

Rediscover JUNKAN

# Monthly JP pavilion

Issue

08

Feature

## No-Waste Philosophy



## Feature

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### **Experiencing Zero-Waste Firsthand: A Town Committed to Producing No Trash**

Two members of the Japan Pavilion creative team traveled to Kamikatsu, Tokushima, to learn about the philosophy and practice of Zero Waste.

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### **What Is Waste? —Exploring the Philosophy of Waste Through the Relationship Between People and Objects**

Why do people perceive discarded items as “waste”? When does something become “waste”? Join us as we explore these questions with philosopher Hiroshi Toya.

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# Experiencing Zero-Waste Firsthand: A Town Committed to Producing No Trash



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880 grams. This is the average amount of waste generated per person per day in Japan. Annually, that translates to approximately 40.34 million tons of waste nationwide—enough to fill 108 Tokyo Domes.\* Of this, only about 20% is recycled, while roughly 80% is incinerated.

One municipality actively working to improve this situation is Kamikatsu Town in Tokushima Prefecture. In 2003, it became the first in Japan to declare a “Zero-Waste” initiative, pledging to eliminate waste entirely. By 2020, the town had achieved an impressive recycling rate of over 80%. At the heart of these efforts is the Kamikatsu Zero Waste Center “WHY”, a multi-purpose facility where residents actively participate in waste sorting—separating their waste into an astonishing 43 different categories. Beyond waste disposal, the center also features a one-of-a-kind accommodation facility that integrates waste-conscious design, offering visitors a new perspective on the relationship between waste and people.

For this article, two key figures from the design team behind the Japan Pavilion at Expo 2025 Osaka, Kansai visited Kamikatsu: Yoshiaki Irobe, responsible for design, and Jumpei Watanabe, overseeing the linguistic elements. Over the course of their two-day, one-night stay, they engaged with the individuals behind Kamikatsu’s zero-waste initiatives, gaining firsthand insights into the town’s waste management philosophy. Their goal was to explore how Kamikatsu’s approach to waste reduction could inform and inspire the “circularity” theme of the Japan Pavilion.

\*Source: Ministry of the Environment, “Status of General Waste Emissions and Disposal (FY 2022).” Household waste per person per day: 496 grams.



## How Much Soap Do You Use in Two Days?

A little over an hour’s drive from Tokushima Awa Odori Airport through mountain roads leads to the Kamikatsu Zero Waste Center. Nestled in the lush greenery of the Shikoku Mountains, the facility consists of several elements: the Garbage Station, where household and business waste is sorted; the Community Hall, where residents gather; the HOTEL WHY, offering a unique lodging experience; and the Kurukuru Shop, a reuse store where residents can exchange unwanted items.

Unlike a typical hotel, guests at HOTEL WHY receive a Zero-Waste Action Guide before checking in. This time, the tour was led by Momona Otsuka, the Chief Environmental Officer (CEO) of the center.

**Otsuka** Welcome to the Zero Waste Center! Before heading to your rooms, let’s start by estimating how much soap you’ll need for your stay and cutting off just that amount. Yoshiaki, how much do you think one person needs?

**Irobe** This is harder than I expected... Maybe about this much?

Most of us rarely stop to consider how much soap we actually use in a day. This exercise is a simple yet effective way to introduce the fundamental zero-waste principle of “using only what you need.”

Next, Otsuka handed each guest a waste-sorting basket.



Top: From left: Kamikatsu Zero Waste Center CEO Momona Otsuka, Art Director Yoshiaki Irobe, and Copywriter Junpei Watanabe. / Bottom left: Slicing while estimating a portion for one person—only to realize the next day that much less was actually needed. / Bottom right: Kurukuru Shop: Here, 4 to 5 tons of household items find new owners and are reused each year.

**Otsuka** Everything you discard during your stay—used tea leaves, tissues, and all other waste—should go into this basket. Tomorrow, you’ll participate in the waste-sorting experience at the Garbage Station.



## A Unique Lodging Experience at HOTEL WHY

As they settled in, Irobe and Watanabe found themselves in a building that seamlessly integrates waste-conscious design and innovative ideas. The HOTEL WHY is constructed using repurposed windows arranged in a patchwork-like pattern and furnished with items salvaged from other accommodations, embodying the concept of waste reduction in every detail.



The basket contains six types of sorting bins: "Food Waste," "Paper and Metal," "Clean Plastic Containers and Packaging," "Contaminated Plastic, Paper, and Wood," "Beverage Bottles," and "Items That Must Be Incinerated."

On the wooden deck, they brewed just enough coffee and tea to match their declared consumption, savoring the drinks while enjoying the night breeze. They also carefully sorted their waste, placing it in the designated bins in their baskets. The absence of excess created a sense of closeness to nature, making each action feel fresh and deliberate.

