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Value Creation Driven by Intangible Assets
— Forms of Value That Grow Alongside Society —

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Summary

- As globalization and digitalization continue to advance, sources of competitive advantage are shifting from tangible assets to the intangible domain. Amid these developments, the Intellectual Property Strategic Program 2025, formulated by the Intellectual Property Strategy Headquarters headed by the prime minister, positions value creation through investments in intellectual properties and intangible assets as one of its key priorities.
- The value of intangible assets develops alongside society through the processes of co-creation, cultural inheritance, and visualization.
- In this era of intangible assets, the role of companies is to create an environment in which value forms on a sustained basis. Externalizing intellectual properties and making use of digital technologies are ways of providing society with access to intangible assets and accelerating value creation, and the means by which companies pursue these will shape their future competitiveness.

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1. Introduction

Innovation refers not merely to the creation of new technologies, but to the very changes that generate new value in response to social and industrial challenges. In the past, corporate competitiveness depended heavily on tangible assets such as capital investment, production capacity, and the securing of resources. However, this value creation model centered on tangible assets is reaching its limits as globalization and digitalization continue to advance, awareness of environmental impact continues to grow, and the rapid imitation of products and technologies becomes the norm.

As a result, intangible domains—such as people, culture, nature, and knowledge—are growing in importance. A survey[1] by the World Intellectual Property Organization (WIPO[2]) reported that investments in intangible assets are expanding at a rate more than three times that of investments in tangible assets between 2008 and 2024. While intangible assets can serve as sources of competitive advantage and innovation, they are difficult to represent in corporate accounting and traditional KPIs, and this lack of visibility has itself become a management challenge.

This increase in investments in intangible assets is driven by a shift in where the center of market value lies—from products themselves to brands, experiences, and relationships. With the proliferation of social media, consumers are no longer merely recipients of information and products. They have become actors who participate in value creation through posting, evaluating, and sharing content. Furthermore, the proliferation of generative AI is significantly expanding each individual's ability to create content and influence others, accelerating the formation of a structure in which consumers participate in the market as "producers."

In light of these changes, the key to understanding modern value creation lies in identifying how the intangible domain operates and how the intangible transforms into business value. This report examines key aspects of the intangible economy—comprised of intangible assets—in terms of four core themes: culture, natural resources, co-creation, and the externalization of knowledge.

2. The Value and Management of Co-Created Assets (Matsuura)

2-1. The Well-Known Phenomenon of *Oshikatsu*（推し活）

The term "*oshikatsu*" refers to the practice of supporting one's favorite celebrity, actor, anime or game protagonist, character, architectural structure, animal, or any other favorite thing in a variety of ways. The term was nominated for the 2021 New Words and Buzzwords Awards in Japan and has since become widely used in society. It is also attracting attention as a key driver of consumer activity.

The practice of supporting "*oshi*"（推し）—one's favorite person or thing—has existed since around the 1980s, but at that time it was a relatively private matter, largely confined to live venues and events or to limited close-knit communities. The proliferation of social media was a major driver behind the evolution of *oshikatsu* into a widely recognized buzzword. The practice of *oshikatsu* developed into a culture as fans began to loosely connect with each other via social media, and it grew to encompass participants posting, demonstrating, and sharing their emotions and experiences with others.

As a result, fans have become more than merely consumers. They now play an important role in presenting the value of their favorites to society as a whole through posting and sharing photos and videos, creating derivative works based on existing characters and settings, and offering interpretations of their favorite fictional worlds. Contemporary *oshikatsu*

[1] WIPO, Measuring Investment in Intangible Assets, 2025. A research report presenting a comparative analysis of investment trends in tangible and intangible assets based on country-level data.
[2] A specialized agency of the UN responsible for intellectual property matters. It works to harmonize systems between nations, and conducts statistical and policy analyses.

has evolved through these shifts—from consumption to participation, and from support to value creation.

2-2. The Fandom Economy and Co-Created Assets

The economic sphere generated by such fan communities is referred to as the "fandom economy." This section examines its formation using the example of MYAKU-MYAKU (Figure 1), the official character of Expo 2025 Osaka, Kansai, Japan.

MYAKU-MYAKU is based on the official logo, and its design was finalized in March 2022. When it was first announced, many had adverse reactions and felt that it was too scary or creepy. However, after the name MYAKU-MYAKU was decided in July of the same year, people began to refer to "MYAKU-MYAKU-sama" on social media, and many posted derivative works and fan art. Subsequently, as the character gained more exposure, perceptions shifted, and people began to have more positive reactions, seeing the character as cute and popular.

Once the Expo opened, the increased enthusiasm became apparent in actual consumer behavior, such as long lines forming for the MYAKU-MYAKU Plush Toy Lottery. The buzz and sense of participation grew even further as people posted and shared their individual experiences on social media, such as their time waiting in line for the lottery or whether they won. This created a cycle prompting new groups of interested people who saw these posts to take action. This is a clear demonstration of the fandom economy, in which sharing experiences can inspire further participation and consumption, and the process itself amplifies value.

As this example indicates, fandoms are no longer merely marginal hobbyist groups. They now have the potential to function as actors that drive culture and the economy. Moreover, any value generated through these activities over time can be considered a sustainable co-created asset.

Figure 1: MYAKU-MYAKU, the official character of Expo 2025 Osaka, Kansai, Japan

Source: City of Osaka press release (Last accessed on December 26, 2025)
(https://www.city.osaka.lg.jp/hodoshiryo/banpakusuishin/0000662900.html)

2-3. Co-Created Assets and Management

As noted in the previous section, some of the value created in the modern era is generated outside the operational sphere of companies and government agencies, specifically through the activities of fandoms. Conventionally, the intangible assets that companies have emphasized—such as brands, characters, content, and designs—have been defined and managed by the companies themselves, based on the premise that their value could be consistently controlled. The core message and overarching concept were designed in advance, and any deviations were considered something that should be corrected. This framework was effective in providing a stable supply of highly refined value.

However, co-created assets do not necessarily fit within this premise. The value of co-created assets is not derived solely from the core message or overarching concept provided by the company. Rather, it is formed over time through participation, sharing, and dissemination by fandoms. As this value creation process extends beyond the company's sphere of control, it is more accurate to describe co-created assets as something that exists between the company and society, rather than as something that the company exclusively owns.

It should be noted, however, that co-created assets do not grow autonomously, independent of corporate activities. The content, venues, and opportunities for participation are still provided through corporate efforts. Whether the process of co-creation continues in a healthy manner depends largely on how closely companies engage with fandoms. Excessive intervention would undermine the motivation driving the creation of value, while neglect could invite confusion and friction.[3]

Under this approach, corporate management of co-created assets does not involve directly managing or controlling value, as with conventional intangible assets. Rather, it involves creating an environment in which fandom participation and diverse interpretations can naturally emerge, which in turn leads to further value creation. In other words, this refers not to a process of unilaterally determining the direction of co-creation, but rather to a form of engagement that maintains and supports the conditions necessary for co-creation to continue to occur.

This point is also evident in the example of MYAKU-MYAKU. The Japan Association for the 2025 World Exposition, responsible for managing Expo 2025 Osaka, Kansai, Japan, permits and welcomes derivative works related to MYAKU-MYAKU under certain conditions. The guidelines established by the Association permit creating works with designs similar to MYAKU-MYAKU for personal enjoyment and sharing them on social media and other platforms, while forbidding commercial use and representations that damage the reputation of MYAKU-MYAKU or the Expo.

From a legal perspective, derivative works could constitute copyright infringement and are, in principle, unlawful. However, when viewed as an aspect of a co-created asset, derivative works represent spontaneous acts of value creation by fans, and as such, they are able to boost recognition and promote content. Companies should pay close attention to co-created assets because they contain value that is difficult to identify using conventional metrics, but which should nonetheless be addressed strategically.

2-4. How to Evaluate Co-Created Assets

While co-created assets can serve as sources of corporate value in much the same way as conventional intangible assets, their nature makes certain aspects difficult to identify using conventional evaluation axes. Indicators such as revenue, brand recognition, and follower counts represent only a portion of the outcomes generated by co-created assets and do not directly reflect the full scope of their value. This is because the value of co-created assets is not fixed at a specific point, but rather formed and updated over time. Therefore, in evaluating them, it is

[3] The Yukkuri Chabangeki trademark issue is an example of confusion caused by the acquisition of trademark rights by an unrelated third party. For details on the background of this case and its institutional context, see "Impact of Technological Advancements and Social Change on Intellectual Property Rights" (2024).

necessary to focus on the process of how the value is growing, instead of on short-term or momentary outcomes.

