI providers but also a wide range of stakeholders, including AI-using companies, academia, government, and private sectors.

The suggestions from the committee that led to the recommendation above

This section explains how the suggestions from the committee were implemented from two perspectives: “Collaboration with AI user companies” and “Collaboration with stakeholders in society.”

★Collaboration with AI user companies

Currently there are some AI user companies that are promoting AI Ethics individually by referring to AI Ethics guidelines developed by government agencies. However, each organization has different perceptions regarding AI Ethics. There may be some misconceptions, including the concern that AI will make humans redundant. If such a misunderstanding exists, it will be difficult for AI providers and AI user companies to collaborate effectively in delivering safe and secure AI systems.

Therefore, **AI providers such as Fujitsu should improve the AI literacy of both parties by not only working on AI Ethics alone, but also actively promoting community building through initiatives such as holding discussions with AI user companies that actually utilize AI systems, and organizing AI exchange meetings to educate about AI Ethics.** By working together, AI providers can protect consumers and consumers living in society from AI risks. The committee members have provided specific suggestions, listed in what follows.

The suggestions from the committee that led to the recommendation above

At the 2nd committee in February 2020

When cutting-edge technologies such as AI are provided, it is not enough for AI providers such as Fujitsu to consider AI Ethics alone. **If there is "literacy gap" between AI providers and AI user companies**, there is a concern that it may be difficult to demonstrate the necessity of AI Ethics. It is necessary to continually consider the collaboration between AI providers and AI user companies.

At the 2nd committee in February 2020

Humans tend to place too much faith in AI decisions. For example, if one delegates final decisions to an AI system without understanding that the AI system is operating on insufficient data, that can be extremely dangerous. Of course, it is important to ensure the fairness of systems and data through technologies, but **Fujitsu should carefully educate AI user companies on how to use AI systems just as tools and how to perform human oversight.**

★Collaboration with stakeholders in society

Furthermore, when practicing and promoting AI ethics, not only AI user companies, but also **a wide range of stakeholders should be continuously engaged in discussions to ensure that all interested stakeholders, and not only industrial areas, are represented**. A wide range of stakeholders includes not only government agencies and academic areas, but also civil society organizations, consumers and consumers.

In the international society, community building is relatively advanced. For example, GPAI (the Global Partnership on AI) is **a multi-stakeholder international collaboration initiative between industry, academia, and the public and private sectors**. Japan joins the GPAI as a founding member and since November 2022, Japan has held the presidency for one year. At a side event of the annual GPAI Summit held in Tokyo in 2022, Fujitsu hosted a session on "The ways to trustworthy AI in practice" and held a panel session with AI experts from Japan and overseas.

It would be desirable to continue promoting such wide-ranging community building both in Japan and overseas. At the past meetings of the committee, the committee members made the following specific suggestions.

