

# Briefing

## Co/Lab: Rethinking Waste

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### Design for a sustainable society

Co/Lab: Rethinking Waste

#### *What if... waste could help improve lives?*

The way we, as humanity, choose to live our lives today is causing the world to change at a fast rate. These rapid developments have global effects and create challenges for which plug-and-play solutions usually do not exist. So how do we ensure the quality of life in the near future?

#### **Wicked problems**

The concept of a sustainable society has been around for decades. In 1981, Lester Brown, founder of the Worldwatch Institute, defined it as “one that can satisfy its needs without diminishing the chance of future generations.” It is an ever-evolving concept that includes various topics, including environmental, economic, societal and technological issues.

When discussing sustainability, challenges concerning classic themes like waste processing, circular and biobased materials, renewable energy, and CO2 reduction immediately come to mind.

Sustainability also covers how we live together and interact as humans, building a respectful environment where future generations will thrive and prosper. Very often, the challenges addressed above are so-called “wicked problems”. These socially complex issues are intertwined with other topics and depend on various factors. For every “wicked problem”, there is always more than one explanation and, therefore, never just one solution. We must look at these challenges from different perspectives and tackle them together. Even small changes can already have significant effects.

Since 2018, the Erasmushuis Jakarta (the cultural institute of the Embassy of the Netherlands to Indonesia) and Dutch Design Foundation have organised two intercultural programmes under the theme of the Sustainable Society. These programmes invite designers from Indonesia and the Netherlands to collaborate on projects aimed at improving the world around us. The Embassy offers valuable insights into Indonesia's pressing challenges that demand innovative solutions, while Dutch Design Foundation fosters creative power and fresh perspectives by connecting designers with relevant stakeholders.



By focusing on a selected challenge each year in a broad programme, we aim to combine forces between Indonesia and the Netherlands. The Sustainable Society encourages mutual learning from each other's knowledge and skills to develop new perspectives on the questions we face in our future ([watch a video of the programme here](#)).

### **Co/Lab 2025: Rethinking Waste**

For this year's Co/Lab we asked Indonesian institutes, organisations, government bodies and businesses to share their urgent concerns and ambitious goals for the future. What would their dream be for the Indonesia of tomorrow? Among the reactions of these organisations, one topic stood out: How can we move towards a society where we find a more sustainable solution for the waste we produce?

Indonesia as a nation generates approximately 8 million KG of waste per day (BPS, 2020). Over 80% of this waste remains uncollected, ending up in open dumpsites, being burned, or stored in unsustainable landfills. To transition towards a more sustainable, circular and healthy waste system, big changes are needed. Indonesia's waste stream can be categorised into four main types: Food 40%, Plastic 17%, Wood/branches 14% and Paper/carton 12% (JSSEW Research, July 2023). The majority of the waste is generated in households (46%) followed by street markets (22%).



Photo by [Adi Fauzanto](#) on [Unsplash](#)



*image Bantar Gebang*

To stop pollution, we need better solutions worldwide: improved waste management, circular resource flows, innovative packaging alternatives, biobased alternatives and behavioural changes among consumers and industry. Tackling the pollution crisis requires investment in solutions across the entire waste management chain, from waste collection to innovative materials that reduce the need for virgin materials (Source: Worldbank 2023).

### **Wahu**

For this Lab, we have selected Wahu (PT. Waste Hubs Indonesia), a smart plastic waste collection and recycling company as the project partner (question holder).

Wahu's mission is to create system change by building a large-scale viable waste infrastructure in Southeast Asia to prevent future pollution.

Through the waste management system of Waste Hubs and the mobile app, Wahu educates and incentivises people to change their attitude and behaviour towards waste. At designated Wahu Waste Hubs, consumers can drop off all their consumer plastic waste and receive instant rewards for every KG of plastic waste, in cash directly to their preferred e-wallet.

Wahu collects and pays out for ALL types of consumer household plastic waste. Unlike most other waste collection initiatives, they collect not just PET bottles but also multi-layer sachets, plastic bags and other products. They prevent plastic waste from being burnt in the open or leaking into nature.