Under this premise, the degree of maturity of co-created assets can be assessed based on multiple factors. First, whether engagement by fandoms goes beyond a transient reaction and develops into sustained participation. Second, whether the content of co-creation remains unfixed and gives rise to a diverse range of interpretations and representations. Third, whether the company's engagement avoids hindering the spontaneous activities of fandoms. While all of these elements are difficult to quantify, they are important indicators of whether co-created assets are gaining depth within their relationship with society.

In light of the above, evaluating co-created assets is not a matter of definitively determining outcomes, but could rather be considered a process of observation and understanding aimed at discerning what forms of engagement and decision-making will be desirable going forward. The value of co-created assets cannot be fully determined using short-term outcomes or clear numerical indicators. The best way to evaluate co-created assets in order to ensure their sustained use in corporate activities is to continuously monitor their development and evolution, and adjust the manner of engagement in response to those changes.

2-5. Corporate Strategies for Engaging with Co-Created Assets

While the value of co-created assets is formed through the voluntary participation and creative activities of fandoms, they cannot be sustainably maintained without the engagement of companies and rights holders. Derivative works stand as a prime example of this. As noted earlier, while derivative works may legally constitute copyright infringement, in the context of co-created assets, they also contribute to value creation by boosting recognition and promoting content. Companies are required to engage with an understanding of this dual nature.

While excessive control can provoke backlash from fandoms, paying too little attention could also invite third-party appropriation and confusion. Managing co-created assets is not a matter of promoting or restricting their use, but rather a matter of creating an environment in which participants can continue co-creating with confidence.[4]

For companies, benefiting from the value of co-created assets is not a matter of reaping short-term rewards. The basic approach to engaging with co-created assets as intangible properties is to monitor the process by which co-creation grows and continues to evolve within society, and to engage in ways that do not disrupt this cycle.

3. The Value of Intangible Cultural Heritage Elements as Intangible Assets and the Utilization Thereof (Asada)

3-1. Japan's Cultural Heritage System and the Challenges in Leveraging the System for Regional Revitalization

Chapter 2 discussed new value in the form of co-created assets and how companies should engage with them. At the same time, rather than focusing on the co-creation process itself, it is more effective to dig deeper into and further explore the sense of values that people have already established, quantify each piece of content through digitization, and identify ways for one's company to leverage such assets. As one such example, this section explains the growing movement to assess and leverage intangible cultural heritage elements as intangible assets.

The UNESCO Intangible cultural heritage system was established to protect humanity's cultural diversity and focuses on our "living heritage," such as performing arts, festivals, and traditional craftsmanship that have been

[4] In December 2025, the Japan Association for the 2025 World Exposition filed a trademark application for one of the Expo's ID elements—which had spontaneously come to be referred to online as "Co-MYAKU" and further developed through derivative works—with the aim of protecting Co-MYAKU culture from malicious third parties and preserving a culture of participation and co-creation for the future. (Reference: To Everyone Who Loves Co-MYAKU — Regarding the Co-MYAKU Trademark — | Hikichi Kouta)

passed down within local communities without a tangible form. Unlike the World Heritage system[5], it is characterized by the fact that the community associated with a particular intangible cultural heritage takes the lead in safeguarding it. In Japan, multiple heritage elements have been registered under both systems (Figure 2). In addition, Japan has introduced the Japan Heritage system, which aims to revitalize local communities through cultural properties and aspects of traditional culture by categorizing tangible and intangible cultural assets under narratives that reflect their traditions and customs (Figure 3).

[5] World Heritage sites are inscribed on the UNESCO World Heritage List upon approval by the World Heritage Committee, based on the criterion of Outstanding Universal Value, following evaluations by organizations such as ICOMOS or IUCN.

Figure 2: List of registered intangible cultural heritage elements and world heritage sites

Intangible cultural heritage	
Year of registration	Name
2008	Nogaku theater
2008	Ningyo Johruri Bunraku puppet theater
2008	Kabuki theater
2009	Gagaku
2009	Ojiya-chijimi, Echigo-jofu
2009	Oku-noto no Aenokoto
2009	Hayachine Kagura
2009	Akiu no Taue Odori
2009	Dainichido Bugaku
2009	Daimokutate
2009	Traditional Ainu dance
2010	Kumiodori
2010	Yuki-tsumugi
2011	Mibu no Hana Taue
2011	Sada Shin Noh
2012	Nachi no Dengaku
2013	Washoku, traditional dietary cultures of the Japanese
2018	Raiho-shin, ritual visits of deities in masks and costumes
2022	Furyu-odori
2024	Traditional sake-making
2025	Washi, craftsmanship of traditional Japanese hand-made paper
2025	Yama, Hoko, Yatai, float festivals
2025	Traditional techniques for the conservation and transmission of wooden architecture

World heritage			
Year of registration	Name of heritage site	Type	Location
1993	Buddhist Monuments in the Horyu-ji Area	Cultural	Nara Prefecture
1993	Himeji-jo	Cultural	Hyogo Prefecture
1993	Yakushima	Natural	Kagoshima Prefecture
1993	Shirakami-Sanchi	Natural	Aomori Prefecture, Akita Prefecture
1994	Historic Monuments of Ancient Kyoto	Cultural	Kyoto Prefecture, Shiga Prefecture
1995	Historic Villages of Shirakawa-go and Gokayama	Cultural	Gifu Prefecture, Toyama Prefecture
1996	Hiroshima Peace Memorial (Genbaku Dome)	Cultural	Hiroshima Prefecture
1996	Itsukushima Shinto Shrine	Cultural	Hiroshima Prefecture
1998	Historic Monuments of Ancient Nara	Cultural	Nara Prefecture
1999	Shrines and Temples of Nikko	Cultural	Tochigi Prefecture
2000	Gusuku Sites and Related Properties of the Kingdom of Ryukyu	Cultural	Okinawa Prefecture
2004	Sacred Sites and Pilgrimage Routes in the Kii Mountain Region	Cultural	Wakayama Prefecture, Nara Prefecture, Mie Prefecture
2005	Shiretoko	Natural	Hokkaido
2007	Iwami Ginzan Silver Mine and its Cultural Landscape	Cultural	Shimane Prefecture
2011	Hiraizumi – Temples, Gardens and Archaeological Sites Representing the Buddhist Pure Land	Cultural	Iwate Prefecture
2011	Ogasawara Islands	Natural	Tokyo
2013	Fujisan, sacred place and source of artistic inspiration	Cultural	Yamanashi Prefecture, Shizuoka Prefecture
2014	Tomioka Silk Mill and Related Sites	Cultural	Gunma Prefecture
2015	Sites of Japan's Meiji Industrial Revolution	Cultural	Eight prefectures
2016	The Architectural Work of Le Corbusier	Cultural	Tokyo
2017	Sacred Island of Okinoshima and Associated Sites in the Munakata Region	Cultural	Fukuoka Prefecture
2018	Hidden Christian Sites in the Nagasaki Region	Cultural	Nagasaki Prefecture, Kumamoto Prefecture
2019	Mozu-Furuichi Kofun Group	Cultural	Osaka Prefecture
2021	Jomon Prehistoric Sites in Northern Japan	Cultural	Hokkaido, Aomori Prefecture, Iwate Prefecture, Akita Prefecture
2021	Amami-Oshima Island, Tokunoshima Island, Northern part of Okinawa Island, and Iriomote Island	Natural	Kagoshima Prefecture, Okinawa Prefecture
2024	Sado Island Gold Mines	Cultural	Niigata Prefecture

Note: For intangible cultural heritage elements, only the year of the most recent inscription is shown.
Source: Compiled by MGSSI based on various sources

Figure 3: Types of heritage registrations

	Intangible cultural heritage	World heritage	Japan Heritage
Certification	UNESCO	UNESCO	Agency for Cultural Affairs (of Japan)
Year issued	2006	1975	2015
Scope	Culture and community	Real estate (Cultural and natural heritage)	Tangible and intangible cultural properties
Characteristics	Cultural aspects of local communities	Important heritage sites of universal value to humanity	Packaging tangible and intangible cultural properties together through a narrative
Number of registrations	23	26	105

