



The 1st Qualitative Assessment of Reusable Food Packaging

(Monitoring & Evaluation period June – 3rd week of August 2022)
Case study: Allas by Enviu, Indonesia

September 2022

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Prepared for the Collaborative Actions for Single-Use
Plastic Prevention in Southeast Asia (CAP SEA) Project

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EXECUTIVE SUMMARY

The Collaborative Actions for Single-Use Plastic Prevention in Southeast Asia (CAP SEA) project that is implemented in Indonesia aims to contribute to the achievement of Indonesia's target of reducing plastic and packaging waste. For this purpose, a pilot project is carried out to implement a business model. The pilot project was launched in Jakarta City to reduce single-use plastic (SUP) packaging waste in the Food and Beverage (F&B) sector. As part of the pilot project, the start-up Allas offers reusable packaging as an alternative to SUP packaging for ready-to-eat food deliveries.

The Collaborative Actions

The objective of this study is to provide an understanding of Allas' business model based on a qualitative assessment from the point of view of Allas' subscribers and Allas' partners. This study is based on a qualitative methodology in which data are collected through interviews with Allas' co-founders, Allas' subscribers, and Allas' partners, as well as observations of online communication media of Allas and their partners, such as Instagram. The data are then analysed to identify the environmental impacts of Allas' business processes and to assess their influence on economic performance.

The analysis of experiences from Allas' subscribers and Allas' partners revealed some important points. Allas has improved some issues related to its business processes to better serve their subscribers and partners. However, Allas has neither assessed and utilized their relationships with subscribers and partners nor used communications media effectively. All informants agreed that Allas offers environmental benefits but does not provide economic benefits. In line with the conclusions, some recommendations were identified. Allas could use their communications media better, collaborate with more related parties, and pursue partnerships with more diverse F&B merchants. Regarding environmental impacts, Allas could identify and measure environmental impacts more comprehensively and communicate them via their communications media. Moreover, as a business, Allas should consider the impact of their initiative on economic performance. The pilot project has also delivered insights into the implementation of a reusable packaging system in other areas.

01

Background

The Collaborative Actions for Single-Use Plastic Prevention in Southeast Asia (CAP SEA) is a project that is financed by the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety, and Consumer Protection (BMUV) and implemented by GIZ. CAP SEA has been implemented in Thailand, Malaysia, and Indonesia, and is a part of a global GIZ project to support the Export Initiative Environmental Protection. The key objective is to reduce single-use plastic (SUP) by introducing innovative business models and by developing stakeholders' capacities, explicitly on upstream measures rather than downstream waste management.

In Indonesia, CAP SEA aims to contribute to the achievement of targets stated in The National Action Plan on Marine Plastic Debris (2018–2025), such as a 70% reduction of plastic waste by 2025 compared to 2017, and in The Roadmap to Waste Reduction by Producers (through the Ministry of Environment Forestry or MoEF, Regulation P.75/2019), such as a 30% reduction of packaging waste from producers by 2029.

CAP SEA Indonesia has developed four work packages; work package 3 is the pilot project for business model implementation. The pilot project aims at reducing SUP packaging by providing a reusable packaging system for ready-to-eat food and beverage (F&B) deliveries in Jakarta City. The Special Capitol Region of Jakarta (locally named Daerah Khusus Ibukota or DKI Jakarta) was chosen as the local pilot project municipality because DKI Jakarta City has 10.5 million inhabitants and is by far the biggest agglomeration in Indonesia. The Governor of DKI Jakarta has banned SUP bags by issuing The Governor Regulation No. 142 of 2019 on the Obligation to use Environmentally Friendly Shopping Bags in shopping malls, convenience stores, and traditional markets.

The existence of a reusable packaging system for ready-to-eat F&B deliveries requires a new business model that differs from the model of the single-use packaging system. This system introduces the reusable food container provider Allas, a start-up company that connects F&B merchants and online F&B customers. Allas offers reusable and returnable food packaging to F&B merchants, including solutions for cleaning and returning. By joining Allas, F&B merchants (hereinafter referred to as Allas' partners) can offer reusable and returnable food packaging as an alternative to single-use packaging, whereas customers (hereinafter referred to as Allas' subscribers) have different packaging choices for their orders.



Allas was launched in 2021 as an ecopreneurship initiative to solve the problem of SUP packaging waste from online food deliveries through reusable containers. Allas offers a fully reusable system, from (re)stocking and cleaning, to returning services. In the current business process, Allas charges both their subscribers and partners for every Allas container borrowed. In addition, subscribers pay a lifetime subscription fee for using Allas' containers. The company is currently managed by its two co-founders that handle strategic and day-to-day operations. Allas uses an existing online food delivery platform, realises the cleaning activities in-house, and collaborates with a bicycle courier service for their returning service.

As an ecopreneurship initiative that contributes to reducing single-use packaging waste, Allas needs to understand and calculate the cost of the reusable packaging system to ensure the sustainability of its business. Therefore, as a business, Allas and their partners need to assess the impacts of the new business model on their environmental and economic performance, as well as the relation between them. Such insights will be helpful for pricing and investment decisions, among others. Furthermore, the total cost of a reusable packaging system can be compared to the cost of the single-use packaging system to reveal the cost differences between the systems. Some differences are due to the internalisation of externalities in the reusable system. Moreover, there may be differences in incurred costs for the parties involved due to the shift from single-use packaging to reusable packaging, such as reduced waste management costs due to subscribers using reusable packaging, increased water bills for Allas. More comprehensive cost information can lead to better decisions made by the parties involved. For example, the incorporation of waste management costs into product cost calculation can motivate companies to create zero waste products.

02. Objective

The purpose of this study is to contribute to the assessment of the pilot project's performance by providing quality assessment, monitoring, and evaluation from an economic perspective. A specific objective is to provide an understanding of Allas' business model based on the qualitative assessment of Allas' subscribers' and Allas' partners'. This report focuses on the subscribers' and partners' interaction and experience with Allas' reusable and returnable containers. Based on the result of the qualitative assessment, factors influencing the economic performance of the business model, including environmental impacts, will be identified and analysed. The mid-term and final reports will discuss the assessment of the environmental impact with changes in the business model and product, and its impact on economic performance.

03. Methodology

The qualitative assessment of the pilot project is primarily based on interviews with five Allas' subscribers and the representative of two Allas' partners. This is in line with a qualitative methodology, as the purpose of this study is to understand different phenomena through the interpretation of those who have experienced these phenomena (Denzin, 1978) (Golden-Biddle & Locked, 2007). The selection processes of Allas' subscribers and Allas' partners as respondents are explained in sections 1.1 and 1.2. In addition, other data were collected through studying Allas' websites, Instagram and WhatsApp accounts, as well as the Instagram accounts of the interviewed partner representatives. The researcher also interviewed Allas' co-founders to obtain information regarding Allas' business processes. The collected data was then analysed to identify and evaluate the environmental impacts and economic performance of the business project.