**Watanabe** Being mindful about minimizing waste makes me feel more conscious of my actions—almost as if they become more refined.

**Irobe** Every action feels more intentional than usual, yet it doesn't feel restrictive. In fact, it's oddly liberating.

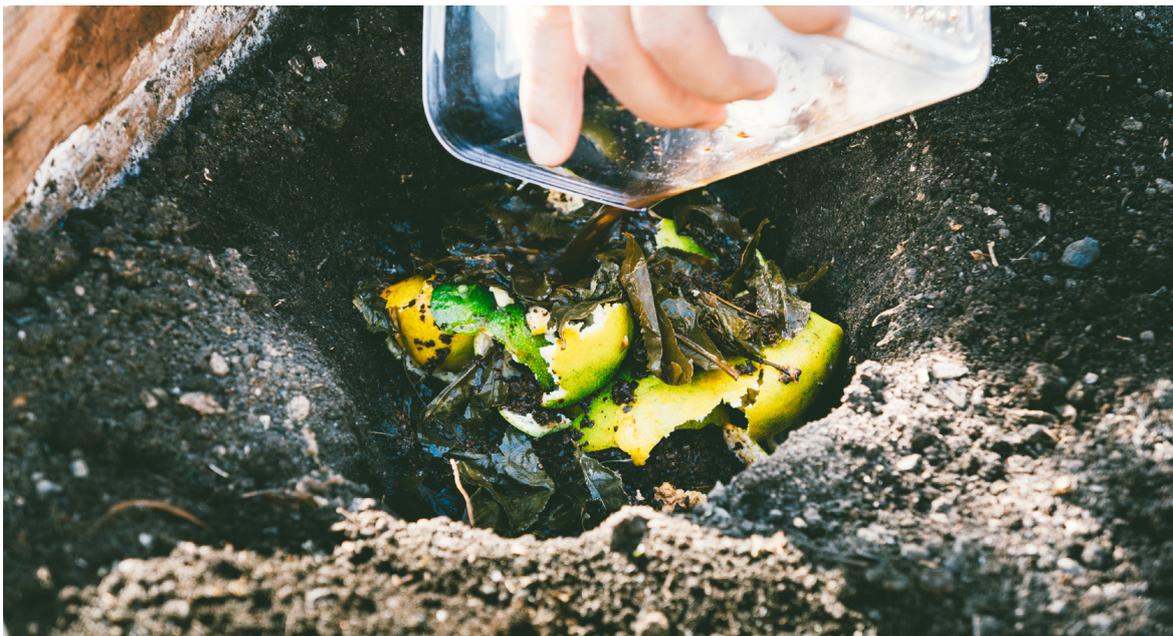
The next morning, a locally sourced breakfast was delivered from a nearby shop. The shop, which also operates a craft brewery during the day, provided a meal featuring fresh citrus fruits, fish cutlets, and warm, freshly baked bread. Even the packaging, such as the paper bag for the bread and the citrus peels, was later sorted at the Garbage Station.



The citrus fruit is an early-harvest mikan, a specialty of the neighboring town, Katsuura.

After breakfast, the two guests joined Otsuka at the backyard composting area. She explained the simple yet effective composting system used in Kamikatsu, where food waste is decomposed by microorganisms.

**Otsuka** This composting box contains black soil. Since fermentation occurs more efficiently in warmth, the lid is transparent to allow sunlight in. Ventilation is also crucial, so we designed it with a sloped lid to prevent airtight sealing. We divided the composting area into six sections—each day, waste is added to a different section to speed up decomposition. For easily biodegradable items, decomposition takes as little as six days.



Larger items and those with tough fibers take longer to decompose, so they should be torn into smaller pieces with a shovel before being added.

**Irobe** I can't believe that the citrus peels from this morning, as well as the tea leaves and coffee grounds, will disappear in such a short time.

**Otsuka** Aerating the soil helps activate the microorganisms, so it's important to mix the soil regularly with a shovel. In Kamikatsu, we don't collect food waste at the Garbage Station—instead, each household processes it in their own compost. Since food waste contains moisture, it decays quickly and can create unpleasant odors or contaminate recyclable materials like paper and plastic. That's why we separate it from the start. The town even provides subsidies so residents can purchase an electric composting unit for a personal contribution of about 10,000 yen.

**Watanabe** That's an incredible initiative. But what about animal-based food waste? Will it break down properly in the compost?

**Otsuka** Yes, meat and other animal-based waste can go into the compost without any issues. In fact, microorganisms prefer breaking them down. However, eggshells, bones, and seashells don't decompose easily, so we advise against adding them.

After placing their breakfast waste into the compost, the two headed to the Garbage Station to sort the rest of their waste. Even after just one night, they were surprised by how much waste had accumulated—plastic wrappers, paper napkins, tea leaves, and more. With Otsuka's guidance, they carefully sorted their waste into the 43 designated categories, including paper, plastic, glass, and metals.