Source: Compiled by MGSSI based on various sources

At the core of the intangible cultural heritage framework stands the principle of supporting and safeguarding aspects of indigenous and regional cultures that are at risk of decline amid globalization and social change. Accordingly, these are not inherently assets for business purposes, and overt efforts to monetize them should be avoided. Other issues, such as overtourism—in which excessive commercialization leads to an increase in the number of tourists—have also emerged. That being said, in practical terms, the people who inherit and preserve culture, as well as the funds that support their activities, are indispensable aspects of the process, and completely separating culture from economic activities may make it difficult to sustain. In particular, in recent years, there has been a severe shortage of people involved, heightening the need to secure a stable economic foundation. Therefore, it is necessary to regard these elements of intangible cultural heritage and Japan Heritage as assets to be leveraged in a manner that makes their value apparent as they are applied. Furthermore, there have been reports of cases in which the rise in popularity of certain World Heritage sites proved short-lived, with visitor appeal declining just a few years after inscription.[6] For elements of intangible cultural heritage and Japan Heritage to serve as foundations for cultural transmission and promote sustained regional revitalization, mechanisms are needed to maintain their attractiveness to visitors long after inscription.

This report positions elements of intangible cultural heritage and Japan Heritage as intangible assets, provides an explanation of their economic effects, and explores potential applications of digital technologies such as NFTs, VR, and AR as means of generating sustained economic benefits.

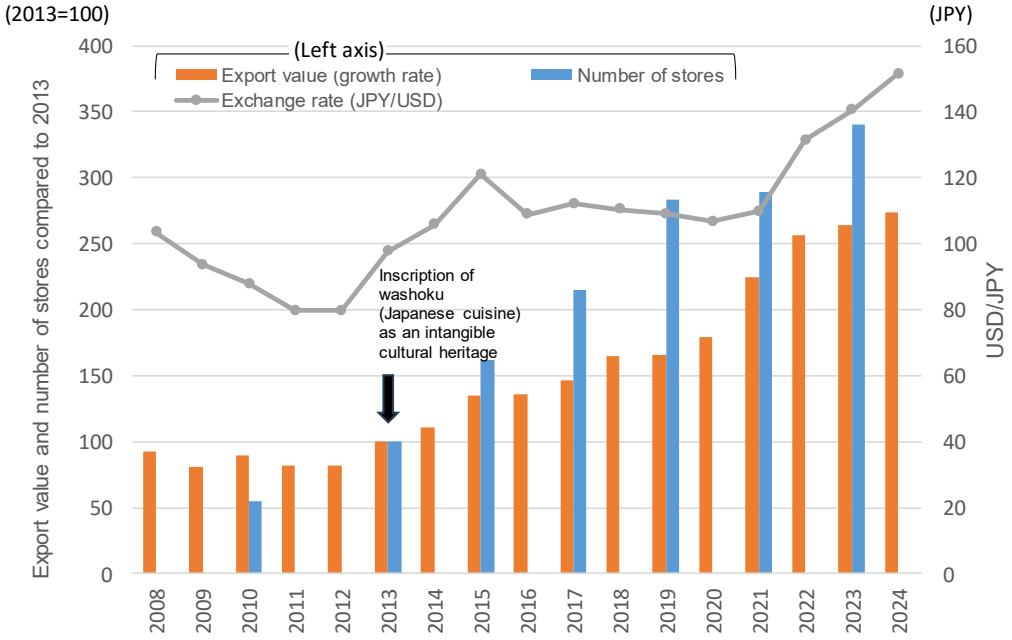
3-2. Intangible Cultural Heritage and the Economic Effects Thereof

While inscription as an element of intangible cultural heritage can successfully generate economic benefits, there are also cases in which doing so has failed to attract the expected number of visitors, underscoring the need for appropriate utilization.

A representative example of successful registration is Japan's washoku, which was inscribed in 2013. It has gained international recognition as a culture unique to Japan characterized its use of dashi broth and expressions of the four seasons, and this is thought to have contributed to an increase in the export value of agricultural, forestry, and fishery products both before and after official inscription, as well as to an increase in the number of washoku restaurants overseas (Figure 4). While the expansion of exports is likely the result of multiple factors—such as the weak yen and initiatives by the Ministry of Agriculture, Forestry and Fisheries to promote exports of Japanese food products—the increased recognition resulting from this inscription may have played a certain role in the rise in the number of washoku restaurants.

[6] Mitsuhiro Komuro, "A Study on Tourism Promotion by World Heritage Sites," Institute for Transport Policy Studies, 35th Research Report Meeting

Figure 4: Changes in export value of Japanese agricultural, forestry, and fishery products following intangible cultural heritage inscription



Note: The number of stores is shown only for the years for which data is available: 2010, 2013, 2015, 2017, 2019, 2021, and 2023.
Source: Compiled by MGSSI based on Ministry of Agriculture, Forestry and Fisheries materials

On the other hand, as recognition increased following the inscription, a negative consequence also emerged—a rise in the number of restaurants that purport to be "washoku" while serving food that does not align with its standards for authenticity. In response, the Ministry of Agriculture, Forestry and Fisheries has established a certification system for Japanese culinary skills to protect washoku culture. This suggests that, when making use of intangible cultural heritage elements, it is necessary to establish institutional frameworks to safeguard the culture while capitalizing on the benefits of increased recognition.

Another international example is Mongolia's traditional technique of making Airag in Khokhuur and its associated customs, inscribed in 2019. The efforts leading up to inscription inspired support for traditional production methods that were at risk of being lost, leading to the resumption of Airag production using traditional leather containers (Khukhuur). Following the inscription, more than 20 groups of nomadic peoples became involved in production, simultaneously transmitting cultural traditions and reconstructing livelihoods.[7] This suggests that intangible cultural heritage elements are not merely records of traditional culture. They also contribute to the revitalization of local community identity and the formation of a foundation for sustainable economic activity.

Furthermore, inscribing an element as intangible cultural heritage and constructing related facilities does not necessarily guarantee success. The Cité Internationale de la Gastronomie, which opened in Lyon to showcase France's dietary culture—inscribed as an intangible cultural heritage element—was a large-scale facility housed in a historic building. However, admission fees were high, and the visitor experience was largely limited to viewing exhibits and dining.[8] It is believed that one factor behind its closure in less than a year was that, due to the insufficiently designed experiential elements and narrative, visitors found it difficult to understand and share in the cultural significance, making it hard to justify the high admission fee for repeat visits.[9] The facility reopened in 2022, redesigned to focus on traditional French cuisine with new exhibits and a greater emphasis on participatory and

[7] International Development Center of Japan, Study on "Overseas UNESCO Intangible Cultural Heritage (Alcoholic Beverages)"
[8] https://www.saveur.com/story/travel/food-museum-in-france/
[9] https://lyon-saveurs.fr/lyon-coup-de-tonnerre-la-cite-de-la-gastronomie-ferme-ses-portes/

hands-on experiences.[10] It has also been reported that Belgian Beer World, which opened in Brussels following the inscription of Belgian beer culture as an intangible cultural heritage element, has struggled to operate since opening in 2023.[11] However, as exports of Belgian beer increased significantly both before and after inscription,[7] it is clear that the beer culture itself is not lacking in popularity or recognition. These examples demonstrate that simply establishing museums for exhibits and dining makes it difficult to fully convey the appeal and value of intangible cultural heritage elements, and it does not motivate visitation or consumption. It is therefore important to develop approaches that enable visitors to actively experience the appeal and value for themselves, encouraging repeat visits.