Data Collection

Observation

1. Allas communications media (website, instagram & whatsapp)
2. Allas' partners Instagram

In-depth interview

1. Allas' co-founder
2. Allas' subscribers
3. Allas' partners

Data Analysis

Environmental Impact Assessment

Economic Performance Assessment

Figure 1. Methodology of study

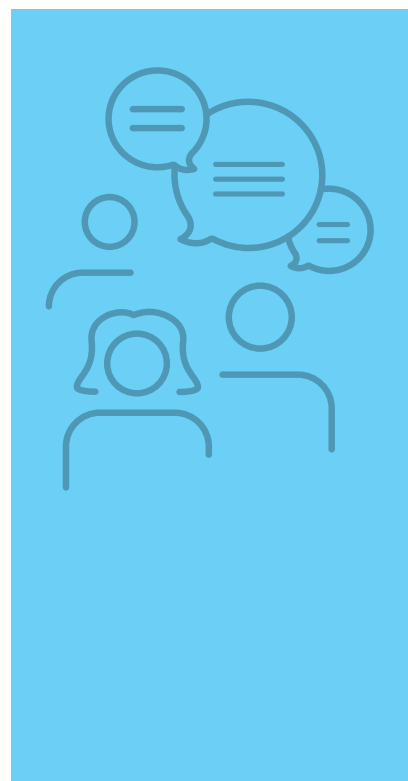
3.1 The Selection Process of Allas' Subscribers as Subscriber-Informants

Prospective informants for Allas' subscribers were chosen from respondents that stated their willingness to be further interviewed in the baseline questionnaire of this pilot project (distributed in May 2022 by The Indonesian Plastic Bag Diet Movement or GIDKP). There were 39 respondents out of 330 Allas' subscribers as of April 2022. The selection process of prospective informants is shown in Table 1.

Table 1. The Selection Process of Prospective Subscriber-Informants

Selection Process	Symbol	Number (N)
Total number of respondents	A	39
Number of respondents declining to act as informants (responding "No" or did not answer the question)	B	7
Number of respondents willing to act as informants	$C=A-B$	32
Number of respondents without identifiable contact information in the database	D	11
Number of respondents with contact information	$E=C-D$	21
Number of respondents working in one of the participating organisations in the pilot project (GIZ CAP-SEA, GIDKP, or Allas)	F	1
Number of potential informants	$G=E-F$	20

The final subscriber-informants were then selected from the 20 potential subscriber-informants. Not all prospective subscriber-informants were willing to be interviewed when contacted, some stated their objection or did not respond when contacted. In line with the purpose of the qualitative assessment, one selection criterion is the frequency of use of Allas' food containers, ranging from "I have never used Allas" to "I have used Allas more than five times". Figure 22 shows the distribution of a total of 39 respondents based on their frequency of use of Allas' food containers. The proportion of respondents who have used Allas' containers is slightly higher than those who have not used Allas. Users who have used them more than five times account for 10% of the total respondents.



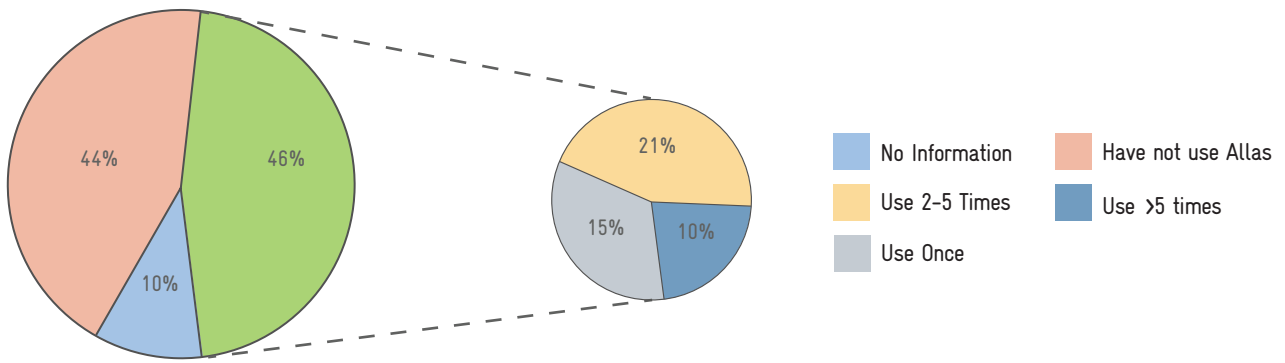


Figure 2 Distribution of Respondents (N=39) based on Frequency of Use of Allas' Food Container



Three subscriber-informants (CustA01, CustI01, and CustV01) were interviewed between the last week of July and the first week of August 2022. Based on these interviews, the researcher then decided to select additional subscriber-informants that have used Allas' containers more than once to gain more profound information regarding their experience in using Allas. As a result, two more informants were added (CustF01, CustK01) to the pool of informants, which resulted in a total of five subscriber-informants as shown in Table 2. Since data saturation was reached after the two additional informants were interviewed (CustF01, CustK01) in August 2022—meaning no new data or information was discovered—the researcher did not continue interviewing the remaining potential informants. All interviews were conducted online via Zoom. The consent of the informants was obtained prior to the interview. Table 2 shows the subscriber-informants' characteristics in this study.

Table 2. Characteristics of Subscriber-Informants

Informant	Total Daily Expense (000)	Generation	Education	Profession	Frequency of Use of Allas' Food Containers
CustA01	IDR 50 - 100	Gen Y	Bachelor	Private sector	More than 5 times
CustF01	> IDR 250	Gen Z	Master	Freelancer	2 to 5 times
CustI01	IDR 200 - 250	Gen Y	Bachelor	Professional	0
CustK01	IDR 150 - 200	Gen X	Bachelor	Housewife	More than 5 times
CustV01	IDR 150 - 200	Gen X	Vocational	Unemployed	More than 5 times

3.2 The Selection Process of Allas' Partners as Partner-Informants

Based on the list of partners on Allas' websites and WA accounts, as well as additional partners announced on Allas' Instagram accounts, there are 14 partners as of August 2022. Figure 33 shows the map of DKI Jakarta; Allas' partners are concentrated in the Southern part of the city.

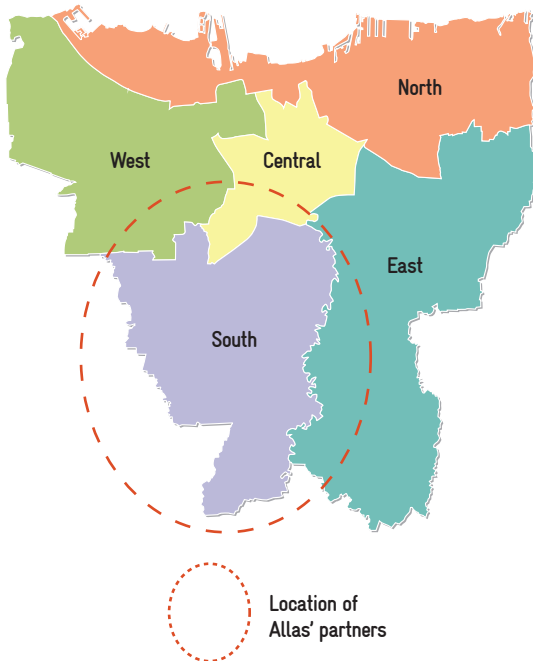


Figure 3 The Map of DKI Jakarta

First, Allas contacted its partners regarding their willingness to be interviewed for this study. Two Allas' partners were interviewed. One of them (Merch01) has been cooperating with Allas since the beginning of October 2021, whereas the other one (Merch02) has only joined Allas at the beginning of August 2022. Both partner-informants are restaurants offering Indonesian food. The interviews were conducted Via Zoom on 13 July (Merch01) and on 5 August (Merch02). The researcher obtained their consent before the interview process began.

Table 3 shows the characteristics of Allas' partner-informants for this study. Based on the number of employee criteria¹ (Badan Pusat Statistik, n.d.), both partner informants were categorised as small enterprises.