Top: "Garbage Station" of Kamikatsu – where all waste from the town is brought for sorting and processing. / Middle left: Juice cartons are recycled into paper, so they are cut open, rinsed, and dried with clothespins before being brought to the waste station. / Middle right: Paper is sorted based on cleanliness. Oil-stained paper cannot be recycled into new paper and is instead processed into solid fuel. / Bottom left: Thermal paper, such as boarding passes and receipts, cannot be recycled into new paper, just like oil-stained paper. / Bottom right Glass bottles are sorted by color—clear, brown, and others—and recycled accordingly. Clean PET bottle labels can be recycled, while contaminated plastic is used for solid fuel.

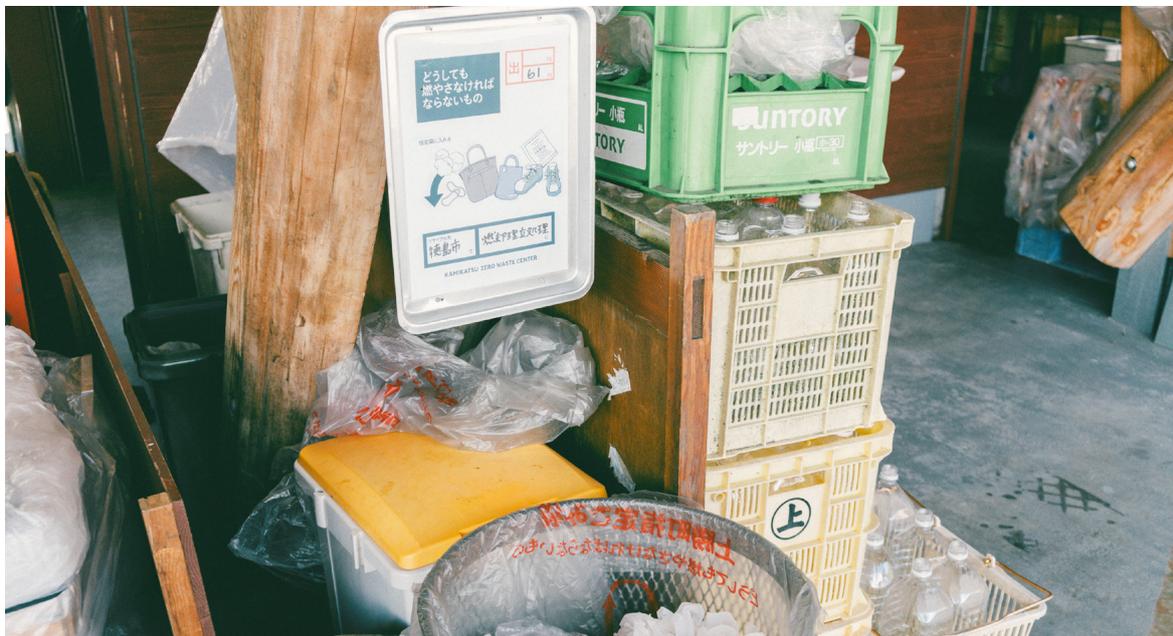
Some items contain a mix of plastic and metal, making them difficult to break down.

**Otsuka** Take a look at the table near the entrance—there you'll find lighters, pens, and umbrellas. These are awaiting disassembly. To reduce the amount of waste

that needs to be incinerated, our staff later dismantles these items manually. The most challenging item we've ever had to break down? A massage chair. The combination of tightly adhered fabric and numerous small components made it incredibly difficult.

**Watanabe** It makes sense—durability often means difficulty in disassembly.

**Otsuka** Exactly. Here in Kamikatsu, even glass bottles with plastic spouts are carefully disassembled before disposal. However, some items—like nail polish bottles containing residual paint or aquariums where glass and rubber are fused—are nearly impossible to separate for recycling. These must be either incinerated or landfilled. The bin labeled 'Non-Recyclable Waste' is essentially the last resort. While we have achieved an 80% recycling rate, the remaining 20% still relies on incineration and landfill. Items like tissues, masks, diapers (which cannot be recycled for hygiene reasons), as well as leather goods, PVC, and rubber products, inevitably end up in this category



Looking around the Garbage Station, Watanabe and Irobe noticed price signs attached to the waste bins.

**Otsuka** If you look at the top right corner of each sign, you'll see two labels: 'In' and 'Out,' along with a price. The 'In' price indicates how much recycling companies will pay for that material per kilogram, while the 'Out' price represents the cost the town must pay to dispose of the waste. In other words, materials that are easier to recycle generate revenue for the town. For example, aluminum, which has a 90% recyclability rate, is priced at 'In 160 yen,' making it the most valuable material here.