3-3. Further Utilization of Intangible Cultural Heritage Elements

An aspect of culture cherished by the people of a country can also serve as a source of profound experiential value for visitors from other countries. An overseas public opinion survey[12] on Japan conducted by the Ministry of Foreign Affairs also shows a high level of interest in Japanese cuisine, lifestyle, mindset, and architecture (Figure 5). It is important to link different cultural elements together—such as elements of intangible cultural heritage related to Japanese cuisine and lifestyle, and World Heritage sites related to architecture—and the utilization of Japan Heritage is expected to play a role in this. Japan Heritage packages together tangible and intangible cultural properties under narratives that reflect their historical context as well as traditions and customs rooted in the local region. Intangible cultural heritage elements and World Heritage sites can also be incorporated into this framework (Figure 6). Connecting the dispersed World Heritage sites and elements of intangible cultural heritage together through a shared narrative makes it possible to deepen understanding of the heritages' value and of Japanese culture, enhancing the experiential value. This requires designing routes that enable visitors to easily understand the narrative (such as multilingual explanations, maps, recommended sequences, and explanations of the connections between related resources).

In addition, the primary reasons that tourists make purchases are for souvenirs[13] to preserve memories of their trip or to have proof of their visit, or for gifts to present to others. Items such as photographs, postcards, and paintings of the local landscape are particularly popular, and these souvenirs function as aids in recalling memories and are highly valued for their authenticity—the fact that they are genuine.[14] Furthermore, surveys on what tourists look for in souvenirs conducted within Japan have shown that they place importance on memories and on experiences that help preserve those memories, and that they particularly value regional authenticity within the broader concept of authenticity.[15] These studies suggest that, in tourism, not only are the experiences themselves important, but the ability to retain memories of those experiences and share them with others in an authentic manner is also highly valued. Accordingly, when making use of intangible cultural heritage elements, it is of utmost importance to preserve the memory of the experience and provide verification of its authenticity.

In addition, as many elements of intangible cultural heritage are limited to specific locations or times of the year, tourists may not have the opportunity to come into contact with them. It is therefore important to consider ways to compensate for these lost opportunities. Digital technologies are considered an effective means of addressing these two issues.

[10] https://traveltrade.lyon-france.com/en/discover-lyon/activities-and-leisure/culinary-visits/the-international-city-of-gastronomy
[11] https://www.thebulletin.be/disappointing-start-belgian-beer-world
[12] https://www.mofa.go.jp/mofaj/gaiko/culture/pr/yoron.html
[13] While "omiyage" is often translated as "souvenir," in English-speaking contexts the term "souvenir" strongly connotes a personal memento or keepsake, and unlike the Japanese term "omiyage," it is not used when an item is intended as a gift for others. Therefore, this translation makes use of both terms: "souvenir" and "gift."
[14] Wilkins Hugh, "Souvenirs: What and Why We Buy", Journal of Travel Research. 50(3), pp.239-247(2011)
[15] Ryotaro Suzuki, Tomomi Hanai, Kim Jinman, "What Do Tourists Require for Omiyage? —Clarification of Basic Elements by Web Survey— "The Tourism Studies: Journal of Japan Institute of Tourism Research, Vol.35, No.1, pp.65-78 (2023).

Figure 5: Summary of overseas public opinion survey results on Japan

Q: Which of the following topics related to Japan interest you?

	Indonesia	Cambodia	Singapore	Thailand	Philippines	Brunei	Vietnam	Malaysia
Ikebana, tea ceremony, calligraphy	43%	26%	19%	33%	41%	16%	50%	30%
Traditional performing arts, traditional music	56%	40%	19%	35%	45%	43%	41%	39%
Literature, haiku	37%	34%	17%	30%	50%	34%	25%	27%
Sumo, martial arts	52%	36%	22%	33%	37%	26%	41%	33%
Bonsai	39%	33%	17%	24%	38%	41%	35%	40%
Anime, manga, games, cosplay	78%	47%	48%	64%	69%	60%	62%	55%
Pop music (J-pop)	41%	27%	26%	25%	31%	22%	19%	31%
Fashion (including kimono)	52%	34%	25%	47%	38%	51%	39%	46%
Films, television dramas	59%	36%	45%	39%	50%	49%	45%	52%
Japanese cuisine	82%	63%	83%	83%	87%	69%	82%	83%
Architecture	45%	52%	23%	44%	63%	57%	51%	45%
Lifestyle, mindset	62%	49%	52%	57%	76%	82%	64%	63%

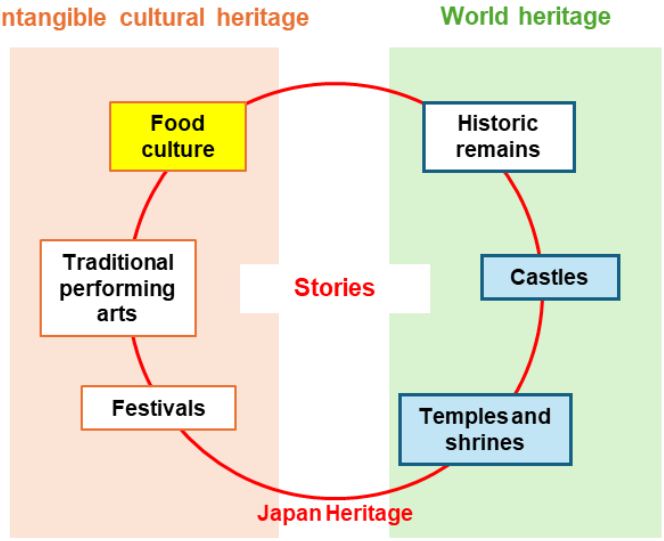
	Laos	India	Australia	UK	France	Germany	Italy	Hungary
Ikebana, tea ceremony, calligraphy	33%	52%	29%	32%	34%	24%	37%	30%
Traditional performing arts, traditional music	37%	49%	28%	31%	20%	22%	32%	23%
Literature, haiku	15%	42%	24%	27%	22%	19%	31%	24%
Sumo, martial arts	32%	54%	28%	28%	25%	28%	21%	20%
Bonsai	15%	39%	46%	32%	32%	34%	38%	41%
Anime, manga, games, cosplay	37%	63%	29%	37%	41%	29%	36%	23%
Pop music (J-pop)	24%	34%	16%	18%	13%	14%	8%	11%
Fashion (including kimono)	29%	47%	29%	37%	26%	27%	22%	24%
Films, television dramas	20%	54%	31%	31%	28%	22%	26%	26%
Japanese cuisine	57%	64%	81%	73%	79%	74%	59%	69%
Architecture	16%	47%	43%	43%	30%	44%	41%	43%
Lifestyle, mindset	50%	58%	69%	65%	57%	73%	65%	72%

	Egypt	Jordan	Saudi Arabia	Tunisia	United Arab Emirates	Iran	Turkey	Average
Ikebana, tea ceremony, calligraphy	44%	39%	57%	52%	51%	69%	62%	28.3%
Traditional performing arts, traditional music	44%	25%	42%	46%	42%	53%	35%	26.5%
Literature, haiku	41%	39%	55%	45%	45%	49%	34%	24.0%
Sumo, martial arts	51%	45%	62%	73%	56%	68%	71%	29.5%
Bonsai	31%	31%	30%	36%	26%	71%	37%	25.2%
Anime, manga, games, cosplay	53%	50%	63%	64%	63%	75%	52%	37.5%
Pop music (J-pop)	35%	23%	29%	35%	28%	30%	23%	17.6%
Fashion (including kimono)	45%	42%	57%	61%	54%	51%	41%	28.9%
Films, television dramas	50%	45%	58%	57%	57%	67%	54%	31.4%
Japanese cuisine	56%	45%	56%	50%	58%	51%	49%	48.6%
Architecture	58%	63%	80%	85%	78%	82%	75%	37.8%
Lifestyle, mindset	62%	67%	77%	82%	77%	79%	70%	47.9%

Note: This applies to respondents who selected "Culture" in response to a question about the areas in which they would like to learn more about Japan (with multiple answers allowed). Data for ASEAN, India, and Australia is from the FY2023 survey, and data for all other regions is from the FY2024 survey. Yellow indicates the highest figure for each country, and blue indicates the second-highest figure.

Source: https://www.mofa.go.jp/mofaj/gaiko/culture/pr/yoron.html Compiled by MGSSI (Last accessed on December 5, 2025)

Figure 6:Relationship between intangible cultural heritage elements, World Heritage, and Japan Heritage



Source: Compiled by MGSSI based on various sources

First, it is necessary to consider the preservation of memories of experiences and the verification of authenticity. As intangible experiences remain in memory only, items such as photographs, postcards, and landscape paintings—as noted earlier—have traditionally served as proof of such experiences. NFTs, which leverage blockchain technology to enable the verification of authenticity, are an effective means of replacing and further evolving this function in the digital domain. For instance, if experiences can be represented in a visual format through the issuance of commemorative coins after participation—as in ECHIZEN Quest (Figure 7)—it will become possible to record and verify the specific narratives that tourists have experienced. Furthermore, if such items can be acquired in a standardized format used everywhere in Japan, their collectible nature will likely serve as an incentive for visitors to tour nearby attractions.