Table 3. Characteristics of Partner-Informants

Merchant	Position of the interviewee	Number of employees	Number of Locations	Monthly Turnover (in number of portions)	Use of Allas' containers
Merch01	General Manager	15	1	1000-1200	Delivery and personal catering
Merch02	Owner	17	3	3000-4500	Delivery

¹criteria used by Indonesian Statistical Bureau

04. Limitations

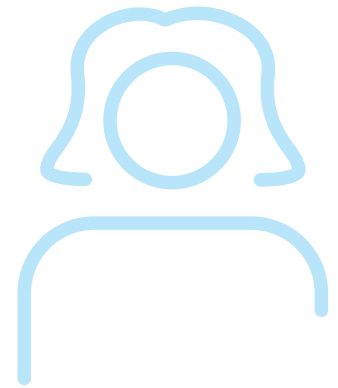
There are two significant limitations of this study:

- 1 The focus of this study is on the assessment of the economic performance of a reusable packaging system in connection with its impact on the environment. As a result, a detailed measurement of the environmental impact, for example emission reduction or carbon footprint, is not the purpose of this study.
- 2 Due to the sensitivity of financial data of organisations involved, this study will use hypothetical data for assessing the financial economic performance (in the middle and final report). For this first report, the financial data are the actual data obtained from the interviews.

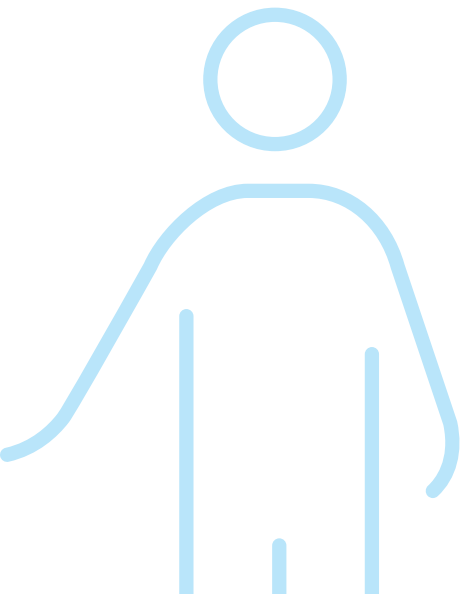
05. Results

5.1 Who, When, How, Why?

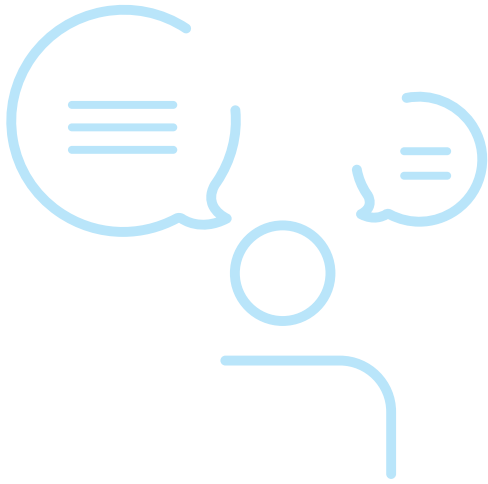
▲ **CustA01** joined Allas in 2021, triggered by the significant amount of waste from ready-to-eat food packaging during the COVID-19 pandemic. CustA01 found out about Allas on Instagram and considered it a solution for SUP pollution. CustA01 has used Allas' containers for ordering food from only one partner; last in July 2022.



▲ **CustF01** joined Allas in 2021 after being introduced to it by a friend and won a giveaway that entitled them to use five containers and a one-time pickup service. CustF01 joined Allas because it was a good way to live a less wasteful lifestyle. However, CustF01 only used Allas for about a month until the giveaway package was used up because Allas' partners are quite far from CustF01's location, which in turn causes expensive delivery charges.



▲ **CustI01** has been a subscriber for a long time, but could not give a more specific period of time. CustI01 was interested in joining Allas after reading about it on Instagram, because Allas can help reduce the amount of waste generated by ready-to-eat food packaging. The limited variety of food offered by partners was the reason why they were reluctant to use Allas' containers.



▲ **CustK01** joined Allas when their favourite restaurant began collaborating with Allas (around June 2021). CustK01 uses Allas only when ordering from this partner and believes that Allas is a good initiative for reducing their environmental impact. Currently, CustK01 is still ordering from this partner, but without using Allas' containers. CustK01 stopped using Allas' containers in the first quarter of 2022 when their request for a pickup service of used containers was not answered by Allas admin. Based on that, they assumed that Allas had discontinued its service and stopped using Allas' packaging when ordering from the restaurant.

▲ **CustV01** has joined Allas since the beginning of Allas ("...a couple of days after it has been launched (on Instagram) ..."), but CustV01 has only used its containers for the first three months because of the limited variety of food offered by partners. CustV01 joined Allas because it offers a solution to environmental problems.

▲ **Merch01** joined Allas in October 2021 and has become a very supportive, high-performance partner. Merch01 offers good vegan and vegetarian food to encourage people to eat more vegetables. Merch01 educates society by publishing information on the positive environmental impacts of eating vegetables on their Instagram account. Other than to reduce packaging waste, an important reason for joining Allas was "...to educate our customers that the environmental impact of food also comes from its packaging...we expect that those who order our food can experience it with no waste 100%...".

▲ **Merch02** became Allas' partner at the beginning of August 2022. Merch02 has a mission to introduce Indonesian eating culture to gen Z by offering food from many regions of Indonesia. Merch02 hosts many related events in collaboration with their suppliers and communities. Merch02 joined Allas "...to reduce our sin (to the environment) ...our customers deserve better options so they will feel less guilty...". A sustainable profit is their value.

Based on the interviews, it can be concluded that all subscriber-informants and partner-informants have a high level of environmental awareness. All subscriber-informants have used some form of reusable alternatives instead of single-use items (e.g., reusable shopping bags and straws), they separate their waste, and have opted against single-use packaging when ordering online. Moreover, two of them have used Siklus Refill, a start-up offering a refill-at-home service for household products, and one frequently uses food containers for takeaway orders. As for partner-informants, their environmental awareness is shown through their motivation in joining Allas.

5.2 What are the characteristics of Allas' containers?

One partner-informant stated that Allas has met different quality and vendor responsiveness criteria (their two top criteria for packaging, other than price). The other partner-informant mentioned that Allas' containers fulfil standards such as food safety, aesthetics, quality, and space-saving (collapsible) criteria. Both do not have an issue with the price charged by Allas for every borrowed container and agree that the price is comparable to their current single-use packaging. In fact, one partner even said that Allas' price is lower than the value it offers. a

The subscriber-informants' opinion is also in line with that of partner-informants. In summary, all subscriber-informants stated that Allas' containers have met certain criteria of good packaging, such as aesthetics, cleanliness, good quality, and leak-proof seal. The collapsible nature of the containers is an additional advantage for one subscriber-informant since it saves storage space. Some subscriber-informants suggest to also provide reusable packaging for condiments to reduce the use of small-size single-use sachet packaging.

5.3 Allas' Business Processes from February to August 2022

This section discusses Allas' business processes as experienced by the interviewees, both subscribers and partners, up to the time of the interviews (second week of July to third week of August). The analysis of business processes is consistent with information gained by the researchers through interaction with Allas between the fourth week of February until the third week of August 2022. After this period, Allas has carried out some adjustments to its business process. As a provider of reusable and returnable containers, Allas needs to reach out to many prospective partners (F&B merchants) and subscribers.

5.3.1 Preparation process

■ The registration process for Allas' subscribers

First, new users need to register as subscribers on its' websites by providing some data (name, postal code, WhatsApp number). Then they receive a notification to connect to the WhatsApp number of the Allas admin. As shown in Table 4, there are three types of packages.

Table 4 . ALLAS' packages for subscribers

Package Type	Fee	Benefits		
		IDR 20,000 returnable lifetime deposit	Usage frequency	Free one-time pickup for returning used containers
First Timer	IDR 23,000	✓	1 time	✓
Eco	IDR 35,000	✓	5 time	✗
Friendly	IDR 49,000	✓	5 time	✓

After selecting a package and transferring the fee through bank transfer, subscribers will be assigned a unique number—their UserID. The UserID is used for ordering and returning. When a package has been used up, subscribers can buy an additional package (Eco or Friendly package) without having to pay the IDR 20,000 deposit. Figure 4 A shows the flow of Allas' subscribers' registration processes.