**Irobe** Seeing the monetary value attached to waste makes it feel much more tangible and relevant.



## From Open Burning to a Zero-Waste Leader

Although Kamikatsu now boasts an 80% recycling rate, this transformation was not always the case. Just thirty years ago, there were no formal waste disposal rules, and residents commonly dug pits in the mountains for open-air burning. The shift from this practice to becoming Japan's first town to declare a "Zero-Waste" policy is a remarkable journey.

**Otsuka** Until 1997, open-air burning was a major issue in Kamikatsu. However, the enactment of the Container and Packaging Recycling Law that year prompted the town to establish its first waste collection station—a small prefabricated building where residents sorted waste into nine categories. Since the station was located near former burning sites, it wasn't a big hurdle for residents to start bringing their waste there instead.

In 1998, the town introduced an incinerator, but it was shut down just two years later due to dioxin concerns. Facing financial constraints and a declining population, Kamikatsu chose to invest in waste reduction instead of incineration. The town's officials conducted thorough research on recycling, engaging in direct conversations with residents to gain their support. By 2001, they had successfully expanded the waste sorting system to 35 categories. Because Kamikatsu is a small town, officials could build close, face-to-face relationships with residents.

Former Mayor Kasamatsu played a crucial role, bringing strong leadership and reform-minded initiatives. In 2003, Paul Connett, an American expert in zero-waste strategies, visited Kamikatsu to share his insights. That same year, Mayor Kasamatsu made history by declaring the Zero-Waste Policy, committing to eliminate incineration and landfill waste by 2020. To further support this initiative, the Zero Waste Academy was founded in 2005 as a non-profit organization dedicated to managing the Garbage Station and fostering zero-waste awareness through community dialogue.



In 2020, the former prefabricated waste collection facility was transformed into the Kamikatsu Zero Waste Center, and the HOTEL WHY began operations. One of the key figures behind this transformation was Tatsuya Tanaka, the center's CEO. Originally running a sanitation business in Tokushima City, Tanaka was deeply concerned about the region's declining population.



Tatsuya Tanaka, founding member of Kamikatsu Zero Waste Center and representative of RISE & WIN Brewing Co.

**Tanaka** I first got involved in Kamikatsu's efforts in 2011 when former Mayor Kasamatsu invited me to help revitalize the town. As an outsider, I was amazed by the 35-category waste sorting system and the high recycling rate. I wanted to share this model beyond the town's borders, which led to the renovation of the Garbage Station. It was essential to create mechanisms that would attract young people to the town. In 2015, I opened the craft beer brewery RISE & WIN Brewing Co., and in 2020, we rebranded the waste station into a multi-purpose public complex—the Kamikatsu Zero Waste Center. These initiatives have been instrumental in promoting Kamikatsu's unique appeal.

Since then, the Kamikatsu Zero Waste Center has evolved beyond just a waste management site—it has become a place that attracts people, sparking conversations about sustainability. The town's residents have integrated zero-waste practices into their daily routines, thanks to strong leadership from the town's administration and close collaboration between local government staff and waste station employees. However, there is another crucial factor behind this transformation.

**Tanaka** Kamikatsu sits at the uppermost stream of the Katsuura River. Whether it's agriculture or wastewater management, the people here have long understood that whatever happens upstream affects those downstream. This

awareness is deeply ingrained in the community's mindset, making it natural for residents to take responsibility for managing their own waste.



## Expanding Awareness Through Enjoyment

Since the **Kamikatsu Zero Waste Center** opened four years ago, the mindset of “enjoying recycling” has spread beyond this small town to other areas in Japan, inspiring new initiatives for a truly circular society.

**Otsuka** Mitsubishi Estate, which aims to achieve a 100% waste recycling rate in the Otemachi-Marunouchi-Yurakucho area by 2030, visited our center a few years ago looking for zero-waste inspiration. This led to the launch of a project focused on improving resource circulation in commercial buildings. We have been sharing our expertise on composting and supporting environmental awareness initiatives within their organization. For example, at TOKYO TORCH, scheduled to open in 2027, a system will be implemented to separate food waste, convert it into liquid fertilizer, and use that fertilizer to grow vegetables for the cafeteria and tenant restaurants.

**Tanaka** Recently, Mitsubishi Estate changed the labeling on their waste bins from ‘Burnable Waste’ to ‘Waste That Must Be Burned.’ This simple adjustment prompted more people to pause and reconsider their waste disposal habits, leading to improved sorting rates. They also repainted their waste collection areas to make them brighter and more welcoming, which has significantly

heightened awareness about waste separation. It's incredible how small changes can shift people's behavior.



**Irobe** It's not just about managing waste after disposal—we also need to be conscious of consumption itself. In Edo-period Japan, people collected and recycled almost everything. In Germany, children are taught from a young age to give away one item whenever they acquire something new. Having a space that teaches these values can help reshape our attitudes toward consumption. Kamikatsu perfectly embodies the circular philosophy that the Japan Pavilion aims to promote.