Figure 7: Overview of ECHIZEN Quest

NFT coins designed to support traditional crafts (support coins) are charged to your wallet at the start of the tour.

Support coins can be used to send any amount to each business operator in the form of a tip during traditional crafts workshops.
*The monetary amount of the coins sent will be used to support the operations of the relevant business operator.

Receive a commemorative coin after the traditional crafts workshop!

A coin related to Murasaki Shikibu, who has ties to Echizen City, will be awarded.

Source: https://www.jtbcorp.jp/jp/newsroom/2025/10/07_jtb_nft_dx.html (Last accessed on January 14, 2026)

Second, it is necessary to consider how to compensate for lost opportunities. While Japanese cuisine and traditional performing arts can be experienced throughout the year, festivals and similar events are held only during specific periods, meaning that tourists often miss the opportunity to experience them. To compensate for this, it is important to leverage technologies such as VR and AR. For instance, Aomori City has established a system that allows visitors to experience the Nebuta Festival in VR (Figure 8), and making use of these technologies makes it possible to offer the experience at any time during the year. Moreover, these technologies are effective for both pre-trip learning and post-trip recollection, and are expected to contribute to enhancing the value of the experience. In the future, the realization of fully immersive VR will drastically increase the sense of immersion, further improving the quality of the experience.

Figure 8: Aomori Nebuta Festival in VR

Source: https://www.youtube.com/watch?v=AXfP97hmGbQ(Last accessed on January 14, 2026)

When examining the aforementioned issues, it is thought that effectively leveraging internationally recognized World Heritage sites and elements of intangible cultural heritage can serve as a compelling entry point. Therefore, during the initial stages, targeting regions that contain intangible cultural heritage elements along with World Heritage and Japan Heritage sites will make it easier to connect with narratives that align with the interests of individuals, enabling greater impact (Figure 9).

Figure 9: Distribution of various types of heritage in Japan

Note: Items not tied to a specific region, such as Japanese cuisine, are excluded from this list of intangible cultural heritage elements.
Source: Compiled by MGSSI based on various sources

3-4. Future Prospects

The increase in recognition resulting from the inscription of an element of intangible cultural heritage has the potential to revitalize local economic activity. To date, elements of intangible cultural heritage and Japan Heritage have faced the challenge of being more difficult to promote compared to more tangible World Heritage sites. However, advances in new technologies such as NFTs and VR are gradually opening up new avenues for their utilization. Going forward, integrating intangible cultural heritage elements along with World Heritage and Japan Heritage sites through narratives and leveraging them to promote tourism and regional development is expected to further revitalize local communities and aid in preserving their cultures.

In addition, the use of AI agents is also seen as a promising means of leveraging intangible assets. If they can generate narratives and propose travel itineraries based on an individual's interests and preferences, they will likely not only enhance the quality of experiences through a deeper understanding of the culture, but also promote wider visitation by guiding people to nearby areas. Furthermore, by making suggestions that avoid crowded locations and peak periods, AI can help mitigate the concentration of visitors at certain destinations, thereby contributing to efforts to address overtourism.

Currently, efforts are underway to inscribe new elements such as kagura music, hot spring culture, and calligraphy as examples of Japan's intangible cultural heritage, as well as to expand the scope of existing inscriptions, and it is hoped that advanced utilization of intangible assets by combining these new inscriptions with technology will aid in preserving and further developing Japanese culture.

4. Co-creation with Consumers with Regard to Biodiversity as an Intangible Asset (Nozaki)

4-1. What Are the Challenges?

Chapter 4 discusses biodiversity, a component of natural capital, as an intangible asset. According to a report[16] released by the World Economic Forum (WEF) in 2020, more than half of the global GDP is reliant on nature, and transitioning to a nature-positive[17] economy has the potential to generate USD 10 trillion in business value annually. As the WEF's recommendation suggests, given that many businesses are reliant on nature, it may seem commonsensical to promote a transition toward nature-positive business practices. However, in reality, some consider biodiversity initiatives to be in conflict with business opportunities.[18] On the other hand, according to a Cabinet Office public opinion survey[19] of general consumers, a high proportion of respondents—70.8%—expressed the opinion that environmental conservation efforts either contribute to economic development or do not hinder it. As it is expected that the respondents likely differ in their positions and levels of knowledge, the two survey results cannot be directly compared. However, a gap can be inferred to exist between companies' perception that such efforts are not profitable and consumer perceptions. Companies that see this gap as a business opportunity and seek to promote a transition toward nature-positive business practices will need to consider how they should engage in co-creation with consumers.

From a technical standpoint, biodiversity is inherently difficult to quantify. This is because it encompasses everything from the diversity of ecosystems, such as forests and grasslands, through to their functions, and even to elements invisible to the naked eye, such as genes (Figure 10). It is therefore not realistic to attempt to identify all living organisms involved in a company's supply chain or business operations. At the same time, consumers also find it difficult to understand the concept of biodiversity due to its lack of concreteness.

The challenge then lies in how to translate the value of conserving and restoring biodiversity—a concept that is difficult to comprehend—into value for consumers and to create conditions for co-creation.

Figure 10: Overview of biodiversity and related challenges

	Composition	Structure	Function
Ecosystem	Types and distribution of ecosystems Ex. Forests, grasslands, wetlands, oceans, deserts, etc.	Arrangement and relationships of biotic and abiotic components within ecosystems Ex. Habitat size, food chains, nutrient cycles, etc.	Roles and services provided by ecosystems Ex. Climate regulation, water supply, soil formation, production of biological resources, etc.
Species	Classification of organisms Ex. Animals, plants, fungi, microorganisms, etc.	Morphology and characteristics of a species Ex. Body color, reproductive capacity, adaptability, etc.	Ecological roles of species and interactions between them Ex. Pollination, predator-prey relationships, decomposers, etc.
Genes	DNA base sequences Ex. Types, number, order, and mutations of genes, etc.	Genetic structures and lineage Ex. Genetic differentiation by region, etc.	Adaptive capacity Ex. Tolerance to drought, salinity, and other hazards

Challenges (1) Developing technologies to visualize the complexity of biodiversity
(2) Transforming the value of biodiversity into value for consumers

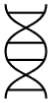
Source: Compiled by MGSSI based on various sources

[16] World Economic Forum
[17] The term "nature-positive" refers to halting the loss of and restoring natural environments negatively affected by economic activities and other factors. Ministry of the Environment, Nature-Positive | ecojin: Ministry of the Environment
[18] "Questionnaire survey on corporate biodiversity actions in Japan <FY2024 Survey>" In a survey conducted by Keidanren in 2024 on the activities of the Japan Business and Biodiversity Partnership, 54 out of 334 companies cited "Not contributing to profit" as a challenge in their biodiversity initiatives, a higher proportion than those citing "Indifference by the management" (12 companies), "No request from investors" (22 companies), or "No request from customers" (35 companies).
[19] *Overview of the Public Opinion Survey on Environmental Education* [in Japanese] (September 2025)

4-2. Advancements in Visualization Technologies

Efforts to visualize biodiversity are making gradual progress. Figure 11 presents the major technologies for visualizing biodiversity. The application of advanced technologies such as biotechnology, AI, and robotics in this field is making it possible to visualize biodiversity more efficiently.

Figure 11: Major technologies for visualizing biodiversity

Technology name	Overview	TRL*
Environmental DNA (eDNA) 	• Environmental DNA (eDNA) refers to DNA fragments of biological origin (such as scales) found in rivers, oceans, and soil. • Analyzing DNA present in the environment provides information on the distribution of organisms.	5～7
Soil met agenomics 	• DNA analysis of microbial communities inhabiting specific environments • Soil microorganisms are involved in the nitrogen, phosphorus, potassium (NPK) cycle, making them important in the agricultural sector.	5～7
Bioacoustics 	• Analyzing sounds captured by microphones placed in the environment over long periods to identify species-specific vocalizations of animals • Advances in AI technology enable rapid analysis of acoustic data.	5～7
Remote sensing 	• Enables observation of environmental changes using satellites, drones, and other technologies. • Enables low-cost monitoring of changes in land use patterns, etc.	7～9

*TRL stands for Technology Readiness Level; the closer the level is to 9, the more the technology has been demonstrated in a real-world environment.