Upon collection, all plastic waste is transported to the Wahu central warehouse. There they sort, bale and store all plastic per type, colour and quality (damage/contamination) for further processing and recycling.

*Photo by Wahu*



So far, Wahu is operating 6 Waste Hub Collection Points on the island Java in Jakarta (Tangerang, Bekasi) and Bandung with a total of over 4500 Wahu collectors. Wahu has collected over 1 million KG of plastic since its inception 18 months ago. With an ambitious growth plan in place, Wahu is excited to grow to 50 locations in 2025, and 250 locations at the end of 2026, becoming the largest waste management system in Indonesia.

### **Indonesia's informal waste system**

Household waste management practices vary significantly throughout Indonesia. While some households separate waste into organic and inorganic fractions, this is not a widespread habit. Many residents view waste management as solely the government's responsibility, leading to a passive approach to waste separation and disposal.

Waste management in areas is often characterised by a mix of formal and informal structures, with the latter playing a significant role, particularly in recycling. Waste Pickers, Bank Sampah, Wastepreneurs and citizens who recycle for sustainability or need the extra income to provide for their family.



*Photo by Wahu*

Wastepickers gather and sort garbage from residential areas, local markets, industrial yards and streets with some operating as organised groups associated with pelapak (middlemen), receiving steady wages, accommodation, and meals, while others work independently (scavenger), earning daily income by directly selling collected recyclables to pelapak or recyclers.

Indonesia's informal waste collection system is currently reliant on 1 million waste pickers in Jakarta (3 million in Java) who collect waste and clean the streets to make a living.

Complementing these activities are 'wastepreneurs', like a plastic waste seeds distributor and selling recycled plastic pellets, and an organic waste specialist tackling organic waste for businesses and the government. Bank Sampah, a small-scale community waste bank, also contributes by incentivising residents to recycle, despite limited reach. Lapak serves as a vital, albeit informal, processing hub for recyclables, lacking integration with municipal waste management, resulting in overall inefficiencies in the entire system.

Waste collectors form the backbone of most regional waste management systems. These individuals, often operating as independent or semi-formal workers, are typically responsible for specific neighbourhoods, creating informal systems of accountability within their assigned areas. Communication with residents is usually direct, either in person or through community networks, to coordinate waste collection schedules and payments. Despite their critical role, waste collectors face several challenges that hinder their effectiveness and well-being.

Key challenges include low wages, with earnings ranging from IDR 600,000 to IDR 3,000,000 per month, and harsh working conditions. Tensions frequently arise with residents over service fees, inconsistent schedules, or unaddressed complaints. Additionally, pressure to clear waste quickly sometimes results in illegal dumping practices.

*\* The aforementioned insights were gathered through a field survey study in the Bataceper region conducted by Wahu in November/December 2024*

## The design question

While steps are being taken to shift responsibility to a more formal role of the government in Indonesia's waste collection, the system is currently still heavily reliant on private incentives like Wahu and the local informal waste system.

As the local informal waste system is such a big part of the current system, its role can and should be considered in new, formalised recycling solutions such as Wahu's.

So we would like to ask ourselves: how can the informal waste community contribute to initiatives like Wahu to address waste challenges in Indonesia? **What design solutions can promote a more effective waste collection system and empower waste collectors, enhancing both environmental outcomes and the quality of life for some of Indonesia's most undervalued workers / local heroes of recycling?**

In this Lab, Wahu and the design team will partner up to research the current system of waste pickers, discover possible levers for change and experiment and prototype with selected idea(s) locally. The outcomes of these experiments can be starting points for Wahu and other waste collectors to implement outcomes of the lab while scaling up their business.

Transformational changes, like moving towards a more circular waste system are big and bold, especially in challenges where social and economic interests come together. The outcomes of this Lab should be starting points that can grow to be part of a broader movement towards less waste and better working and living conditions for the Pumelung community. We hope that the creative ideas and design skills of designers combined with the know-how and ambition of Wahu can lead to opportunities that create a positive impact.