**Watanabe** There's a story called A Drop of Water from the Hummingbird. During a wildfire, a small hummingbird carries droplets of water in its beak, trying to extinguish the flames. Other animals laugh at its futile efforts, but the hummingbird simply replies, 'I am doing what I can.' The zero-waste movement is similar—we shouldn't view Kamikatsu as an isolated example but rather as a model that can be expanded. Achieving a world where zero waste is the norm requires individual action. At first, I felt a bit tense and disciplined staying at the center, but by the end, I was having an incredibly enjoyable experience. The warmth of the people, the delicious food—it was simply an outstanding stay.

**Irobe** I was deeply impressed by the architecture. The commitment to waste reduction is embedded in the design, creating a truly unique and inspiring space.

**Watanabe** Enjoyment and aesthetics can lead to a greater awareness of environmental issues—that's a powerful value in itself.

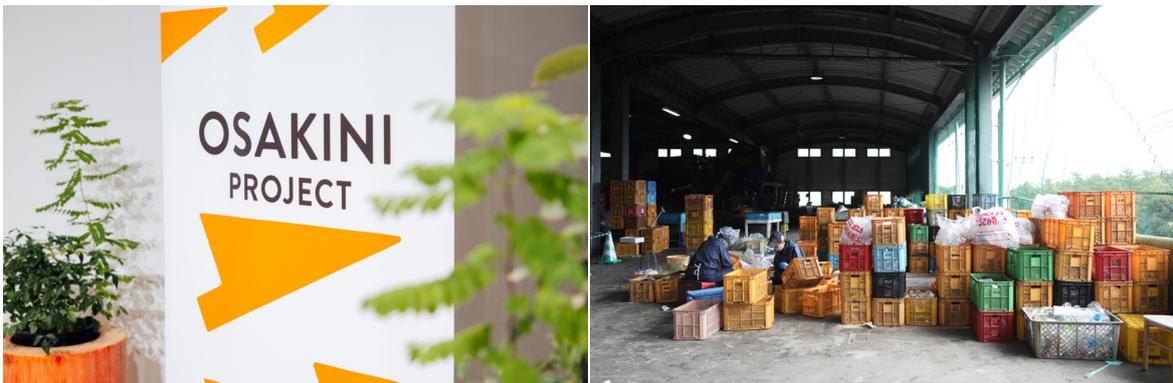
**Irobe** Not just at the Japan Pavilion, but in various aspects of our work, we should create systems that encourage environmental consciousness.



## World Expansion of Zero-Waste Initiatives

Kamikatsu is not the only municipality striving for zero-waste.

For example, Osaki Town in Kagoshima Prefecture boasts the highest recycling rate in Japan. Until 1998, all waste was landfilled, but faced with an imminent overflow of landfill sites, the town implemented a waste separation program. By 2006, it had achieved an 80% recycling rate, a figure it continues to maintain today. The Osaki Recycling System, developed through cooperation among residents, businesses, and the government, has gained international recognition. Today, its waste management expertise is even being transferred to Indonesia to aid in local sustainability efforts.



Left: Based on the Osaki Recycling System, which Osaki Town has long promoted, the OSAKINI PROJECT was launched to spread the concept of circularity worldwide. In addition to recycling initiatives, the project engages in product development in collaboration with businesses and the repurposing of vacant homes. (Photo courtesy of the Osaki Town SDGs Promotion Council) / Right: Waste is sorted into 27 categories: 17% is general waste, 23% is recyclable waste, and 60% consists of organic waste such as food scraps and plants. Since recyclables are processed and organic waste is composted, only 17% ends up in landfills. (Photo courtesy of the Osaki Town SDGs Promotion Council)

Beyond municipalities, major corporations are also taking proactive steps toward sustainability. One such initiative, mentioned by Otsuka and Tanaka, is Mitsubishi Estate’s “Circular City Marunouchi” project. This ambitious program aims to achieve 100% waste reuse in Tokyo’s Marunouchi area (which includes Otemachi, Marunouchi, and Yurakucho) by 2030. Inspired by a visit to the Kamikatsu Zero Waste Center, Mitsubishi Estate has partnered with the center to share composting expertise and raise environmental awareness among employees. Furthermore, the company is implementing rigorous PET bottle collection across 24 large office buildings and has launched an initiative to collect used cooking oil and repurpose it into Sustainable Aviation Fuel (SAF), contributing to a greener future for air travel.