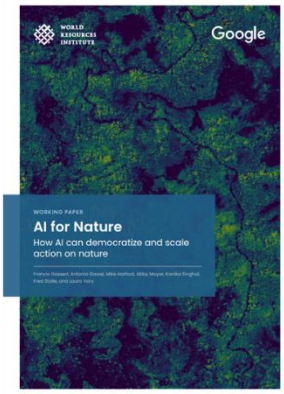
Source: Compiled by MGSSI based on various sources

In 2025, Google published a report titled "AI for Nature"[20] in collaboration with the World Resources Institute (WRI). The report discusses how AI can contribute to monitoring nature and related efforts amid the rapid decline of biodiversity (Figure 12). For instance, bioacoustics is the process of recording sounds emitted by various organisms, such as birds and amphibians, to identify their species. It used to be necessary to analyze audio data with multiple overlapping sounds, but the use of AI makes it possible to identify species more efficiently.[21] In 2024, Microsoft announced SPARROW[22], a satellite-based biodiversity monitoring service. Solar-powered cameras and microphones collect biodiversity data, which is analyzed within the satellite using on-board AI and then transmitted to the cloud via low-Earth orbit satellites. This provides researchers seeking to monitor biodiversity with access to valuable data even when they are in remote locations.

[20] AI for Nature. How AI can democratize and scale action on nature - Google Sustainability
[21] https://deepmind.google/blog/mapping-modeling-and-understanding-nature-with-ai/
[22] "SPARROW" announcement: An Innovative AI Tool for Measuring and Protecting Biodiversity in the World's Most Remote Areas – Japan News Center

Figure 12: Application of AI by Google (left) and Microsoft (right)

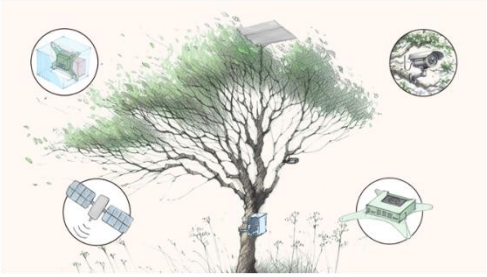
AI for Nature (2025)



- AI-driven analysis of data on forests, water resources, and other factors, enabling real-time monitoring
- The use of large language models promotes citizen science, making it easier for non-experts to access knowledge.
- AI promotes the understanding of complex systems through the simultaneous processing of various types of data.

Sparrow (2024)

- Edge AI for biodiversity monitoring
- Equipped with solar panels, and analyzes images, audio, and other data on-site using AI



Source:
（left）https://sustainability.google/reports/google-2025-AI-for-Nature/ (Last accessed on January 21, 2026)
（right）https://blogs.microsoft.com/on-the-issues/2024/12/18/announcing-sparrow-a-breakthrough-ai-tool-to-measure-and-protect-earths-biodiversity-in-the-most-remote-places/ (Last accessed on January 21, 2026)

The US-based nonprofit organization XPRIZE held a competition with a USD 10 million prize from 2019 to 2024 to evaluate technologies for assessing biodiversity in tropical rainforests.[23] The technologies evaluated included autonomous drones, bioacoustics, LiDAR, multispectral and hyperspectral sensors, environmental DNA, RGB cameras, and capture traps. Limelight Rainforest (US), the winning team, demonstrated that biodiversity data can be efficiently collected using technologies such as drones and machine learning.

As AI rapidly advances, it is increasingly recognized as an important tool not only for visualizing biodiversity but also for understanding its complexity. In addition, the roles of AI extend beyond mere visualization to include data collection by the general public, who are not experts.

4-3. Examples of Co-creation with Consumers

In addition to large corporations, the general public—who are not experts—also play a significant role in visualizing biodiversity. Citizen science refers to the collection of data and other information by members of the public in collaboration with experts,[24] and citizen science platforms are emerging that enable individuals to gather photos and audio data using their smartphones and similar devices. One such example is the platform iNaturalist.[25] Participants can communicate with one another by uploading photographs of organisms and other information. Furthermore, if the data is recognized as research-grade, it is integrated into data infrastructures such as the Global Biodiversity Information Facility (GBIF) and utilized in research and environmental conservation efforts. In Japan, Biome Inc. develops and operates the wildlife collection app "Biome."[26] When users take photos of plants, insects, and other organisms using the app, AI identifies the species and makes a record along with location data. Various entertainment-oriented functions, such as Ikimono Quest, which enables users to conduct biological surveys, and Ikimono SNS, a community for nature enthusiasts, are key features of the app. This approach is building a biodiversity database by engaging the public in a gamified format.

One company co-creating environmental value in the form of biodiversity with consumers is Sea Vegetable (Japan)[27], which is engaged in seaweed aquaculture. Seaweed production in Japan is on the decline. This is due to the progression of a type of marine desertification known as rocky-shore denudation. This occurs when naturally

[23] XPRIZE Rainforest Competition Page | XPRIZE Foundation
[24] SciStarter - SciStarter
[25] https://www.inaturalist.org/
[26] Biome: A living organism collection app – Biome Inc.
[27] https://seaveges.com/

growing seaweed in an area is fully consumed by sea urchins, fish, and other organisms, and it is believed to result from a combination of factors. The company has established a number of seaweed aquaculture methods, even for species for which no method had previously been established.

Engaging in seaweed aquaculture also contributes to the conservation and restoration of marine biodiversity. According to a report[28] released by the general incorporated association good sea (Japan), sea-surface aquaculture has resulted in up to a 36-fold increase in fish populations compared to areas where such aquaculture is not practiced. The report also suggests that positive messaging regarding the health and environmental benefits of seaweed will be able to enhance consumers' willingness to consume it.

When Sea Vegetable launched a crowdfunding[29] campaign to open its first restaurant in Yaesu, Tokyo, it raised 15 times its target amount shortly after the campaign began, indicating that the company is steadily expanding its fan base through co-creation with consumers (Figure 13). The company also runs a co-creation project[30] in which it collaborates with consumers and interested companies to develop business ideas. Companies in a wide range of sectors are participating, including financial institutions, real estate developers, retailers, and major media outlets. The company has launched a new initiative to explore new business models that transcend corporate and industry boundaries in addressing the major challenges of biodiversity.

Figure 13: Crowdfunding by Sea Vegetable

Source: https://www.makuake.com/project/seavege-stand/ (Last accessed on January 21, 2026)