As shown in Table 4, the First Timer and Friendly packages include a one-time pickup service arranged by Allas. This service costs IDR 15,000. For the First Timer package, Allas bears the cost of pickup service. Yet for the Friendly package, Allas does not profit from this fee, and the whole amount is paid to Westbike. All three packages charge a usage fee of IDR 3,000 for each container. However, due to internal miscommunication and unclear terms, some subscribers were charged IDR 3,000 for each usage, regardless of the number of containers used.

■ The onboarding process for Allas' partners

Allas contacts potential partners to discuss its container solutions, available support or training regarding Allas' business processes. After joining the partner pool, partners need to add "Alas makan" as an option in the "customise the dish" section for every menu that will use Allas' containers. Allas then initiates the first stocking process with 10 to 15 containers. Figure 4B shows the onboarding process for new Allas' partners.

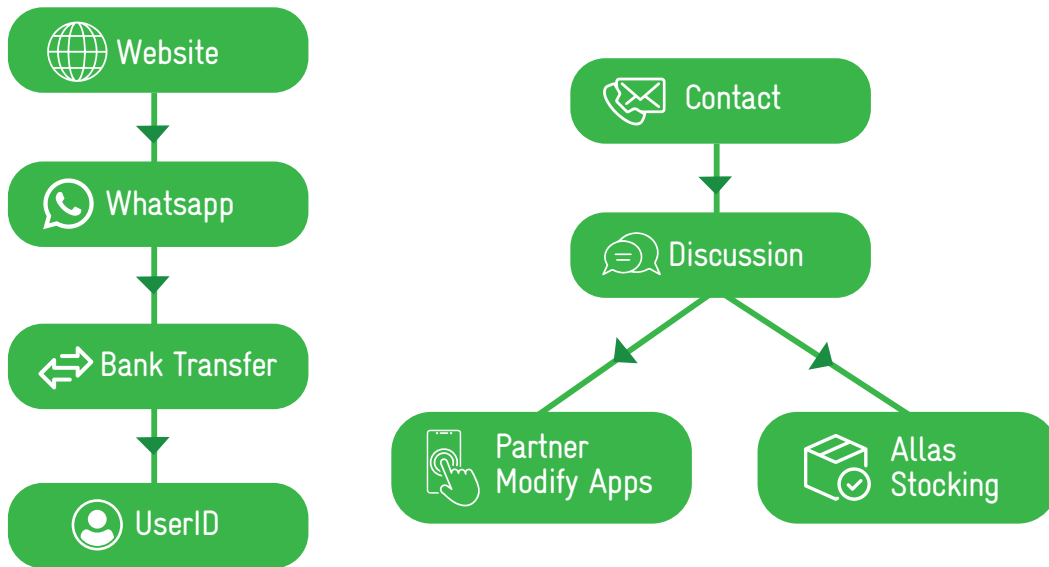


Figure 4 . (A). Registration Process for Allas' Subscribers; (B). Onboarding Process for Allas' Partners

5.3.2 Processes involved in interaction among subscribers, partners and Allas

Figure 5 shows the business process of the reusable container system of Allas. Allas interacts with several parties; Allas' subscribers and Allas' partners are the main focus of this study. A detailed explanation of each process is provided below the figure.

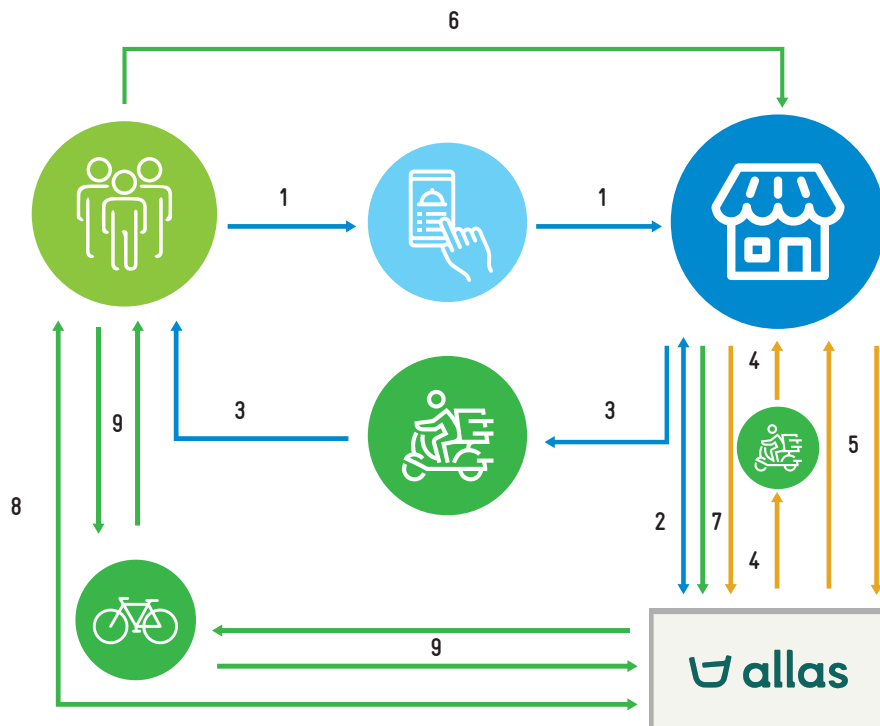





Figure 5 .The Interaction among Subscribers, Partners, and Allas

Notes:

△ Main participants: ,  Allas' subscribers,  Allas' partners

△ Supporting participants:  online food delivery platform,  online delivery courier,  Westbike

△  A line with double arrows represents an exchange of information between two parties at the same time

△  Two lines with arrows in different directions represent a delay in the exchange of information between two parties, eg.: several actions from one party at different time are responded to by one action by another party

△ **Blue** lines show order fulfilment processes that consist of:

1. Ordering
2. Fulfilling an order
3. Delivering orders to subscribers

△ **Orange** lines show restocking and invoicing processes that consist of:

4. Reporting and restocking containers
5. Invoicing and payment

△ **Green** lines show the returning process as follows:

6. Returning used containers from subscribers to partners
7. Returning used containers from partners to Allas
8. Contacting subscribers for returning
9. Returning used containers from subscribers to Allas

Order fulfilment processes

▲ (1) Ordering process by subscribers

Allas' subscribers can order from Allas' partners through any online food delivery platform, e.g., Go Food and Grab Food. In the "customise the dish" section, the subscribers choose "Alas makan" and add their UserID to the notes. The remaining steps are identical with regular ordering processes.

▲ (2) Fulfilling the subscribers' orders by partners

The partner's staff need to check the "customise the dish" section whether there is a request for Allas' containers and whether a UserID for Allas was specified. The partners will then contact Allas to ensure that the UserID is valid and that it is still covered by an active package. If the package is active, the partners will use Allas' containers to deliver the order; otherwise, they will use their regular packaging. Allas' subscribers do not get notifications regarding the balance status of their package and have to contact Allas' admin to get that information.

4 (3) Delivering orders to subscribers

After the order is ready, partners will have the order delivered to the subscriber using a courier service of the chosen online food delivery platform.