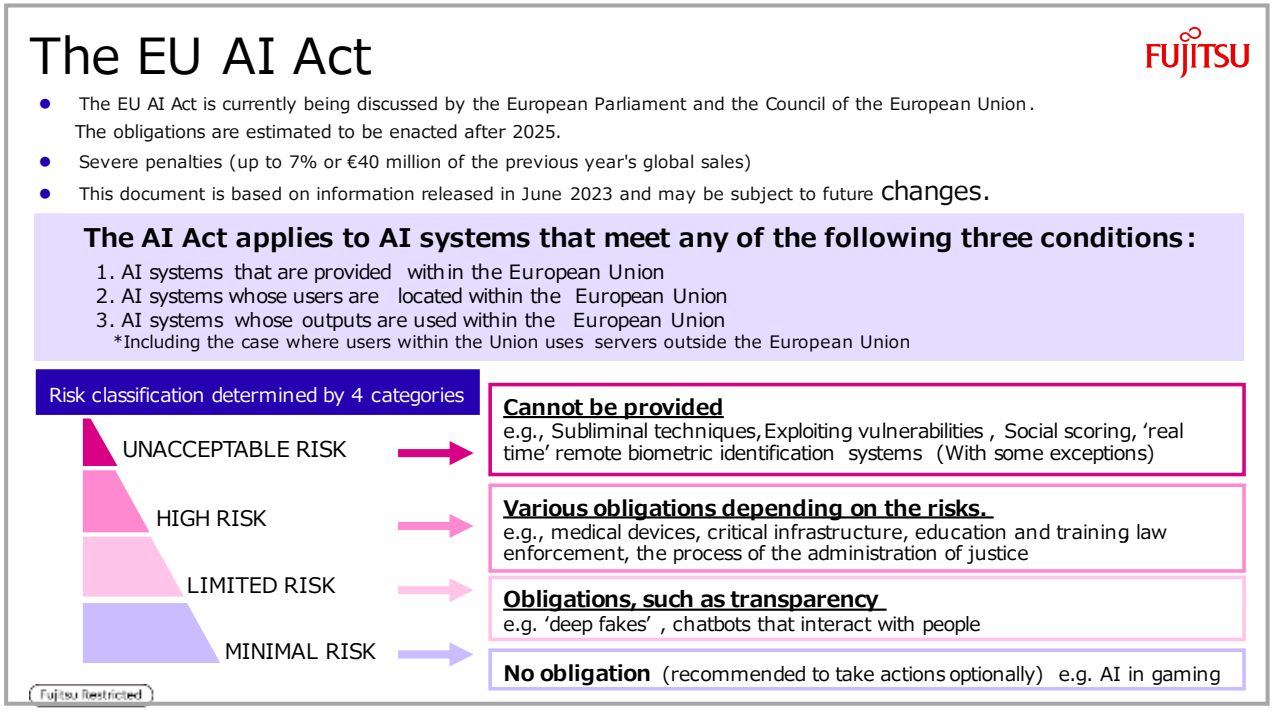
The suggestions from the committee that led to the recommendation above

At the 4th committee in December 2020 & the 5th committee in October 2021

In order to build a community with stakeholders, **it is important for AI providers to use various platforms to conduct multi-faceted public relations.** It will also be necessary to mine knowledge and interest in AI from the "education" stage as well as the enterprise activity stage. For example, if we can create a forum for students to communicate and discuss AI ethics using a platform such as a university, it will be easier for them to feel close to AI Ethics.

At the 5th committee in October 2021

In Japan, industry is actively discussing how to control AI in society. However, **Fujitsu should increase discussions with a wide range of stakeholders, including academia and consumer groups**. Based on the current situation in which the EU is working to enact AI rules (the figure below is provided by Fujitsu), we believe that discussions should be continuously deepened outside the EU.



Examples of Fujitsu's Practices

It is one of the Fujitsu's important roles to raise whole AI literacy of society to let AI providers, stakeholders from industry, academia, and the public and private sectors to practice AI Ethics. Some members of this committee additionally expressed their encouragement, saying, "Fujitsu, which is engaged in the advanced AI business, also has a great responsibility to fulfill in society, and we hope that Fujitsu will continue to firmly engage in AI Ethics." With these words in mind, the practical examples of Fujitsu's external efforts as an AI provider are summarised below in (1)-(4).

N.B., in order to enhance AI Ethics literacy across the whole society, Fujitsu aims to promote awareness among AI user companies by publishing practical considerations and examples in **"Practicing AI Ethics with a wide range of stakeholders "**. The written examples of Fujitsu's practices in this document are not overarching, because the scope of implementation and viewpoints which should be considered are different in each industry sector. Fujitsu would appreciate if this section would be referable for AI user Companies to take actions of AI Ethics practice.

(1) Collaboratively practice AI Ethics with AI user Companies

Fujitsu is committed to practice AI Ethics collaboratively and **has proactively proposed some discussions on AI Ethics to AI use companies**. In recent years, the demand to practice AI Ethics has come not only from Fujitsu but also from leading companies and industry leaders, and this demand shows the increase of interest in AI Ethics across the country. In addition, not only "Soft laws" such as principles and guidelines but also "Hard law" such as the EU "AI Act" which sets high fines has been recommended. It follows that the practice of AI Ethics in a company has become more important.

Under this circumstance, it is an effective measure for AI provider such as Fujitsu and AI user companies **to deepen their understanding of AI Ethics by exchanging information and cooperating in using AI to protect consumers and customers from threats**. Fujitsu invites businesspeople who are interested in the practice of AI ethics and who may read this document to work together.