4-4. Summary and Outlook

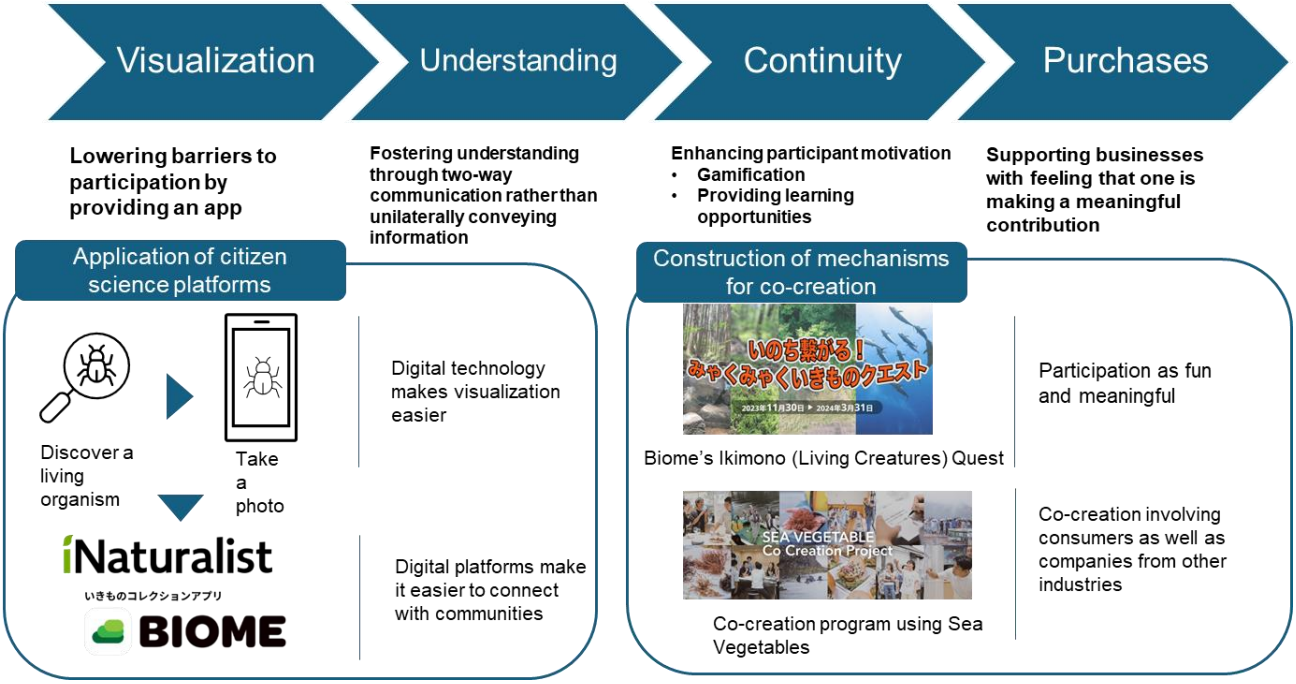
As noted earlier, while biodiversity is difficult to quantify, advancements in technologies such as AI and the expansion of citizen science platforms have enabled better visualization. As described in Google and WRI's "AI for Nature" report, the advancement of AI itself has been remarkable, and its capabilities have further improved since the report was published.[31] In addition, as the first groups of students who have had access to large language models throughout their entire university education begin graduating from 2026 onward, the number of students

[28] PRINT_GOOD SEA Future Report.pdf - Google Drive
[29] Starred Restaurants Around the World Take Notice! Sea Vegetable, the Seaweed Startup, Opens Its First Permanent Store [in Japanese] | Makuake – a crowdfunding service supporting innovative products and experiences
[30] Sea Vegetable Co-creation Project | Sea Vegetable LLC – SEA VEGETABLE COMPANY
[31] Refers to models such as Gemini 2.5 Pro and GPT-5.

and researchers with deep expertise in AI is expected to increase, and research in this field has the potential for dramatic advancements.

While some argue that such efforts do not contribute to business profits, it is important to note that leveraging citizen science platforms such as iNaturalist and Biome and incorporating entertaining aspects that are fun and engaging will make it easier for non-experts to participate in environmental conservation activities. This would also help deepen understanding of corporate-led biodiversity conservation initiatives. Citizens who participate in these activities are also consumers, giving companies the opportunity to increase their fanbase (Figure 14). In addition, initiatives that seek to connect companies, share challenges, and build new business models—such as those of Sea Vegetable—are emerging, and it will be interesting to see how these developments unfold.

Figure 14: Conversion into consumer value



Source: Compiled by MGSSI based on various sources
Connecting Life! Myaku-Myaku-Ikimono (Living Creatures) Quest – Biome Inc. (Last accessed on January 22, 2026)
Sea Vegetable Co-creation Project | Sea Vegetable LLC – SEA VEGETABLE COMPANY (Last accessed on January 22, 2026)

To address the major social issue of biodiversity, it will be important going forward to appropriately assess the degree of separation between companies (i.e., producers) and consumers, while collaborating with firms in other industries to build new business models.

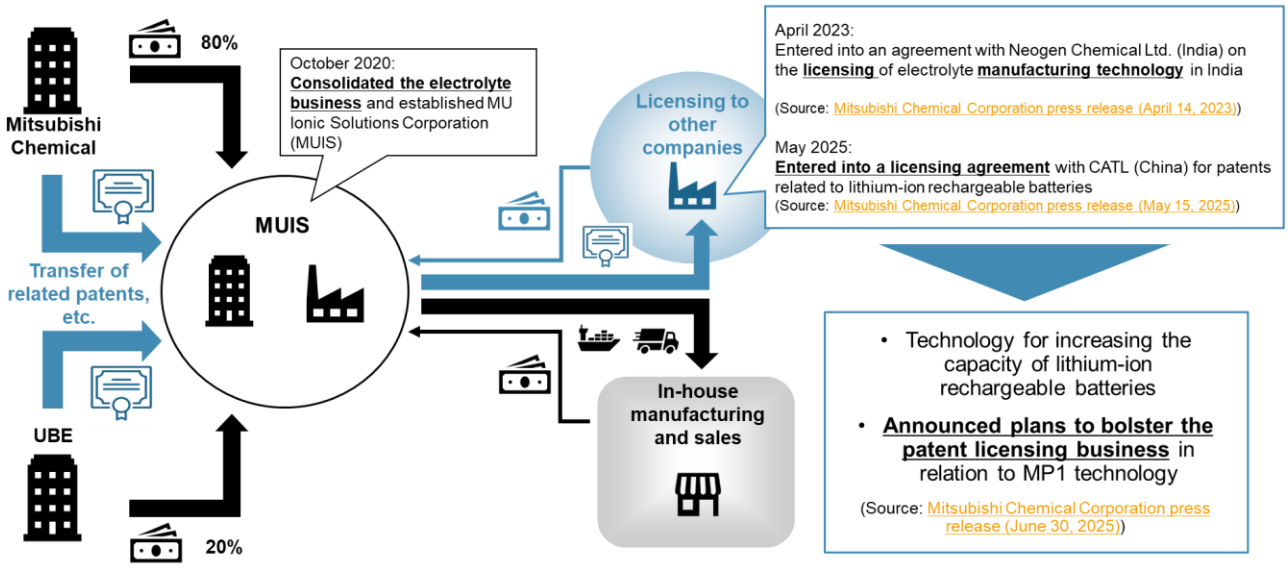
5. The Impact of Intellectual Property Externalization Strategies (Ishiguro)

In recent years, the process of externalizing intellectual properties (IP)—in which companies collaborate with external organizations and investors to make strategic use of their intellectual properties—has been attracting attention. This is a well-established strategy for companies to leverage intellectual properties, not only as a means of protecting proprietary technologies and business operations from imitation, but also as a management resource for generating new business and financing. Furthermore, this approach is expanding beyond intellectual property rights, such as patents, to encompass a broader range of intangible assets, such as brands, data, and expertise, and various initiatives, aimed at creating value from and circulating the intangible assets held by companies are beginning to attract attention.

Patents have conventionally been regarded as defensive assets used to protect a company's competitive

advantage. However, as global competition intensifies and the pace of technological innovation accelerates, an increasing number of companies can be seen actively sharing and collaborating with external partners on intellectual properties to promote open innovation. In the pharmaceutical industry, US-based Bristol-Myers Squibb (BMS) carved out patents related to treatments for autoimmune diseases and established a new company through a USD 300 million financing round led by an investment fund (US-based Bain Capital). BMS will retain a portion of the new company's shares while earning ongoing revenue through a royalty-based structure. In the chemical industry in Japan, MU Ionic Solutions (Japan)—a joint venture between Mitsubishi Chemical (Japan) and UBE (Japan)—is accelerating its global expansion by licensing its proprietary MP1 Technology, which improves battery performance, to battery manufacturers both in Japan and overseas (Figure 15).

