



The 2nd Qualitative Assessment of Reusable Food Packaging
(Monitoring & Evaluation period 4th week of August – 4th week of Oct 2022)
Case study: Allas by Enviu, Indonesia

November 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 delivery.

The Collaborative Actions

The objective of this study is to provide an understanding of reusable packaging business model, reflecting from Allas as the case study, from the point of view of Allas' subscribers and Allas' F&B partners toward reusable initiative. This qualitative assessment is based on a qualitative methodology. For this 2nd qualitative assessment, data are collected through interviews with Allas' co-founders and additional Allas' F&B partners, as well as observations of online communication media of Allas and its partners. The data are then analysed to identify Allas' business processes' environmental impacts and to assess their influence on economic performance.

This 2nd qualitative assessment report is divided into 9 sections:

- ▲ Section 1 provides the contextual background about reuse service as a new scheme that is being pilot tested in DKI Jakarta Province under the CAP SEA project.
- ▲ Section 2 provides the objective of the 2nd qualitative assessment to assess the impact of changes during the monitoring and evaluation period of 4th week of Aug to 4th week of October 2022.
- ▲ Section 3 presents the methodology framework for parameters that are monitored and evaluated, data collection, data analysis and recommendations development.
- ▲ Section 4 highlights the limitations of this 2nd qualitative assessment.
- ▲ Section 5 presents eight parameters have been identified and selected to assess environmental impact and economic performance, they are:
 1. Number of F&B partners;
 2. Number of subscribers;
 3. Number of active users;
 4. Number of borrows (units);
 5. Weight of single-use packaging avoided;
 6. Return rate;
 7. Cycle time; and
 8. Complete, consistent, and up-to-date information across all online communication media.

- ▲ **Section 6** summarizes the results of observation and interviews into Allas' online communication media, Allas' container, changes in the subscribers' pricing scheme, and subscribers' and F&B partners' perspectives on economic benefits of using Allas.
- ▲ **Section 7** then presents the analysis related to environmental impacts and economic performance based on the eight parameters.
- ▲ **Section 3** proposes recommended actions that could be taken to improve the business model of the reusable packaging system.
- ▲ **Section 4**, as the last section, lists the lesson learned from this qualitative assessment.

Based on observation and interviews, it is found out that Allas has not fully utilized its online communication media to communicate related information and any changes in them. Allas has carried good quality containers and made changes in the subscription scheme that simplified the ordering process for all related parties. However, both the subscribers and F&B partners perceived that there are no financial economic benefits from involving in Allas reusable packaging system.

Further analysis has identified that Allas has shown an increasing contribution to the reduction of single-use packaging waste due to the increasing number of borrows of Allas containers during June to October 2022. The offering of cups and event catering have driven the number of borrows and enables Allas to contribute faster to the reduction of single-use packaging waste. Allas has been able to maintain, even increase, the return rate. However, it has long cycle time for delivery/takeaway orders and has not monitored the other environmental impacts of its business processes. Both subscribers and F&B partners have not experienced positive economic consequences because of an incomplete view of the impacts of the reusable packaging system, such as unawareness of the economic benefits of time saving and more convenience.

The implemented reusable packaging system needs to be improved in some areas. Such as, improvement in promoting and raising awareness of the system through the utilization of online communication media and the enhancement of collaboration, including those to encourage the formulation of policy framework by the regulator. In addition, the implementation of initiatives to shorten cycle time and to involve and educate participating parties in improving system performance. Moreover, some monitoring parameters need to be broken down (i.e.: the weight of single-use packaging avoided and the number of borrows) and new parameters need to be added (i.e.: frequency of use and measures of other environmental impacts) to get more and better insights.

01

Background

The Collaborative Actions for Single-Use Plastic Prevention in Southeast Asia (CAP SEA) is a project that is funded 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 to prevent waste generation.

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. In addition to that, 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 delivery requires a new business model that differs from the model of the SUP 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 a reusable food packaging system to F&B merchants, including solutions for cleaning and returning. By joining Allas, F&B merchants (hereinafter referred to as Allas' F&B partners) can offer reusable food packaging as an alternative to single-use packaging, whereas customers (hereinafter referred to as Allas' subscribers) have different packaging choices for their orders.