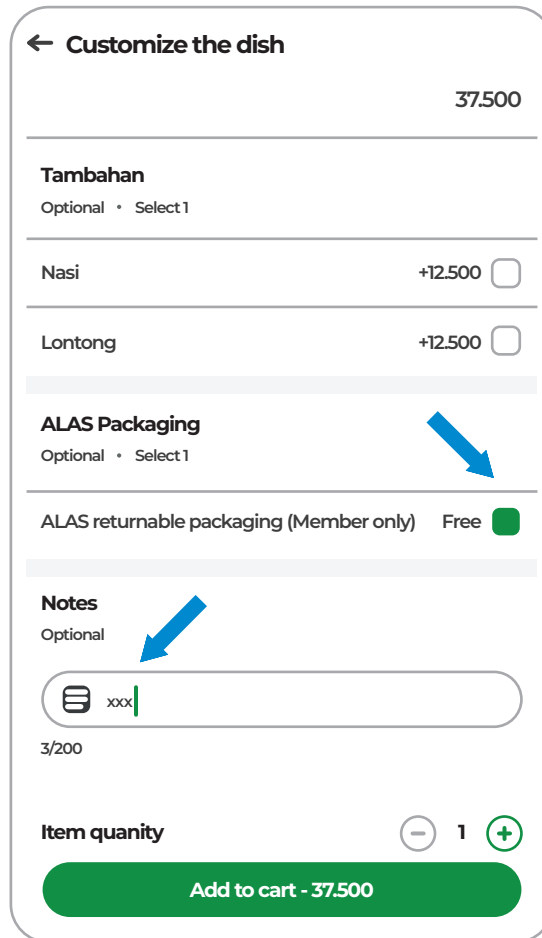


Figure 6 Allas Packaging Option on Online Food Delivery Platform

Restocking and invoicing processes

4 (4) Reporting and restocking

Every time a subscriber places an order, the partner will record the UserID and the number of containers borrowed, then report that information to Allas periodically. Therefore, Allas' has a record of the number of containers borrowed by each subscriber and the number of remaining containers at each partner restaurant. Based on that record, Allas will contact its partners who have low stock of Allas' containers and advise them to fill up. There is no specific quantity set to trigger the restocking process, as this number is determined by frequency of use of Allas containers for each partner. Apart from that, partner restaurants can also contact Allas to request additional containers. Allas will send the containers via motorbike courier immediately. For each restocking, Allas usually sends out 10 to 15 containers. However, for high-performing partners, Allas will send up to 20 containers.

▲ (5) Payment process

The amount of money paid by the partners depends on the number of containers borrowed by the subscribers. Based on a periodic report on the number of borrowed containers by the partners, Allas will prepare monthly invoices for each partner and submit them to its partners for confirmation and payment.

Returning used containers

The subscribers have up to 14 days to return Allas' containers. To ensure a proper recording process, each subscriber has to specify their UserID when returning their containers. Allas has a record of borrowed containers by UserID from data provided by its partners periodically. There are two options for returning borrowed containers, i.e.:

1 Return arranged by subscribers

▲ (6) Subscribers return used containers to the partners

The subscribers can personally drop off used containers at any partner restaurant (no additional fee is charged) or have a courier pick them up and return them to any partner restaurant or Allas' office (at the subscribers' expense).

▲ (7) Partners return used containers to Allas

The partners will contact Allas to inform them about the number of containers returned by the customers. Allas will either send a motorbike courier right away or schedule the pickup for the next restocking at the partner restaurant, depending on the number of remaining containers at Allas and the next scheduled restocking.

2 Return arranged by Allas

▲ (8) Contacting subscribers for returning

Every Thursday the Allas admin will contact those subscribers who have borrowed containers for a pickup arrangement.

▲ (9) Picking up used containers from subscribers for drop-off at Allas

On Friday, Allas will contact Westbike (a bicycle courier service) to pick up the containers at the subscriber's current address. Westbike will drop the used containers at Allas' location. If the package bought by the subscribers covers the return of borrowed containers, no additional fee will be charged. Otherwise, they have to transfer the fee to Allas via bank transfer.

5.3.3 Allas' internal processes

Cleaning process

Allas collects all used containers (either directly from its customers or through its partners) and scans the QR code of each returned container to ensure a proper recording process. Having done that Allas prepares them for washing by dismantling all containers into their components, including the elastomer rubber. Washing is done manually, then the containers are air-dried. Once the containers are dry, they are stored in a dry closed place. The dishwasher is wearing an apron, gloves, and a hairnet during the cleaning process.

Recording and Restocking process

Every container has a unique QR code. Allas will scan the QR code before sending them to a specific partner restaurant. Based on a regular report provided by its partners, Allas has a record of how many remaining containers each partner has. Thus, Allas contacts partners who have low stock of Allas' containers and suggests to restock them. The partners can also contact Allas to request additional containers. In that case, Allas sends the containers via motorbike courier immediately.

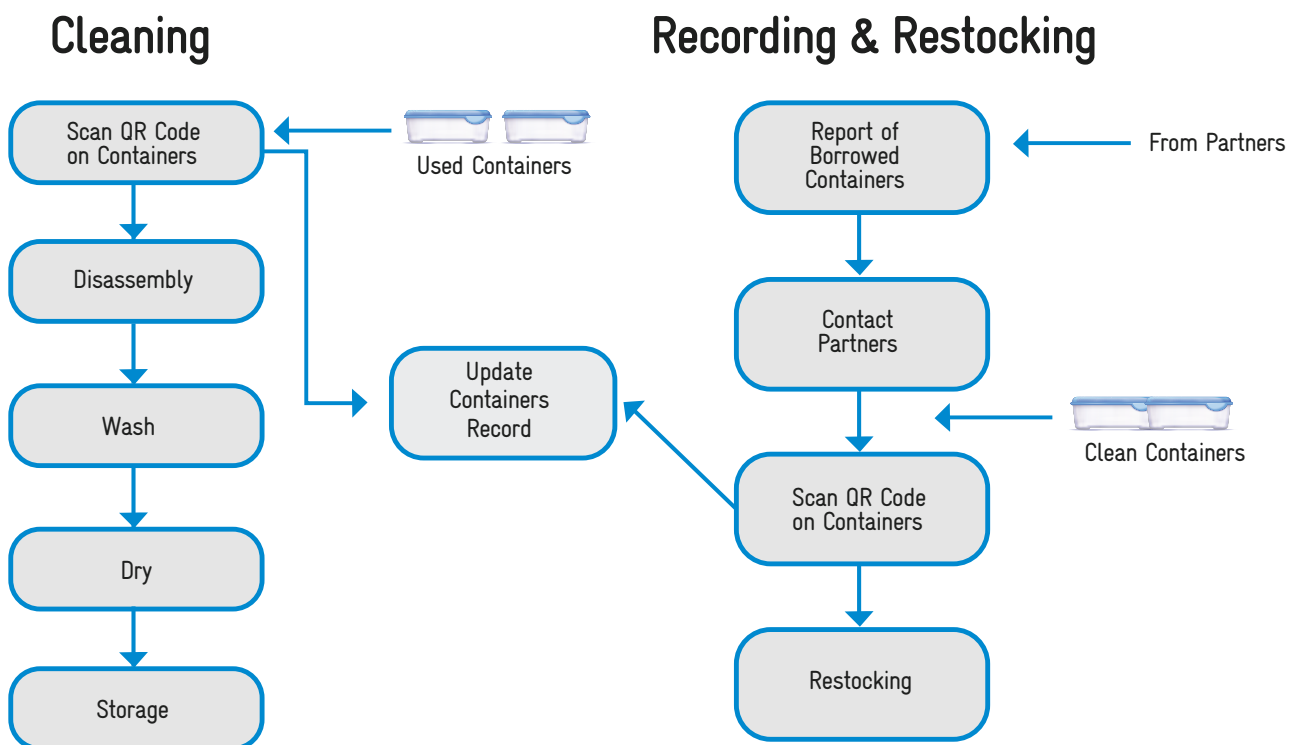


Figure 7. Allas' Internal Process: Cleaning and Recording & Restocking

5.3.4

Comments on Allas' business process from subscriber-informants and partner-informants

Registration process

One subscriber-informant found the registration process was inconvenient since they also had to use WhatsApp instead of completing the registration process on the website.