Figure 15: Acceleration of global expansion through patent utilization



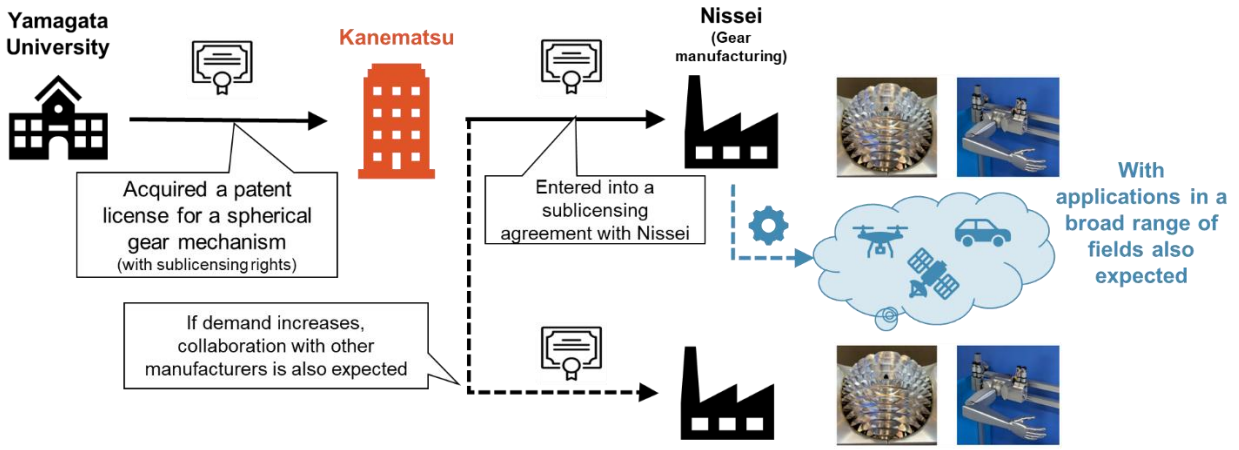
Source: afif / stock.adobe.com、Source: Compiled by MGSSI based on Mitsubishi Chemical press releases

Utilization through the externalization of patents is expanding beyond the manufacturing sector. On July 22, 2025, the US-based major music entertainment company Universal Music Group (UMG) announced a partnership with Liquidax Capital (US), a firm specializing in patent development, management, and licensing. The two companies plan to expand their portfolio of music-related AI technology patents and license them globally through Music IP Holdings (US), a new company established under this partnership.

Furthermore, new cases are emerging in which global investment and trading companies are taking the lead in promoting the externalization of intellectual properties held by other organizations. Kanematsu (Japan), for instance, obtained a patent license for a spherical gear mechanism invented by Yamagata University and, in 2025, concluded a sublicense agreement with gear manufacturer Nissei (Japan) (Figure 16). The mechanism is a highly versatile gear that allows unlimited rotation along the X, Y, and Z axes, with expected applications in a wide range of fields, including robotic joints and medical devices. Going forward, possibilities include collaboration with startups, fundraising through intellectual property funds, and joint research projects with universities and research institutions.

This trend toward the externalization of intellectual properties has the potential to drive the creation of new businesses, revitalize industries, and contribute to addressing social issues in healthcare, the environment, and education. By positioning patents as a management resource and leveraging them in an integrated manner alongside intangible assets such as data, brands, and algorithms, companies are expected to be able to simultaneously achieve corporate growth and create social value.

Figure 16: Emergence of trading companies taking the lead in intellectual property transactions



Source: Compiled by MGSSI based on Kanematsu press releases and various other sources

A trend can also be seen toward the new development of intellectual properties that make use of NFTs. NFTs use blockchain technology to verify the uniqueness and ownership of digital assets and are widely used in fields such as art and gaming. More recently, however, the wave of NFTs has been extending into the world of IPs, particularly in digital content.

For instance, in August 2025, Sony (Japan) and Mercari (Japan) announced a new initiative utilizing NFTs for IP management and distribution. NFTs such as art and trading cards began to be sold on the Mercari platform using Soneium, a blockchain technology developed by Sony Block Solutions Labs (Singapore), a subsidiary of Sony. The two companies aim to collaborate on promoting the development and provision of NFTs and digital content-related services relating to various IPs, as well as on building a new ecosystem. This is expected to result in the formation of a new digital economy, combining Mercari's base of 23 million monthly users with Sony's technology and IP assets. Converting digital content and other intangible assets into NFTs enables highly transparent transactions and rights management. Utilizing NFTs makes it possible to automate processes ranging from IP licensing and sales to secondary market transactions through smart contracts, significantly reducing the burden of complex contractual procedures and issues related to rights ownership. In addition, Calbee (Japan) announced Karuretto, an IP management platform leveraging blockchain technology, on April 17, 2025. The platform aims to simplify credit management and licensing operations for external creators, and to streamline IP operations. Karuretto is built on decentralized identifiers (DID) and blockchain technology, enabling the recording and sharing of IP issuance, ownership, transfer, and usage history in the form of digital certificates to allow creators to quickly and easily license their designs.

NFTs are increasingly being utilized in fields such as publishing, music, and tourism (Figure 17). Shueisha (Japan) is converting popular manga works into NFTs and recording ownership logs using blockchain technology to streamline copyright management. In the music industry, the distribution of NFT-based audio enables the automatic allocation of royalties during secondary market transactions. In addition, as noted in Chapter 3, in the tourism sector, NFT stamp collection events have been incorporated into regional touring services and are being used to create travel mementos and promote understanding of local areas. NFTs also play a role in visualizing the value of IPs for the international community and enhancing their liquidity as an asset. This has given rise to a variety of innovations, including new forms of financing using IP as collateral, promoting investments in startups, and supporting the monetization of individual creators' works.

Figure 17: Examples of NFT usage

Company (Country)	Details	Industry or sector
Sumitomo Corporation Group (Japan)	Incorporated an NFT stamp collection activity into a sightseeing service making use of EV taxis	Tourism and transportation
AEON (Japan)	Converted T-shirts jointly created with other companies into NFTs and sold them as digital items wearable in the XANA metaverse	Fashion and retail
Sapporo Breweries (Japan)	Distributed NFT membership cards and entry tickets as part of a campaign for beer fans to improve engagement with fans	Beverages and food
Sogo & Seibu (Japan)	Opened its own NFT marketplace and converted artwork for young people into NFTs	Retail and art
Shueisha (Japan)	Converted manga works into NFTs and managed logs and ownership information via blockchain	Publishing and copyrights
Fanplus (Japan)	Converted audio tracks into NFTs and automatically distributed royalties upon secondary market transactions	Music and copyrights
Candy Digital (US)	Partnered with MLB, Netflix, and others to develop NFTs as digital collectibles	Sports and entertainment
Adidas (Germany)	Sold limited-edition NFT items and granted rights to wear them in the metaverse and exchange them for physical goods	Fashion
Pixar (US)	Sold NFTs of popular characters, selling out all 55,000 items in 24 hours	Films and entertainment
ANote Music (Luxembourg)	Converted music copyrights into NFTs and established a system for automatic royalty distribution	Music and copyrights

Source: Compiled by MGSSI based on various sources

Furthermore, with the emergence of new systems that combine AI agents and decentralized technologies, the creation of value from intangible assets—including intellectual properties—is expected to accelerate even further going forward. An example of this is the automation of intellectual property distribution through AI agents. An IP marketplace could conceivably be established, in which AI analyzes the content of patents and copyrights to match them with the most suitable licensees or investors. Moreover, by integrating with smart contracts, the entire process from contract execution through to royalty distribution can be handled in real time, significantly reducing transaction costs, and this is expected to increase the importance of the integrated management of intangible assets in a broad sense, including data, algorithms, and brand value. If mechanisms are put in place to evaluate and facilitate the circulation of intangible assets held by companies, such as IP, AI models, and datasets, it would constitute a significant shift from their conventional role as merely defensive tools to serving as a foundation for new business creation.

Through these developments, intellectual properties are shifting from being defensive assets to offensive assets, signaling a new era in which companies can build new business models centered on intellectual properties. The integration of AI, blockchain, and other cutting-edge technologies will continue to increase the value and expand the utilization of intangible assets, pointing toward a future in which social issues can be addressed while simultaneously creating economic value.

6. Future Prospects

The value of intangible assets is not determined solely by a company's unilateral definition and management. Rather, it is formed through its relationships with society and evolves over time. This report discussed co-created assets, intangible cultural heritage elements, biodiversity, and the externalization of intellectual property, all of which illustrate that intangible assets are not static in nature and instead derive their value through social processes.

Going forward, it will be important to appropriately integrate digital technologies such as NFTs and AI as a means of supporting the creation of value for intangible assets. NFTs can serve as a means of providing society with access to intangible elements, such as engagement and history, while AI can play a complementary role in detecting emerging signs of value creation and shifts in value based on the data accumulated. On the other hand,

technologies themselves do not create value. Rather, a company's ability to sustain its competitive advantage depends on how well it understands the context in which intangible assets develop and its ongoing efforts to design its relationship with society.