## Local opportunities

Within the design question, we have identified various 'local opportunity spaces' that designers can leverage in this Lab. This edition of *What if Lab: The Sustainable Society* focuses on waste collection management systems as a vehicle to dive into the waste collection and recycling industry. We expect more insights and opportunity spaces to emerge during the course of the Lab.

#### *Community waste collection and recycling*

Indonesia faces a serious waste challenge, ranking among the top garbage-producing countries in the world. Garbage is seen as a problem without value and far too often ends up in the environment. To bring change to this (worldwide) waste problem our attitude towards waste must first change. We must think in terms of (circular) resources and material value instead of waste.

Wahu offers the local community a way to earn additional income with their waste, driving long-term behaviour change. The basic principles of Wahu are: collect, save, earn, change behaviour, and enjoy a clean neighbourhood. This could be implemented and rolled out across the Indonesian archipelago, as well as other Southeast Asian countries. For designers, this provides an opportunity to build meaningful long-lasting impact.

#### *Waste industry network and knowledge*

We are not starting from scratch. Instead, we have the advantage of building on the established expertise, networks, and resources of Wahu and the network of the Embassy of the Kingdom of the Netherlands in Jakarta. With a proven business model, Wahu operates with over 4,500 collectors and has already collected and processed over one million pieces of plastic.

#### *Informal learning*

We aim for the Lab's outcomes to be valuable to a broad group of people and open up new opportunities for people to implement them in different settings. In tight-knit communities, knowledge often spreads informally, reaching a broader group of people that can profit. We hope that opportunities like waste collection and management solutions will be adapted and reinvented and can end up in more communities that are looking to use that knowledge. By collaborating with local waste picker communities and residents to implement these solutions, the Lab's outcomes can directly improve the livelihoods and well-being of Indonesians.

#### *Recycled plastic as material*

Wahu processes thousands of kilograms of plastics per day, some of which are higher-value materials like PET and HDPE and others that are less easily recyclable. If needed, these materials can be used to design and produce products as part of the lab's outcome.

#### **Lab setup and collaboration between Dutch and Indonesian designers**

In this Lab, Dutch and Indonesian designers will collaborate in a team to design and prototype a concept for waste collection through waste pickers in a more formalised setting. The concept will aim to promote more effective waste collection systems while also improving the working conditions of waste pickers. Results should be co-designed with waste pickers, residents, and industry & governmental stakeholders to meet local needs and demands.

The design team will work on the design question in collaboration with Wahu, our local partner. The team will consist of two Indonesian designers and two Dutch designers with diverse design skills (for example social, product, service, experience and strategic design), selected through an open call.

The design team will be supported in achieving their goals by practical help in planning and organisation from the Co/Lab team and connecting them to experts in the field during masterclass

sessions and field trips. This way, we hope to facilitate the design team to use their available time effectively on the creative part in the Lab and organise a coalition that can convert outcomes and opportunities into lasting results.

**Dutch Design Foundation** manages the Lab process, including coordinating the visits of Dutch designers to Indonesia and Indonesian designers to the Netherlands. Marleen Kokke will serve as the Lab Manager, guiding the designers throughout the project.

**Wahu** will act as the question holder in the Lab. With firsthand knowledge of the Indonesian waste system and a presence in both the Netherlands and Indonesia, Wahu is seeking creative insights to strengthen their operations. Their extensive network within the plastic waste industry—including suppliers, off-takers, and other key stakeholders in the waste and recycling ecosystem—positions them as a connector between the designers and the Indonesian waste system. Wahu also brings a strong network of established partners, such as PT. Lion Super Indo, P&G, and PZ Cussons, who could potentially support or fund the project in the future.

Wahu will support the Co/Lab team in organising knowledge sessions and supplying information needed by the designers. Wahu will co-organise the visit of Dutch designers to Indonesia and manage communication within the waste management community.