Benefits of Collaborative Practice of AI Ethics by AI Providers and AI User Companies

① Realization of a safe and secure AI society	②able to build up AI which complies with regulations	③Gain the trust of society
Collaboration between AI provider and user companies to mitigate AI Ethical risks and troubles which may occur after delivery makes **the safe AI utilizing society**!	AI Ethics is expected to be enforced through legislation in EU. By working on AI Ethics from now and make know-how, leads **to stable AI provision under the legal regulations**!	Not many companies are able to govern AI Ethics practice, so by gaining practical experience, both AI providers and user companies **gain the trust of society as a company**!

(2) Activating AI Ethics through participating in external community

Fujitsu is committed to promote the "AI Ethics activities" throughout society by emphasizing the importance of AI Ethics and Governance not only to AI-user companies but also to the society. Fujitsu believes that it is natural to think carefully about AI Ethics and this will lead to the happiness of consumers and customers.

In the past, discussions on AI in Japan have tended to be led by leading companies that have made prominent efforts. However, if only some of the leading companies that can afford to devote resources to advanced initiatives are at the center of the discussion, this might create a literacy gap and divide between the rest of us. It will be essential for the industry to unite and increase the number of places in the community where people share their knowledge, such as through **dissemination of cutting-edge initiatives, exchange of opinions and information, and the involvement of multi-stakeholders.**

Therefore, Fujitsu actively collaborates with many AI communities in Japan, such as the Japan Deep Learning Association and the Japanese Society for Artificial Intelligence, and update Fujitsu's knowledge daily through activities such as presentations and information exchanging. **Fujitsu's efforts have become widely recognized by experts and the business community**, and now have many opportunities to hear from them.

(3) Recommendation for government agencies and industry associations

Fujitsu, as a leading company in AI research, development, and business has been actively involved in AI Ethics since its early stages. As a company providing "trustworthy AI," we are recognized and expected by government and industry associations. For example, we cooperated developing the "Governance Guidelines for Implementation of AI Principles" at the request of the Ministry of Economy, Trade and Industry. Also, by participating as members in discussion on AI principles and guidelines at other government agencies, **we are actively involved in developing official rules of AI Ethics.**

Furthermore, **Fujitsu is one of the most ambitious companies in terms of advocating for AI Ethics on a global scale**. For example, when new guidelines and policies for technology are published in Japan and overseas, Fujitsu actively expresses our opinions, such as directly responding to public consultations.

Fujitsu believes that appropriate discipline must be exercised in providing and using technology, taking into consideration the balance between regulation and autonomy. As reflected in the "Governance Guidelines for Implementation of AI Principles" from the Ministry of Economy, Trade and Industry, it is important to respect the autonomy of companies. AI technology is still developing, and it is unclear how it will progress in the future. If overly broad and strict regulations are enforced due to fear of AI, they could stifle potential benefits and future innovations, ultimately giving negative impacts on consumers and consumers. It is crucial to strike a balance between risk and innovation when implementing rules and regulations. From now on, **we will continue to closely monitor international trends and collaborate with domestic AI-using companies and stakeholders such as customers and consumers**, taking appropriate measures as needed.

(4) Industry-academia collaborations initiatives

There is also an aspect of AI ethics that requires advanced knowledge, making the insights from academia essential. At Fujitsu, we are promoting many industry-academia collaboration projects. Here, let us introduce a lecture on AI Ethics held at Keio University in 2022 an internship targeting students. This collaboration was realized thanks to Professor Kimijima, a member of the committee and a professor at the Keio

University Faculty of Law, in response to the discussion within the committee that emphasized the importance of “promoting the social penetration of AI Ethics through the platform of universities.” **In this way, one of the merits of this committee is creating synergies that go beyond internal discussions**.

A distinctive feature of the industry-academia collaboration with Keio University is t**he academic approach to AI Ethics from the perspectives of law and political science**. In addressing AI Ethics, it is essential to consider not only the aspect of technology development but also social science and humanities. Specifically, through a program like the one shown below, we delved into AI Ethics together with students who will be responsible for the future AI society. Instead of just providing information unilaterally from the Fujitsu employees' side, we were able to have interactive conversations due to the very enthusiastic and insightful recommendations from the students.