Left: A waste collection station in a building managed by Mitsubishi Estate. Repainting it in bright colors has increased users’ awareness of proper waste sorting. (Photo provided, designed, and constructed by MEC Design International Co., Ltd.) / Top right: The composting system at Otemachi-Tokiwabashi Tower converts food waste from the facility into liquid fertilizer. This fertilizer is then used in nearby farms to grow crops, which are later served at Tokiwabashi Tower and Mitsubishi Estate’s employee cafeterias. (Photo courtesy of Mitsubishi Estate.) / Bottom right: The composting system at Otemachi-Tokiwabashi Tower converts food waste from the facility into liquid fertilizer. This fertilizer is then used in nearby farms to grow crops, which are later served at Tokiwabashi Tower and Mitsubishi Estate’s employee cafeterias. (Photo courtesy of Mitsubishi Estate.)

## Building a Circular Society

Kamikatsu’s philosophy of finding joy and beauty in waste reduction aligns with the circularity theme of the Japan Pavilion at Expo 2025.

Through conscious action, creative initiatives, and government support, the zero-waste movement is expanding. As awareness grows, a truly circular society—where waste is minimized, resources are valued, and sustainability is second nature—becomes an achievable reality. And the key to this transformation? Each and every one of us.



## Momona Otsuka

Born in 1997, she studied fashion in the UK through the "Tobitate! Study Abroad JAPAN" program. This experience led her to question social issues surrounding clothing and to reconsider what it means to create garments that truly last. After graduating from International Christian University in 2020, she moved to Kamikatsu, Tokushima, and joined the newly opened Kamikatsu Zero Waste Center WHY. As Chief Environmental Officer, she engages in daily dialogues on waste management, working toward the realization of a circular society.



## Tatsuya Tanaka

Born in 1969 in Tokushima City, he is the representative of SPEC Bio Laboratory, a company dedicated to ensuring food safety and security through inspection and analysis. His involvement in projects addressing regional challenges led him to engage with initiatives in Kamikatsu, Tokushima. In 2015, as part of efforts to make the town's environmental initiative, "Zero Waste," more accessible and understandable, he established the craft brewery RISE & WIN Brewing Co. BBQ & General Store. He also played a key role in launching the Kamikatsu Zero Waste Center (WHY), a public multi-purpose facility that opened in 2020. Additionally, he serves as the representative of BIG EYE COMPANY, the organization responsible for managing the facility.



**Art Director / Graphic Designer**

## Yoshiaki Irobe

Head of Irobe Design Institute at Nippon Design Center. With a foundation in graphic design, his work spans a wide range of disciplines, from two-dimensional to three-dimensional design, spatial design, and visual media. He is a member of AGI (Alliance Graphique Internationale), a board member of the Japan Design Committee, a member of Tokyo ADC, and JAGDA, as well as a part-time lecturer at Tokyo University of the Arts. His major projects include VI design for Osaka Metro and Japan's national parks, signage planning for public institutions such as Ichihara Lakeside Museum and the Museum of Contemporary Art Tokyo, and graphic design for exhibitions like Sony Park. For Expo 2025 Osaka, Kansai, he is in charge of the art direction for the Japan Pavilion. His notable awards include the Yusaku Kamekura Award, ADC Award, SDA Sign Design Grand Prize (Minister of Economy, Trade and Industry Award), and One Show Design Gold Pencil.



**Copywriter**

## **Junpei Watanabe**

Born in 1977 in Funabashi, Chiba Prefecture, Junpei Watanabe graduated from Waseda University and joined Hakuhodo Inc. in 2000. In 2007, he founded Watanabe Junpei Co., Ltd. Beyond planning advertising campaigns, he works extensively with words, developing corporate slogans, naming products and companies, and even writing lyrics. His work has been recognized with numerous awards, including the Cannes Lions International Festival of Creativity, ACC Awards, TCC Newcomer Award, Nikkei Advertising Award, and Galaxy Awards. He also runs the bookstore "Nohohon BOOKS & COFFEE" in Hokuto City, Yamanashi Prefecture.



# What Is Waste?

## — Exploring the Philosophy of Waste Through the Relationship Between People and Objects



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Waste is a curious concept. Even a beloved T-shirt you've worn for years or a perfectly functional tool can be mentally discarded the moment you decide you no longer need it. At the same time, what is useless to one person may still hold value for another. So, what exactly is "waste"?

To explore this question, we conducted fieldwork by collecting discarded items and drifted objects from the beach. As we sorted through them, we began to realize that determining whether something is waste involves multiple factors—its function, perceived value, and individual perspectives.

To delve deeper, we visited philosopher Hiroshi Toya, bringing along the items we had gathered as well as objects from home that we struggled to classify as "waste." Together, we examined them and engaged in a conversation.

When does waste come into existence? What does waste mean to us as humans? And is it truly waste at all? Let's explore these questions together.

**— The perception of what constitutes trash varies from person to person. Today, I'd like to explore this ambiguous concept with you, Mr. Toya. Has philosophy ever directly examined the concept of "trash"?**

**Toya**      There isn't a major philosophical tradition dedicated to the study of trash itself.

However, we can think about trash in two broad categories. One is biodegradable waste, like food, which naturally decomposes and returns to the environment. The other consists of non-biodegradable materials, such as plastic, which do not easily break down in nature.