**Erasmus Huis** is the cultural space within the Embassy of the Netherlands in Indonesia, where results will be shared with the broader public in Indonesia in the form of a symposium and exhibition.

**The Embassy of the Netherlands to Indonesia** ('the Embassy') finances the Co/Lab, and together with the Erasmus Huis they can connect to possible local and Dutch partners in the field.

## **Co/Lab**

**Co/Lab** is part of the Coalitions programme developed by **Dutch Design Foundation** (DDF). DDF is an organisation that focuses on strengthening design's position, development, and importance. DDF believes that designers are equipped with the right state of mind to tackle sizeable, highly complex challenges. Dutch Design Foundation challenges designers to work on questions that companies, governments, or other organisations (question holders) are dealing with.

Dutch Design Foundation has found that, for the worlds of 'question holders' and designers to come together, they often need to learn how to collaborate effectively and build on each other's strengths. Because designers are specifically trained to question the status quo and think about possibilities, they can easily unearth new insights and opportunities. Organisations have the power to accelerate the outcomes of a Lab.

By offering a programme that gives a head start to these cross-sectoral collaborations, new ideas can quickly and effectively be formulated and executed, counting on the creative strength of designers and knowledge, resources and network of organisations.

Dutch Design Foundation structures this collaboration process and creates time and space to explore new possibilities. Based on a clear briefing, introductory meetings, sessions with experts or a master class, design studios start their work. Throughout the process, research and concepts come together, and ideas are validated and further refined based on feedback from the question holder. This process is supported by a specialised 'Lab Manager'. At the end of a Co/Lab, designers present results, and the question holder can test potential and impact for further development and implementation.

## **Dutch Design Foundation and Embassy of the Netherlands to Indonesia**

The Netherlands has a unique position in the design world, with a leading role in employing design for a sustainable society. Indonesia, as one of the world's leading economies with projected growth

in 2030 into one of the largest in the world, faces a myriad of challenges that comes with this growth that can profit from a design approach.

The Embassy recognises the potential for the Dutch creative economy to take a role in these challenges. By initiating collaborative projects, the Embassy and DDF aim to build strong connections between both countries and further the position of design as a societal tool in Indonesia and the Netherlands.

For these Labs, designers from Indonesia and the Netherlands are invited to collaborate on projects that can improve the world around us.

### **Collaboration with Indonesian and Dutch designers: Who are we looking for?**

To create a better world, we need fresh perspectives and strong collaborations. For this Co/Lab, we are looking for two Indonesian designers and two Dutch designers to form an interdisciplinary design team. By collaborating in a team we aim to stimulate intercultural exchange and inspiration within the design community. Designers in the team will benefit from each other's knowledge, craftsmanship and experience. We believe that by combining diverse backgrounds the team will be better equipped for solving issues from within the community and stimulate solutions from new perspectives.

We are looking for a diverse team of designers who believe in the power of collaboration and want to design a more sustainable world together. This can include social designers skilled at working with communities and people. Product designers who can help bring ideas to life. Or service designers who can craft new systems or business models that help both Wahu and the informal waste community. In the end we believe this team will profit from a diverse expertise and different design backgrounds and approach challenges with a solutions-focused mindset, while actively seeking the right collaborations and knowledge partners to bring your ideas to life. All participating designers should be comfortable self-organising as a team, proficient in English, and able to collaborate online and across long distances.

Dutch Design Foundation, the Embassy and Wahu will select 4 designers from all applications to participate in the programme.

### **What's in it for me? Opportunities for joining this Co/Lab**

This Lab is for designers interested in working in an international context on design-driven challenges. It offers the opportunity to work abroad, collaborate with designers from different backgrounds, and develop ideas and prototypes that can lead to real positive change in the world.

The Lab places a strong emphasis on developing your own practice, experience, and knowledge while working on practical, real-world challenges within a dedicated team.

Designers joining this Lab should be well aware that joining the program includes traveling abroad, hosting designers in your home country and building up team relationships and a collaborative way of working.