Ordering process

One subscriber-informant did not have any difficulties when ordering because they had been previously briefed by the Allas admin, who, as many informants reported, was very responsive when answering their questions. Another informant thinks that the process is easy for those familiar with the technology. To avoid mistakes and confusion, an informant suggested clearer instructions in the online food delivery application form. In addition, step-by-step video instructions given on Allas' Instagram were considered useful.

Yet another informant found that Allas' ordering process was inconvenient since it required access to three applications: an online food delivery platform for placing the order, the Allas website or Instagram to check up-to-date partners, and the Allas admin WhatsApp to confirm package availability. As a consequence, they have only ordered from one partner restaurant. This is also the reason why their friends are reluctant to join Allas, even though they have some environmental awareness. Another informant also experienced this inconvenience but accepted it as a trade-off for a more environmentally friendly alternative to the existing system.

Returning process

Three subscriber-informants chose to use the pickup service arranged by Allas via Westbike for convenience. They collected the used containers up to a certain quantity to make "good use" of the returning fee. One subscriber-informant who has not yet used Allas' containers also intends to opt for the pickup service— either via Westbike or other alternatives. There was a misunderstanding reported by a subscriber-informant when returning used containers via the pickup service. The Westbike courier identified themselves as Gojek couriers, which created confusion since Allas had informed the subscriber that the container would be picked up by a bicycle courier.

Cleaning process

Overall, all subscriber-informants were satisfied with the cleanliness of Allas' containers. They did not only rate the cleanliness of the containers, but also the cleanliness during the delivery and the returning process. One subscriber-informant assumed that washing activities were carried out by the partners. They suggested that the idea of having drop-off points other than partner restaurants or a collaboration with the waste collection system should be accompanied by clear instructions to ensure proper handling of the containers (food versus non-food related containers).

Recording process

One subscriber-informant and one partner-informant have experienced a discrepancy between the recorded number of Allas' containers used; Allas' record indicated a lower number than theirs. Both informants were concerned about the impact of such a discrepancy on Allas' profitability. Differences between Allas' records and the subscribers' records might be due to the partners' recording and reporting processes. Inaccuracies in recording has had an impact on the timeliness of invoicing and payment from the partners.

5.4 How has Allas communicated business model changes and initiatives?

This section discusses Allas' business processes as experienced by the interviewees, both subscribers and partners, up to the time of the interviews (second week of July to third week of August). The analysis of business processes is consistent with information gained by the researchers through interaction with Allas between the fourth week of February until the third week of August 2022. After this period, Allas has carried out some adjustments to its business process. As a provider of reusable and returnable containers, Allas needs to reach out to many prospective partners (F&B merchants) and subscribers.

Information about Allas' partners

Allas has three main communication channels: their website, Instagram account, and WhatsApp account. Some of the information about partner restaurants provided via these three channels is inconsistent. Allas provides a list of its partners on its websites and WhatsApp accounts. In addition, Allas has also listed its partners in one of its Instagram feeds (posted on 14 April, 2022). All three media have a list of 10 participating partners, but the details are different. According to a post on Instagram, two new partners have joined Allas (on 1 May and 5 August, 2022) as well as one new location of an existing partner (on 18 May, 2022). However, that information was not consistently included in the list of participating partners on all three media. Based on partner information provided by all three media, Allas has had 14 partners by the third week of August 2022. Two of the subscriber-informants specifically stated that they were not aware of the addition of new partners.

Change in the subscription scheme

According to communication with Allas, the subscription scheme for subscribers was changed in June 2022. Table 5 compares the different subscription schemes. Three subscriber-informants who had been using Allas were not informed about this change, while one received the information but did not understand it. One informant misunderstood the deposit required for both subscription schemes by thinking that it was a monthly payment. Information about the subscription scheme and the changes cannot be found on Allas' Instagram account and website. Prospective subscribers will get information and an explanation about the subscription scheme when contacting the Allas admin via WhatsApp.

Table 5. Comparison between Old and New Allas Subscription Scheme

Component	Old Subscription Scheme	New Subscription Scheme
Returnable lifetime deposit	IDR 20,000	IDR 50,000
Borrow charge per container	IDR 3,000	-
Pickup fee arranged by Allas for every pickup	IDR 15,000	IDR 15,000

The new subscription scheme was regarded as positive by subscriber-informants and partner-informants because it simplifies the ordering process. It eliminates the process of manually confirming the user UserID to the Allas admin for the partners as well as checking the available containers by both the partners and the subscribers. Since the reply from the Allas admin is not an automatic message, this also reduces the waiting time for subscribers when ordering and the order fulfilment process by the partners. However, three subscriber-informants said that these improvements do not necessarily encourage them to use Allas more often.

Product: Personal/daily/family catering

In addition to providing containers for restaurants, Allas' new product is to provide food containers for businesses offering catering services. Allas' containers have already been used for catering services by the existing partners (in addition to delivery or take away orders), but this new offer is targeted at catering businesses. Although Allas posted this information on its Instagram account on 4 August, 2022, two of the subscribers interviewed after that date were not aware of the new service.

Product: Event catering

Allas has offered its food containers directly to some of its subscribers or even potential subscribers for event catering with a minimal number of containers. Here, subscribers can order from restaurants that are not an official partner of Allas. Allas has not published any information about this service yet. Three subscribers voiced their interest when receiving this information:

△ **CustA01:** “very interesting”

△ **CustF01:** “I may use Allas again when I arrange a gathering... we can choose (the restaurants) freely, maybe those nearer to where we live” (this subscriber discontinued using Allas since the location of Allas’ partners is far from their house)

△ **CustV01:** “interesting... (since) it has a larger impact”

Product: Cup

In addition to offering reusable food containers, Allas’ new initiative was to offer reusable cups to its existing partners and coffee shops. Allas announced this initiative on 27 June, 2022, on its Instagram account. Three informants considered this a good initiative. Only one informant was aware of this service, and they remembered suggesting the idea to Allas in a previous interview.

Bicycle courier service

Allas has used Westbike, a bicycle courier service, for picking up used containers from its subscribers. All informants appreciated this initiative, including one informant who has not used Allas’ containers. Information about this collaboration was posted only once on Allas’ Instagram account in December 2021, but there was no information about this collaboration on the courier service’s Instagram account.

5.5 What are the benefits of joining Allas?

Based on the interviews with its subscribers, partners, and Allas’ co-founders, three categories of benefits are identified: economic, environmental, and social. The following sections will explain each in detail.

5.5.1 Economic benefits

This section lays out the positive and negative economic benefits of the reusable packaging system experienced by Allas' subscribers, Allas' partners, and Allas itself based on their interaction up to the third week of August. There are also some suggestions of potential economic benefits based on the current business process.

Economic benefits for Allas' subscribers

All subscriber-informants stated that the financial benefit was not a decisive motivation to join Allas and, according to their experience so far, they have not saved any money by using Allas. Three of them mentioned additional expenses from using Allas' containers due to the relatively high menu price offered by the partners (two informants) and the returning mechanism that generates additional costs (one informant). One informant highlighted the potential economic benefit of a personal catering service using Allas because the returning process is realised simultaneously with the delivery of the next day's meal, which eliminates additional returning activities and cost. To encourage more people to choose a reusable packaging system, one informant suggested a complete cost comparison between single-use and reusable packaging systems including waste management costs and the value of other benefits offered.