The latter, "trash that defies nature's cycle," is a relatively modern concept that emerged after the Industrial Revolution in the late 18th century. Philosophy has traditionally focused more on the themes of ownership and production—how humans acquire and utilize resources—rather than on what happens when something is discarded.

Modern trash, as we think of it today, is a mixture of these two categories and thus represents a relatively new phenomenon.



## **Why Do We Consider a Crushed Can "Trash"?**

**— For this discussion, I brought some objects collected from the beach. Here is a crushed beer can. Most people would immediately recognize this as trash. But why do we so instinctively categorize it as such?**



**Toya** This can was originally a tool for drinking beer. Its value lies not in the can itself but in its function—to hold and deliver beer for consumption. Trash is often defined by whether an object has lost its function within its intended network of use.

This can has ceased to serve its purpose and has been removed from that network. That's why we consider it trash.

— **That makes sense. It has lost its original function.**

**Toya** But can we be sure it has truly lost all function? What if someone placed it on the beach as a landmark? In that case, it still serves a purpose and wouldn't be considered trash.

— **That's an interesting perspective. If we take its context into account, we can't judge solely by appearance.**

**Toya** On the other hand, the person who discarded the can might have intentionally crushed it to make it look more like trash.

— **What do you mean?**

**Toya** There's no need to crush a can simply to discard it. By crushing it, the person has ensured it is perceived as waste—removing its functionality and reinforcing its status as trash. This suggests that sometimes objects don't become trash because they have lost function but rather because we actively render them non-functional.

— **That makes sense. People also crumple paper before throwing it away, reinforcing its status as trash.**



## Is a Forgotten Item Trash?



— **Let's consider these two sandals. One is a single sandal, while the other is a matching pair. The single sandal seems like trash, but the pair might make us hesitate—perhaps it was simply left behind by mistake. Does this mean that the single sandal is trash while the pair is not?**

**Toya** Trash was once someone's possession. The key issue is whether the owner still needs the item or has abandoned it. If the item still holds meaning within its owner's network, it is not trash.

— **If the owner has forgotten about the item entirely, does that mean it has already become trash?**

**Toya** Not necessarily. If the owner remembers and realizes, "Ah! I was missing this!" then it remains valuable. But if they see it and think, "I don't need that anymore," then it was likely trash from the moment it was left behind.

— **So, an item can leave its owner's network long before it is physically discarded?**

**Toya** Exactly. When an object is abandoned and no longer belongs to anyone, it has a high chance of being considered trash.



## Can Something Beautiful Be Trash?



— **Next, let's talk about natural objects. Here is a piece of driftwood I found on the beach. Some people collect and even sell driftwood. If a natural object has no function, can it still be considered trash?**

**Toya** Unlike manufactured items, driftwood was never someone's possession. It exists within nature's network. From that perspective, it isn't trash.

However, human intervention can change that. Philosopher John Locke argued that an object gains value through human labor. If someone picks up driftwood and repurposes it—say, as decoration or material for furniture—it gains new value.

— **So humans assign value to objects arbitrarily. But if that value fades, does the object become trash?**

**Toya** Yes. Once an item enters the human network and loses its value within that system, it can become trash. Essentially, humans determine what is and isn't trash.



— **This is also driftwood, but I felt a certain strength in its presence, which made me pick it up. And this next combination of stones—I found their shape beautiful. Some people collect objects from the beach because they find them aesthetically pleasing. Do you think there is a connection between perceiving beauty and recognizing something as waste?**

**Toya** That’s a difficult question. If we consider usable tools as the opposite of waste, then beauty doesn’t necessarily play a role. In other words, “beautiful waste” can exist. For example, even if someone finds aesthetic value in the arrangement of garbage bags left out on collection day, they are still a waste.

— **That relates to the earlier discussion about whether waste is purely a subjective judgment or if authorities have the right to define it arbitrarily.**

**Toya** However, if that sense of beauty can serve a different purpose, then perhaps it is no longer a waste.

— **Using beauty for another purpose—what do you mean by that?**

**Toya** If someone simply discards a piece of driftwood, then at that moment, it becomes waste. Even if another person finds it beautiful, it remains a waste.

But the moment someone picks it up and thinks, “This is beautiful, so I could trade it for something else” or “This is beautiful, so displaying it in my room would lift my mood,” then it ceases to be a waste.

Furthermore, if someone picks up a piece of driftwood, holds it against the sunset, and observes the interplay of light and shadow, they are engaging in a kind of “labor.” That labor—the act of interacting with the object to experience beauty—might make it feel like their possession rather than waste. In other words, by engaging with an object in pursuit of beauty or experience, we might redefine it as something other than waste.