While Dutch Design Foundation provides an honorarium to each team member to support their time investment in the Lab, this honorarium cannot account for all hours spent within the program. That means while financial support is provided, motivation for joining the Lab should also include professional growth opportunities such as networking, experience and portfolio building, creative inspiration and skill development.

The honorariums are defined with the local financial context of each of the countries in mind. As the costs of living and maintaining a design studio differ in both countries, we have defined different design fees that will enable each design team member to invest time in the Lab.

That means the Indonesian designers will each receive a design fee of 92.000.000 IDR, excluding VAT for the lab. The Dutch designers will each receive a design fee of 10.980 euros, excluding VAT as the design fee for the Lab.

Participating designers are expected to invest time in the development of the idea and concept. They attend (online) meetings, travel to Indonesia or the Netherlands, (travel costs are covered by the project) and develop a prototype and a framework/toolbox/methodology that can be shared with a broader audience. Furthermore, they transfer outcomes to the exhibition design team to present at the Erasmushuis and Dutch Design Week.

Dutch Design Foundation covers flights, accommodation, and meals when visiting Indonesia and the Netherlands. The Lab Manager will book flights and accommodation. Designers will receive a standard daily allowance for travel and food.

For the development of experiments and prototypes, Dutch Design Foundation offers a joint budget for material and labour costs of 5000 euro excluding VAT (approximately 82.000.000 IDR). This budget can be used by the team on the base of quotations or invoices. Prototypes will become the property of Erasmushuis and/or Wahu.

For the exhibition in Erasmushuis an additional budget is available after submitting a proposal. This budget covers costs of exhibition design, exhibition production and events during the exhibition.

### **Expected Results**

In this Lab we are challenging the design team to research the question, connect with and learn from the ecosystem, formulate possible new answers and select one or two concepts to develop into local experiments to test and prototype.

The concept should promote better waste collection systems while also improving the waste pickers' conditions, co-designed with residents to meet local demands, and the outcomes should be shareable for a broad group to use.

The team is expected to translate the outcomes into an exhibition that will be on show at the Erasmushuis in Jakarta. Deliverables are a master plan, a prototype of at least one concept and a guide and/or publication of results to share outcome and knowledge with other communities that want to improve their local waste collection systems.

We hope that creative ideas and design skills of designers combined with the knowhow and ambition of Wahu can lead to opportunities that create a positive impact.

### **Programme set-up and timeline**

**Co/Lab: Rethinking Waste** is a yearlong programme designed to develop and showcase outcomes in both Indonesia and the Netherlands. The collaboration will combine online meetings with on-site work. While the design team is expected to self-organise for online collaboration, key update meetings and presentations will follow a predetermined schedule. The working language for the programme is English.

As part of the programme, Dutch designers will travel to Indonesia, and Indonesian designers will visit the Netherlands. Travel and accommodation expenses, as well as allowances for transportation, food, and drinks, will be covered. The Co/Lab team and the Wahu team will organise the *visit* to

Indonesia in partnership with the Indonesian designers. Similarly, the Co/Lab team will plan the visit to the Netherlands in collaboration with the Dutch designers.

The outcomes of the programme will initially be exhibited in Indonesia at Erasmus Huis. Afterward, Dutch Design Foundation, the designers, and Wahu will explore opportunities to showcase the results in additional venues in both the Netherlands and Indonesia.

Below is an overview of the programme's expected timeline. While the dates may be adjusted to accommodate the availability of the selected designers, the structure is as follows:

## **Timeline**

### **February 2025 – Open Call for Designers**

In February 2025, an open call will be issued for Indonesian and Dutch designers to apply for the programme. Selected applicants will be invited to participate in online interviews, after which four designers (two Indonesian and two Dutch) will be chosen to form the design team. Following the selection, *Dutch Design Foundation (DDF)* will host an online introductory session where designers can meet one another, the question holder, and other stakeholders.