Based on interviews with Allas' co-founders, there are some changes related to Allas offerings and pricing, as displayed at Table 1. Some of these changes affect Allas' business processes.

Table 1 Changes in Allas Offerings and Pricing

Component	1 st Qualitative Assessment	2 nd Qualitative Assessment
Allas containers	Food containers	Food Containers Cups
Allas service	Delivery Takeaway Personal Catering by F&B Partners	Delivery Takeaway Personal Catering by F&B Partners Event Catering
Subscribers' pricing scheme	Delivery, Personal Catering by F&B Partners, & Takeaway: Refundable lifetime deposit Payment per container borrowed Returning fee by pickup	Delivery, Personal Catering by F&B Partners, & Takeaway: Non-refundable registration fee Returning fee by pickup Event Catering: Payment per order placed Payment per container borrowed
F&B partners' pricing scheme	Delivery, Personal Catering by F&B Partners, & Takeaway: Payment per container borrowed	Delivery, Personal Catering by F&B Partners, & Takeaway: Payment per container borrowed Event Catering: No payment

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. In this report, the impact of changes in Allas' offerings, pricing, and business processes on the environment and economic performances is provided, and recommendations is given.

03. Methodology

The methodology in this 2nd qualitative assessment is shown in Figure 1. A detailed discussion about the parameters is given in section 5.