## Why Do We Feel “Somehow Unable to Throw Things Away”?



— Now, let’s shift our focus to items found inside our homes. Unlike the things we pick up on the beach, these are technically our possessions. However, I realized that there are many things we don’t actually need—we just haven’t thrown them away. This is an empty smartphone box that I’ve been keeping for no particular reason. Why do we sometimes develop this feeling of “somehow unable to throw things away”?

**Toya** Boxes and bags are special objects. The French philosopher Gaston Bachelard once said that “a small box, by separating the inside from the outside, creates value within.”

For example, doesn’t simply placing something inside a box or wrapping it make it feel more valuable? In other words, it’s not the contents themselves, but the box that creates a sense of value. So, when you throw away the box, it might feel as if the value of what was once inside also diminishes slightly, making it difficult to part with. Of course, there are also people who struggle to discard things regardless of whether they are in a box or not.

The philosopher Hannah Arendt spoke about how, in modern society, people tend to convert everything they own into monetary value and perceive objects based on their exchange value. But originally, possessions were not meant to be seen this way.

— Nowadays, selling personal belongings online has become commonplace. It seems like the tendency to recognize the value of objects through their role in the marketplace is growing stronger.

**Toya**

Exactly. Arendt also said, "Possessions and property are things that existed before I was born and are expected to remain in this world even after I die."

A smartphone, for example, will eventually lose its function as part of the cycle of daily life—it will disappear. On the other hand, things like houses or jewelry existed before we were born and will likely continue to exist long after we are gone.

As human beings, we are fleeting by nature—one day, we will all leave this world. But possessions resist that impermanence. If we repeatedly discard things just because they are no longer needed, it could be seen as losing that resistance. Perhaps the reason we struggle to let go of certain possessions is because, deep down, we want to resist our own transience.



## **Is It a Resistance to Fleetingness That Makes "Sentimental Items" So Hard to Throw Away?**



— **If that's the case, then maybe this candle is something I've kept as a way of resisting impermanence.**

**This candle was used on my son's birthday cake when he turned five. I haven't been able to throw it away. Sentimental items are often difficult to part with. What kind of relationship exists between personal memories, emotions, and objects?**

**Toya**

In today's world of mass production and mass consumption, we are constantly pressured to keep up with a rapidly changing lifestyle. Even the things we are using now will soon become waste. When they do, we replace them with something new, only to discard it again. We live within a fleeting cycle.

However, while objects circulate in an endless loop, a person's life is not cyclical—it moves in a straight line, from beginning to end. If we imagine material circulation as a circle, then life itself is a line.

Despite being immersed in this constant cycle of material consumption, we as humans instinctively resist it. We want to record our linear existence. Your child's fifth birthday will never happen again. Life is the accumulation of moments that will never be repeated.

This candle, in the endless cycle of daily life, serves as a record of your child's story. I don't think it qualifies as waste.



## A World Without Waste: A World Without Others?

— **This conversation has made me realize how difficult it is to define waste in a single statement.**

**Toya** Today's society seems to idealize an urban space where waste is completely absent. In digital twins (virtually replicated environments) and metaverse spaces, which allow us to design the world however we please, waste does not exist. Even though waste is a normal part of the real world, we deliberately exclude it from the virtual worlds we create.

I believe that a space without waste lacks a sense of reality. Earlier, we discussed how something becomes waste when it falls out of the network of useful objects. This idea comes from the philosopher Martin Heidegger. He argued that "the world is made up of interconnected tools, and as long as they function normally, we don't even notice their existence."

— **Could you explain that further?**

**Toya** For example, when you're writing with a pen, you don't consciously think about the pen itself. But if it suddenly stops working, you immediately become aware of its presence. In other words, it is only when something loses its function that we recognize its place within a broader system of tools and objects.

— **So, a world without waste is also a world where it becomes harder to recognize the networks we exist within.**

**Toya** Exactly. When we pick up a crushed beer can, we become aware of the person who drank from it. Waste, in this way, is also part of human networks. Through waste, we realize that people with different lives and experiences are existing alongside us.

— **If digital spaces are considered the next evolution of human networking, then the question becomes: how do we replicate the traces and warmth left by others? In other words, how do we integrate "waste-like" elements into the digital realm to maintain our sense of social connection? Without tangible objects—whether in the real or virtual world—it would feel somewhat lonely.**

## Toya

A society without waste is a society where it is impossible to imagine the existence of others. Near my childhood home, there is a kaizuka—an ancient shell midden, essentially a prehistoric garbage dump. These discarded shells reveal that people once lived there. And not just any people, but humans from tens of thousands of years ago—individuals we could never possibly communicate with. Yet, their presence can still be felt. That, in a way, is miraculous.

— This suggests that waste holds value beyond its original function. Even if something loses its practical use, if it allows us to sense the presence of others, it takes on a new kind of significance.



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