### **March 2025 – Project kick-off and Masterclass**

The programme will officially begin in March with an online meeting where the question holder will present the local context. Additionally, Dutch and Indonesian experts will conduct a masterclass related to the design challenge, marking the start of the online collaboration.

### **March – April – Online work period**

During the first online work period, designers will focus on understanding the context of the question, conducting desk research and sharing their expertise. Regular update meetings with designers and the question holder will be organised to check progress, address questions, and facilitate connections.


### **May 2025 – Travel to Indonesia**

In May (2025), Dutch designers will travel to Indonesia for a two-week residency to collaborate with the Indonesian designers and engage with the question holder. The goal of the visit is to learn more about the local context and needs. This visit, organised by DDF with local assistance, will include a symposium at Erasmus Huis where the question holder will present the context, the designers will share their work and plans and network with local designers and partners.

### **May – August Online work period**

The design team will continue working remotely during this period, developing ideas and concepts. Regular updates will ensure progress is monitored, questions are addressed, and additional resources are provided when needed.

### **September 2025 – Travel to the Netherlands**

In September, Indonesian designers will travel to the Netherlands for a one-week residency. During this period, they will collaborate with the Dutch designers, explore the local context and visit specialists and projects to further develop their ideas. 

### **October – December – Online Work Period and final presentation**

After the trip to the Netherlands, the design team (designers and question holder) will work remotely (digital meetings) on finalising their concepts and designs. Regular update meetings will continue, the production of prototypes will be started up and preparations for the exhibitions will take place. In

the beginning of September a final proposition will be presented together with prototypes and a plan for the exhibition.

### **February - April 2026 – Erasmus Huis Exhibition**

The project will be translated into an extended exhibition at Erasmus Huis. This exhibition will be produced in Indonesia with help of the Erasmus Huis team. After the exhibition period at Erasmus Huis the possibility to re-exhibit the project at the location of the question holder can be explored.

### **Conditions for participation**

Please read the conditions for participation carefully before signing up. We have drafted these conditions to formalise the intentions of both designers and partners in the lab. By registering for this Co/Lab, you automatically agree with the *Participation Conditions for Co/Lab: Sustainable Public Space*.

Please note:

- You must be available during the travel periods mentioned above in *Programme set-up and timeline*
- Registration is only possible for designers with a Dutch or Indonesian passport.
- The communication during this Co/Lab will be in English. Participants are expected to be able to communicate in English.

### **How to sign up?**

Registration is not possible anymore.

In the registration form, we ask you to provide a reference of 3 to 5 relevant, previously completed projects or designs and motivation for participation in Co/Lab: Rethinking Waste. In the motivation, you describe how the assignment connects to you as a designer (or design studio), your motivation to participate and where you see opportunities within the design question (max. 800 words).

It is not necessary to provide design solutions yet. Based on the entries, the Lab team will select the designers who will be participating. The designers will be notified within two weeks after the open call closes.

There is no need to provide design solutions at this stage. Based on the submissions, the Lab team will select the designers who will participate in the program. Selected designers will be notified within two weeks of the open call's closing date.

By registering, you automatically agree to the *Participation Conditions for Co/Lab: Sustainable Public Space*.

### **Selection**

Registration for this Lab has closed.

From all applications, the Dutch Design Foundation, Wahu, the Embassy will invite a selection of designers for a personal online interview. After the interviews, a final team will be selected to join the Lab. Selection

From the applications, the team (including representatives from Dutch Design Foundation, Wahu, and the Embassy) will invite a selection of designers for personal online interviews. After the interviews, a final design team will be chosen to participate in the Lab.

The selection process is based on your application and a balance of skills and experience in the team. All designers will receive feedback within two weeks after the closing of the open call on whether they are selected for Co/Lab: Rethinking Waste.

**Inspiration:**

[https://business-indonesia.org/waste\\_management](https://business-indonesia.org/waste_management)

<https://journal-iasssf.com/index.php/JSSEW/article/view/180/30>

**Questions?**

If you have any questions regarding this Co/Lab, please contact the Lab Manager:

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