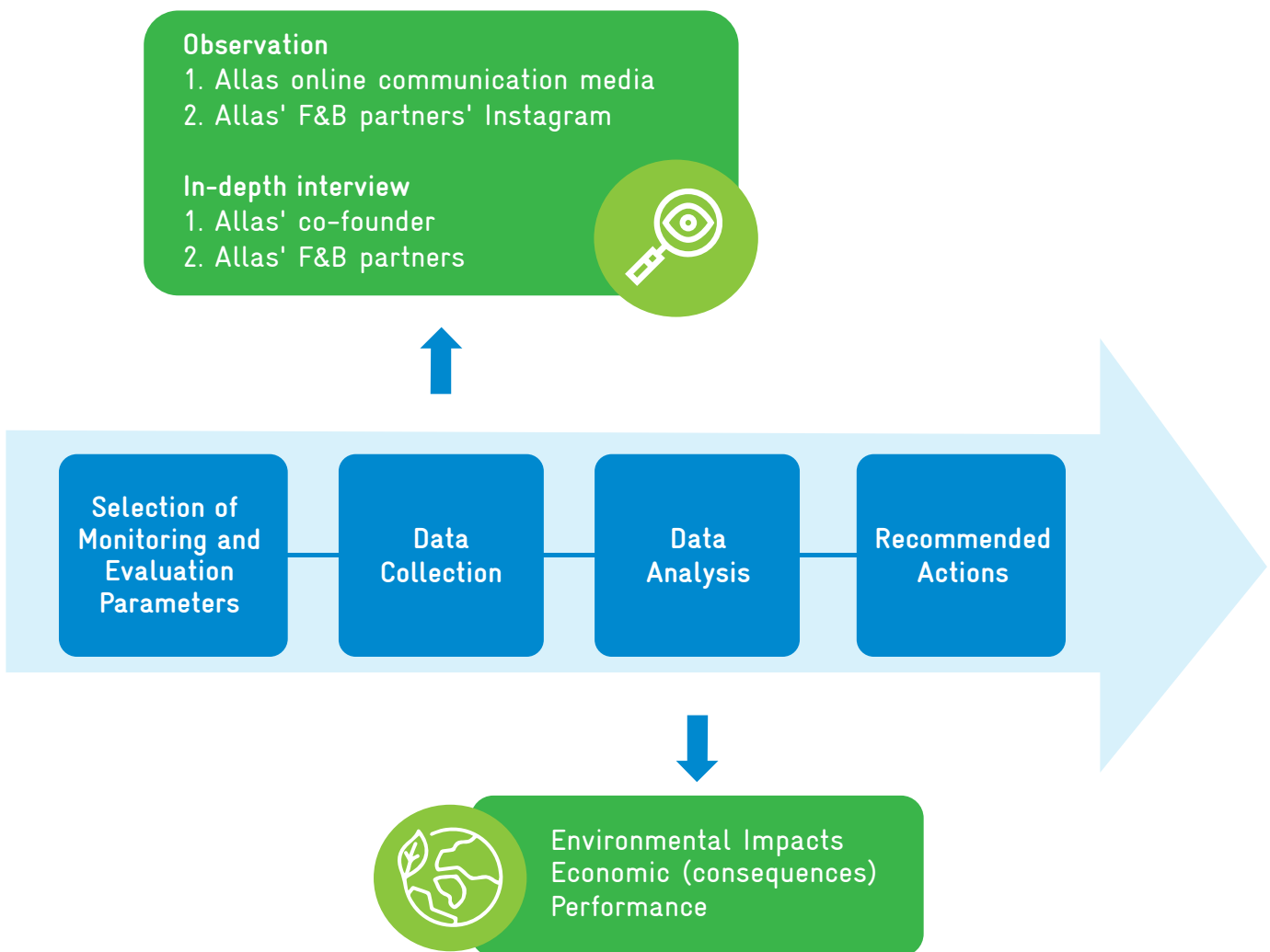


Figure 1 Methodology

04. Limitations

There are two limitations of this study, as follows:

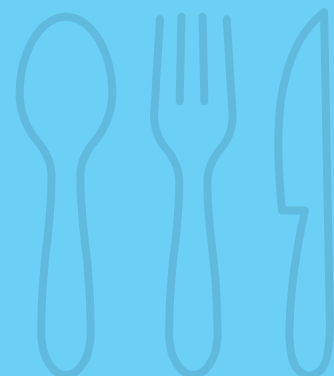
- 1 The focus of this study is on the assessment of the economic performance of a reusable packaging system in connection with its impact on the environment. As a result, a detailed measurement of environmental impact, for example emission reduction or carbon footprint, is not explained in this study.
- 2 Due to confidentiality issue of financial data of organizations involved, the financial data used in this study are for illustration purposes only, except for those available for public, such as pricing information for Allas' subscribers. The same reason applies for non-financial data representing performance, which shown in percentages only.

05. Monitoring and Evaluation Parameters

Changes that Allas has made (Table 1) was intended to increase the acceptance of its business model by existing and potential subscribers and F&B partners. These, in turn, are expected to increase the number of Allas containers borrowed, contribute to the improvement of the environment, and result in better economic performance. Eight parameters are selected to assess the impact of the changes; considering data availability in monitoring the progress, six of them are those that have been used by Allas (parameter no 1 to 6). They are:

1 Number of F&B partners

Interviews with subscriber-informants have identified the number and choices of menus offered by F&B partners as one of their considerations in ordering from Allas' F&B partners. With more F&B partners offering variety of menus, it is expected that the number of active users will increase and so do the number of borrows. In addition, an increasing number of F&B partners shows that more F&B merchants accept the new business model.



2 Number of subscribers

Increase in number of subscribers over time shows increased awareness of the reusable packaging system for ready-to-eat F&B offered by Allas, that is new in Indonesia. It is expected that many of them will become active users.

3 Number of active users

After joining as Allas' subscribers, it is important to know how many of them are using Allas containers on regular basis, called as an active user. The active users are the ones driving the number of borrows.

4 Number of borrows (units)

With the current payment scheme, Allas charges its F&B partners based on the number of containers borrowed. More borrows turn into more revenues from F&B partners, in addition to more single-use packaging avoided.

5 Weight of single-use packaging avoided

Allas was established to reduce single-use packaging, especially SUP, from deliveries in the food and beverage sector. With every unit of Allas containers borrowed, the use of an equivalent unit of single-use packaging is avoided. By considering different types and size of SUP packaging used from F&B partners, the calculation is expressed in term of weight (kilogram, kg).

6 Return rate

The challenge in using reusable packaging is ensuring that the packaging will be returned by the customers. As mentioned in the 1st qualitative assessment report¹, one of the F&B partners stopped the usage of reusable containers in its catering business because of the hassle in collecting the used containers.

7 Return rate

Cycle time is the time taken since the containers leaving a premise and back to the premise. In Allas case, it is the time taken for a container to go from Allas to F&B partners, then to subscribers, being picked up by courier partner from the subscribers, and back to Allas. The faster the cycle time, the less containers needed to serve the same amount of borrow during a period. Or in the other word, good cycle time lessen procurement frequency for new container.