Economic benefits for Allas' partners

Merch01, which joined Allas quite some time ago, has not experienced any economic benefit in the form of cost savings as Allas only accounts for a small share of its business activities (about 1% of total sales). Merch02, who just joined Allas at the beginning of August 2022, acknowledged the learning process of the reusable packaging system both for Allas and themselves at this point to gain an economic benefit from this initiative. However, both believed that the price offered by Allas for a completely reusable process (stocking, cleaning, and returning) is competitive with the current price of single-use packaging. In addition, Merch02 pointed out the potential of using Allas' containers as a unique selling point and a source of economic value added for SMEs. Although both informants were aware that payment for Allas' containers is done after using them, they did not consider this as an economic benefit.

Two subscriber-informants suggested that Allas could utilise the current practice of online food delivery platforms that allow merchants to add packaging fees on top of the ordered amount. However, a mere addition of packaging fees as explained before will not highlight the existence of the reusable container system offered by Allas (related to Allas' branding and expected changes in behaviour). Therefore, the other two informants suggested that the subscribers should be the ones who make the packaging choice—whether to use single-use or reusable packaging—, although the price of single-use and reusable packaging may be comparable.

Economic benefits for Allas

Other than bearing the investment cost of reusable containers, as a start-up and pioneer in reusable packaging systems for the F&B industry, Allas needs to introduce the reusable packaging system to both prospective F&B merchants and subscribers. To encourage the adoption of this system by merchants, Allas has offered a free trial period at no cost to interested merchants. Discussion with Merch02, who is in the trial period, reveals that they are not aware of the actual duration of the trial period. Furthermore, subscribers of the First Timer package will not be charged for returning the containers via pickup service since this cost is borne by Allas.

5.5.2 Environmental benefits

All informants, both subscribers and partners, are aware of the environmental benefits of joining Allas in terms of reducing single-use packaging waste generated by online ready-to-eat food delivery. The materials used for single-use packaging were identified by this study as plastic, paper, and laminated paper. The subscribers contribute to this initiative by choosing an eco-friendlier packaging alternative, while partners contribute by offering the option. As explained in the previous section, environmental benefits were the driving force for them to join Allas. Furthermore, a subscriber-informant mentioned the aspect of time-saving (efficiency) due to less waste management efforts as another benefit.

Merch01 has tried to integrate reusable food packaging into its catering business to reduce packaging waste, but the hassle of picking up the used containers has made them stop participating in the initiative. Therefore, they now greatly appreciate the existence of Allas and its business model; their exact words were "...Allas is a blessing...".

To boost the adoption of reusable packaging systems by those with a lower environmental awareness, both subscriber-informants and partners-informants suggested different initiatives, such as:

- ▲ Using more day-to-day terms in their communication;
 - Translating environmental benefits into more immediate benefits, such as financial or
- ▲ non-financial;
- ▲ Marketing through education by working with schools and communities; and
- ▲ Clear positioning through branding.

As mentioned before, all subscriber-informants value Allas as a solution to reduce single-use packaging waste from online food delivery. When asked about the negative impacts of Allas' business process, they could not immediately think of any. After further discussion, three subscriber-informants mentioned the carbon footprint of returning process, two mentioned additional water usage, and one mentioned wastewater. One subscriber-informant went even further by mentioning that Allas, together with its subscribers and partners, need to ensure proper

maintenance of the containers to prolong their life; otherwise, their environmental impact would be higher than that of single-use packaging. Furthermore, they considered the integration of a bicycle courier service in the returning process as a positive initiative to support a more comprehensive, eco-friendly reusable packaging system. After realising that there are some negative environmental impacts, one informant said that the other negative impacts will be offset by the benefit of reducing single-use packaging waste.

5.5.3 Social benefits

One subscriber-informant mentioned the potential social benefit of this system as long as Allas ensures a fair compensation for its employees and fair prices for its partners. They also mentioned the possibility of an equal access to a more environmentally friendly lifestyle for all parts of society through cross-subsidisation, by using a portion of the price charged to enable others to experience this initiative. Therefore, the realisation of these social benefits requires information transparency by Allas.

06. Analysis

This section analyses potential further environmental and economic benefits from Allas' current business process, and the relation between them.

In addition to analysing the interviews and Instagram accounts of partner-informants, the researcher also analysed the Instagram accounts of the remaining 12 partners. Based on those analyses, it can be concluded that all of them have some degree of environmental consciousness and that they can be categorised as SMEs. In line with Allas' value to reduce negative environmental impacts from food packaging waste, it is easier to collaborate with businesses that have similar values as early adopters. Moreover, as discussed in an interview with the co-founder of Allas, previous attempts to work with large companies have failed due to the required adjustments of their existing Standard Operating Procedures and a long hierarchical decision-making process. SMEs are more open to this initiative since they are more flexible in adapting their business process and the involvement of owners in day-to-day operation facilitates a faster decision-making process. Furthermore, to collaborate with a bigger partner, Allas needs to have a more defined procedure to handle a higher number of transactions and higher demand for data validity.

All subscriber-informants have shown values and characteristics similar to those of the partners. They are willing to try a new, more eco-friendly alternative even though the system itself is still in its infancy. Currently, Allas is in the process of improving its application procedure to simplify

registering and ordering processes as a response to the inconveniences experienced by some subscriber-informants. The elimination of pay-per-borrow by subscribers in the new subscription scheme is an effort toward improving the system. Other than simplifying those processes, the application is intended to also facilitate the tracking of containers and the measurement of environmental impacts, both positive and negative. The application should be fully utilised to increase its contribution to achieving a better environmental and economic performance. The tracking of containers can help Allas identify actions to facilitate a faster return of its containers. With a faster return process, Allas will need a reduced quantity of containers to serve the same number of customers over a certain period of time, compared to the quantity needed with a slower return process. This will reduce the environmental impacts due to less resources being used in the production and disposal of the containers, which at the same time reduces the investment tied up in the process.

The mapping of the comprehensive environmental impacts of its business processes (packaging waste reduction, increase in carbon footprint from transportation/reverse logistic, and increase in water usage and wastewater from washing activity) will contribute to prioritising environmental initiatives, in terms of its positive impact on the environment and economic performance.

Interviews with two partner-informants have shown that their environmental consciousness has influenced their decision to join Allas. They considered Allas as an enabler in pursuing their values. From their point of view, they are not only selling food but also communicating the value that defines their products and business practices. Similar characteristics regarding environmental consciousness are also found in subscriber-informants. Because of this characteristic, the information about their contribution to saving the environment is valuable. Therefore, Allas needs to measure and communicate the environmental impacts of the collaboration regularly to motivate more potential partners to collaborate with them in the future. Allas has measured the quantity of single-use packaging saved, but it has not communicated it externally yet. In terms of business sustainability as an ecopreneurship initiative, Allas needs to incorporate the environmental impact in its business decisions and consider their impacts on its economic performance. For example, when deciding on a reusable container material, Allas should also be aware of the disposal process at the end of its life and/or the lifetime of frequently used containers for various F&B, which will influence the costs involved.

The success of this reusable packaging system is influenced by Allas' collaboration with its subscribers and partners. Allas can introduce ways to increase the subscribers' roles by pointing out the environmental impacts of their behaviour via its communication channels and social media. Washing containers before returning and storing the containers properly is part of the activities to

preserve the containers without significant additional investment (i.e.: soap and water) by the subscribers. In addition, creating awareness that a faster return by the subscribers means that fewer containers will be needed (in other words, Allas doesn't need to procure new containers) to serve the same number of customers, which in turn results in a lower environmental impact, may be an incentive for more action. One subscriber-informant mentioned that less packaging waste resulted in less time spent for waste management activities. However, they did not associate this with an economic benefit. Less packaging waste means that their waste will be picked up less frequently, which results in cost savings. By joining Allas, the subscribers also help reduce the negative environmental impact of more waste and resources being used because the same number (existing) of reusable containers can serve more orders and more customers. If the number of takeaway orders is relatively high, this can also reduce the cost of procuring the new containers and storing them.