In addition to the collaborations with Keio University, Fujitsu is also working on research and practice of AI Ethics in cooperation with various educational and research institutions globally. For example, in the 2022 fiscal year, **Fujitsu delivered a lecture for high school students**, discussing considerations such as how members of society should be aware AI Ethics and conducting real-time Q&A sessions. From now on, we aim to expand the circle of collaboration and make AI Ethics more accessible to a wide range of stakeholders, including consumers.

Practical example with Academic-industrial alliance in 2022

① A lecture on AI Ethics held at Keio University and Internship by Fujitsu Research Laboratories

・In the **"Intellectual Property Law" lecture** at Keio University, we explained the current state of global AI regulation and our practices of AI ethics.
・During the Internship for students **majoring in Law and Political Science**, we asked them to evaluate the validity of our AI Ethics tools.

② A lecture for high school students

・In the lecture, Fujitsu’s AI Ethics officer casually explained “How should young generations handle AI?” or “How should we be aware of AI Ethics?” **for high school students**.

"Examples in Fujitsu’s Practices" introduced in Sections 3.1 to 3.3 of this chapter are just a part of Fujitsu's initiatives. In addition, we are actively implementing measures to improve the literacy of Fujitsu employees, such as holding regular internal study sessions and deploying e-learning for all group employees.

The illustrations in this chapter, such as the "AI Self-Check Sheet," are just examples.

Future prospects

In this white paper, we have introduced in detail the **“Recommendations”** by “the Fujitsu Group External Advisory Committee on AI Ethics” and **“examples of Fujitsu's practices.”**

As we can see from the rapid development of generative AI in recent years, technology is evolving at a dizzying pace and knows no bounds. Also, there are many situations where AI is used, and its impact extends not only to AI developers and providers of AI, but also to other stakeholders including companies using AI, customers and consumers. Therefore, **all of us living in the era of coexistence with AI need to be aware of AI Ethics and acquire appropriate literacy**. This makes it possible to realize a safe and trustworthy AI society that Fujitsu aims for.

Fujitsu has been aware of the need to practice AI Ethics to achieve **a safe and secure society and has been working on it** since its early stages. The committee activities and the various use cases based on recommendations from the committee introduced this time are part of works.

We will continue to utilize the accumulated know-how and insights, collaborate with companies using AI, educate a wide range of stakeholders including customers and consumers, and provide more reliable AI to society. **Fujitsu aims to be such a “trustworthy AI partner.”**

We hope this white paper will be helpful for you to reconsider the important of AI Ethics and Governance. **Let’s work together to deepen our efforts to realize a prosperous society where everyone can enjoy the value brought by AI.**

About Publishers

AI Ethics and Governance Office, Fujitsu Limited

About Inquires

The illustrations of the "AI Ethics Self-Check Sheet" included in this paper serve as examples only. If you are interested in AI governance support services, please feel free to contact **AI Ethics and Governance Office (contact-aiethics@cs.jp.fujitsu.com)**.

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Annotations

[*1] Generative AI: This refers to AI that **generates new content such as images, music, and text** that can be used by simply providing simple instructions such as words. With the rapid development of machine learning technology in recent years, the generation capability has reached a level that is indistinguishable from the intellectual activities performed by humans, and it has begun to permeate society. In 2022, topics such as "Midjourney" and "Stable Diffusion," which automatically generate images, and "ChatGPT,"

which generates sentences in the form of natural conversations when you type a question, became popular.

[*2] FACOM α: A computer dedicated to high-speed processing of the Lisp language, announced by Fujitsu in July 1984.

[*3] AI Ethics and Governance: Fujitsu refers to "Self-discipline the organization in terms of AI Ethics regarding the issues surrounding the use of technology, including AI" as "AI Ethics and Governance." These efforts are often referred to as "AI Governance," but we use the term "AI Ethics and Governance" in this book to emphasize that **the implementation of AI Ethics is not only the development of technical controls and quality control procedures, but also the creation of a culture that upholds AI Ethics throughout the organization.**

[*4] AI Ethics Impact Assessment: This is a support tool by Fujitsu Laboratories that can detect the ethical risks that individual AI systems pose to society.

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Published in December 2023, V1.0