¹<https://www.greentechknowledgehub.de/publications/qualitative-assessment-reusable-food-packaging>

8 Complete, consistent, and up-to-date information across all online communication media

As an online-based business, online communication media are major tools for Allas in promoting its products and in providing information about its business processes and any changes in them. Information across communication media should be consistent and updated regularly to avoid readers' misunderstanding. Apart from their role as a promotional tool, the media can also be utilized to educate the society about the new business model, the solution it offered, and act as a mean to communicate Allas values through branding.

06. Result

06.1 Allas' online communication media

Information about Allas' partners²

Reviews on all of Allas' online communication media revealed that no updates have been done on list of F&B partners in Allas' websites and WhatsApp accounts. Both shows the same information as that discussed in the 1st qualitative assessment report, despite the fact that additional F&B partners were onboarded. Furthermore, no updated information about partnership with Westbike on Allas' Instagram and no information about it in its websites.

Information about Allas new service:

□ Cup

Although Allas has announced this initiative on June 27th, 2022 at their Instagram account, the collaboration was started in August. Allas first posted its collaboration on cups with existing and new F&B partners in its Instagram account on September 3rd, 2022. However, there are no information about cups on its websites. The business processes for cups are identical to those for food containers.

□ Event catering³

No published information about this type of offering in Allas' all online communication media. Allas is still using direct approach for this offering. Allas has offered event catering to parties that have previously in contact with Allas, whether existing subscribers, F&B partners, or through other events.

²A detailed information about Allas' F&B partners is available in Annex 1, while description about newly interviewed F&B partners is available in Annex 2.

³A detailed explanation of business processes related to event catering can be found in Annex 3.

▢ Personal catering with catering business

Currently Allas is in negotiation process and is exploring alternative food containers with compartment for this purpose. No information about this in any of its online communication media, other that posted on its Instagram feed on August 4th, 2022.

▀ Subscription scheme

Similar to before, information about the new subscription scheme is not available to public and can be obtained by contacting Allas' admin via WhatsApp.

06.2

Allas' containers

Both newly interviewed partner-informants agree with the previous ones regarding the good quality of Allas food containers. One of them has used Allas cup and stated that the quality is better than another packaging alternative made from bagasse. In addition to be more aesthetic, Allas cups is temperature withstand, both for hot and cold drinks. Also, both have used packaging made of bagasse and consider Allas as another eco-friendlier alternative of packaging that they can offer to their customers. They realized the benefit of using Allas containers in reducing single-use packaging waste.

06.3

Changes in the subscribers' pricing scheme

As explained in the 1st qualitative assessment report⁴, Allas has made some changes to the subscription scheme for its subscribers, in which there are no longer charges for every container borrowed. These changes were motivated by Allas' intention to increase convenience for F&B partners, Allas' subscribers, and Allas itself. Changes in Allas' subscription scheme simplify the second step of order fulfilment process⁵. F&B partners need to only check on the validity of UserID; if they have been familiar with the UserID due to frequent orders by the same subscribers, the manual confirmation can be eliminated altogether. Without the necessity to check on the remaining balance of the package for a specific subscriber, Allas can respond quicker to F&B partners' inquiry. This reduces the hassle and time in ordering for subscribers as well; previously, they need to check on the remaining balance with Allas admin and buy additional package if necessary. In addition, it reduces Allas' recording process as Allas does not need to maintain a record of package balance for each subscriber.

⁴<https://www.greentechknowledgehub.de/publications/qualitative-assessment-reusable-food-packaging>

⁵Idem

06.4

Subscribers on economic benefits of using Allas

All subscriber-informants stated that they had not experienced any financial benefits by using Allas containers for delivery orders, instead, they spend more money because of the relatively high-priced menus offered by current Allas' F&B partners and if they choose to return used containers by a pickup. One subscriber experienced time-saving from the reduction of waste management activities (sorting, cleaning, and disposing of), but did not associate it with cost saving.

06.5

F&B Partners on economic benefits of using Allas

In spite of offering Allas food containers since it was launched in 2021, two partner-informants reported a low number of sales using Allas food containers compared to total sales in average (about 1%). One of them considered that the need to subscribe and pay a sum of money upfront may create reluctance from some potential customers to join Allas.