One issue mentioned several times by subscriber-informants is the limited number of merchants listed as Allas partners. Allas' current strategy to focus on recruiting new merchants is in line with the issue. However, without publishing updated information on participating merchants via its communication channels (website, Instagram, and WhatsApp), Allas' efforts will not be noticed by potential and existing subscribers. Moreover, this may harm its relationship with partners, who might want to use their collaboration with Allas to show their commitment to reducing the negative environmental impacts of their business. Allas can also use this for cross-promotion with associated partners to increase awareness and, subsequently, sales at a relatively low cost of marketing. For example, when posting information about reducing single-use packaging waste by using Allas' containers on its Instagram accounts, Allas could mention all of its partners, including on its websites. In return, Allas may ask its partners to repost it or mention Allas in their related postings.

Interviews with partner-informants revealed that they paid for Allas' containers after using them, as opposed to the upfront payment required when buying single-use packaging. The difference in the time of payment has the potential to contribute to the partners' cashflows. Online food delivery platforms allow merchants to add the packaging fees on top of the ordered amount, which will allow Allas' partners to easily pass the packaging costs—whether single-use or reusable—to their subscribers. With proper information and communication, this feature will reduce the partners' reluctance in adopting Allas and it will ensure cost transparency for the subscribers.

Based on interviews with Allas, the subscription scheme was modified to simplify the ordering process for all parties involved—subscribers, partners, and Allas itself. The new scheme is intended to eliminate the hassle for the subscribers and also for Allas to keep track of the remaining package balance. For its partners, it will eliminate the additional confirmation step in the order fulfilment process. Both subscriber-informants and partner-informants confirmed the benefits of the new system when interviewed. Another concern of prospective subscribers related to the cleanliness of the containers, as the cleaning process is one of the services offered by Allas.

Subscriber-informants and partner-informant have agreed that Allas has maintained good cleaning practices so far. However, the lack of information about the cleaning procedure on Allas' communication channels may offset their benefits, especially for potential subscribers that are concerned about this issue.

07. Conclusion

Outlined below are some conclusions from the qualitative assessment:

- 1 Allas has simplified its business processes, collaborated with new merchants, and offered new initiatives to better serve its subscribers and partners. These changes and new initiatives are expected to result in a more frequent usage of Allas' containers as substitutes for single-use packaging, especially plastic, and an increased number of subscribers and partners.
- 2 Allas has not elaborated on its relationship with its subscribers, and partners, and courier partners, to promote a reusable packaging system to the wider society. The initiative offered by Allas is relatively new, at least for the Indonesian market, even for those with higher environmental awareness. By collaborating with parties that share similar values, Allas can reduce the reluctance to change and gain support to access even more communities.
- 3 Subscriber-informants and partner-informants have not required Allas to map, measure, document, and communicate the total environmental impacts of its business processes. They believe that Allas helped them protect the environment through the reduction of single-use packaging waste. However, they are not aware of other environmental impacts of this system. Since their motivation is mostly to reduce any negative environmental impacts, Allas' initiative to do this will exceed the stakeholders' expectations and can create a competitive advantage if communicated effectively.
- 4 Since immediate and significant economic benefits are not experienced by both subscriber-informants and partner-informants, they stated that Allas' reusable packaging system does not offer such benefits, at least at the current stage. However, some have pointed out the potential, such as for personal catering or given the competitive price charged by Allas in comparison to the price of single-use packaging. Furthermore, a limited understanding of the business process prevents them from understanding the economic benefits of the reusable system.

- 5** To approach and attract new subscribers and partners with different levels of environmental consciousness compared to its current subscribers and partners, Allas needs to use different types of communication when comparing the cost and benefits of single-use packaging and reusable packaging. Information on economic benefits and other advantages along with environmental benefits will give a clearer and more comprehensive picture of the benefits of a reusable packaging system.
- 6** Based on the interviews and an analysis of Allas' communication channels, it can be concluded that Allas has not used its communications media effectively. A proper utilisation of its communication channels in this digital era is essential, especially since these are the main channels that Allas uses for communicating with its subscribers and partners.

08 Recommendations

To improve Allas' business process and expand its market in terms of subscribers and partners, the following recommendations can be made:

- 1** Allas needs to utilise its communication channels effectively to communicate with its subscribers and partners. In addition, regular and consistent updates across all media are required to keep their users engaged. This will also avoid the inconvenience of receiving frequent WhatsApp chat requests. However, communication via WhatsApp should be treated carefully by obtaining prior consent from the subscribers. The following lists contain some content suggestions that can be communicated via all communication channels of Allas:
 - ▲ List of updated F&B merchants partnering with Allas;
 - ▲ Processes and information relevant to subscribers and partners;
 - ▲ Contribution to reducing the environmental impact of food delivery service, e.g., through reducing single-use packaging, CO₂ emissions, and so on;
 - ▲ Cleanliness standard and transparency of cleaning process;
 - ▲ Current and planned initiatives, as well as their progress; and
 - ▲ Any changes that affect subscribers and partners.
- 2** To increase food variety, Allas may consider collaborating with prospective F&B merchants with some level of environmental awareness even though they do not necessarily offer vegan or vegetarian food. Allas should also consider the price range of menus offered by its partners since it may be regarded as an additional cost by subscribers.

- 3** Improve communication and create collaborative initiatives with subscribers, F&B partners, and courier partners. An example could be a collaboration with the subscribers and F&B partners requesting the online food delivery services to transparently display the costs of single-use and reusable packaging in the ordering process.
- 4** Related to environmental impacts, Allas should:
- ▲ Identify the environmental impacts (both positive and negative) of its business process comprehensively.
 - ▲ Map, measure, document, and communicate all of its environmental impacts by type and product type to set priorities in reducing negative environmental impacts, improving its business processes, and choosing products to be offered or promoted.
 - ▲ Report the achieved single-use packaging reductions and CO₂ emission reductions to the Environmental Agency of DKI Jakarta Province. This could be considered as Allas' commitment to supporting waste reduction. In return, Allas could request technical assistance from the Environmental Agency of DKI Jakarta Province to validate and verify whether their CO₂ emission reduction calculation is appropriate or not, referring to the national GHG emission methodology/standard. Pointing out this value and showing the province's support can strengthen Allas' image both as perceived by the public and/or potential investors/partners.
- 5** Currently Allas has focused more on convenience and achieving its environmental performance when choosing and implementing an alternative course of action, e.g., when changing its subscription scheme or offering a free trial period to prospective partners. Although upfront investment is usually associated with start-ups that have a new business model, Allas needs to consider how such initiatives, including those intended to reduce negative environmental impacts, will affect its economic performance.

09. Lesson Learned

This study has identified some important lessons that should be considered by those who intend to offer reusable packaging systems. First, they need to determine the environmental impact of all business processes (both positive and negative) and their influence on their economic performance. Second, they need to collaborate with all related parties. In addition to working with customers and F&B merchants, collaboration with providers of online food delivery platforms could significantly increase the acceptance of reusable packaging

systems. The inclusion of Allas in the online application can simplify order fulfilment services for all related parties. Arranging the returning service through the same application would be another added bonus. Finally, an effective communication strategy is important, and may even require a dedicated employee to handle this matter. Communications media should not only be used for promotion but also for communicating every new achievement and collaboration. Since this is a new initiative, marketing campaigns should also focus on education to build awareness.

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