Different situation was mentioned by a newly interviewed partner-informant that offers both types of Allas containers. They has joined Allas since August 2022 and has experienced around 30% of sales using Allas. They stated that the price of Allas containers is competitive with the alternative bagasse packaging they offer for takeaway orders (they do not offer delivery service). They charge the price of packaging chosen on top of the price of food and/or beverage ordered. The after-use payment offered by Allas was not regarded as economic benefit by all partner-informants, including those interviewed in the 1st qualitative assessment report. One newly interviewed partner-informant stated that additional F&B partners offering different kind of food may increase overall used of Allas food containers. They said "... people need (food) variety...". This is in line with the suggestion given by subscriber-informants in the 1st qualitative assessment report

0.7

Analysis

07.1

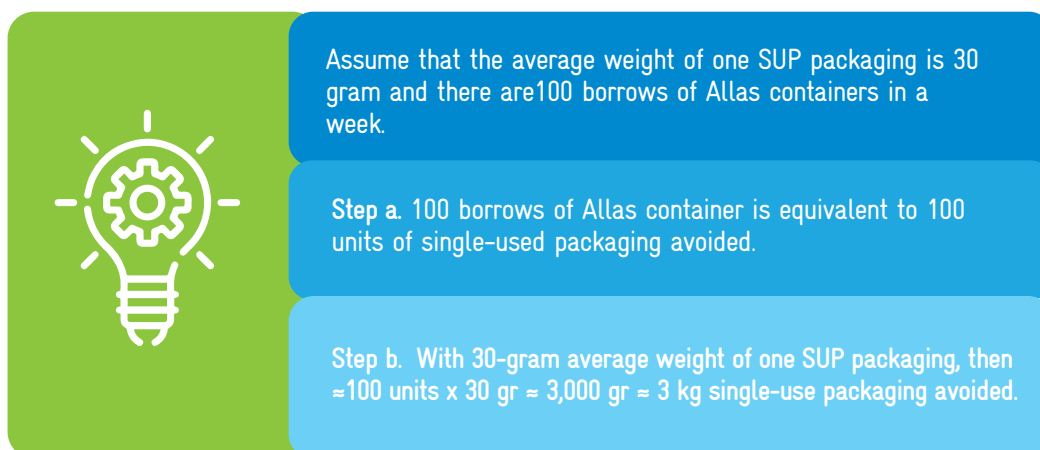
Environmental Impacts

- 1 Weight of Single-Use Packaging Avoided
This parameter measures the positive environmental impacts of Allas' business model.

Allas measures the weight in kilogram and use it as an indicator of its achievement. At this moment, Allas' calculation formula/method for the parameter are as follows:



- a. One unit of Allas container is considered an equivalent to one unit of single-use packaging.
- b. Allas weighted some SUP packaging types mostly used by F&B merchants, took the average weight, and use it to convert quantity in units into kilogram.

Illustration 1 Example of Single-use Packaging Avoided Calculation



The data in Table 2 shows that there was a significant growth (179%) of single-use packaging avoided from June to October 2022 and that the growth rate in the 2nd qualitative assessment (QA) is higher than that in the 1st QA. These growths were driven by an increasing number of borrows during those periods. Analysis of the changes in the number of borrows and the driving factors is provided under section 7.2.3.

Table 2 Growth in Single-Use-Packaging Avoided from June to October 2022

	Indicator	1 st QA (Jun to Aug 2022)	2 nd QA (Aug to Oct 2022)	Overall period (Jun to Oct 2022)
	Growth of Single-Use Packaging Avoided ⁶	45%	93%	179%

2 Cycle time

Reusable containers reduce single-use packaging waste. However, they require higher resources to produce and dispose of. Therefore, reusable containers should be used frequently enough to lower their impact to the environment; the frequency is subject to the type of material used⁷. Cycle time influences the frequency of use; a long cycle time prevent more frequent use of reusable containers. By lowering

⁶Formula for growth rate = (Amount at the later period – Amount at the earlier period) / Amount at the earlier period

⁷Material choices for environment-friendly packaging design | Knowledge Hub for Green Technologies (greentechknowledgehub.de) (Stuber-Rousselle, Prakash, & Löw, 2021)

the cycle time that enables more frequency of use, higher demand can be served with currently owned containers. Thus, it will lower the investment to purchase new containers and, consequently, reduce the environmental impacts of additional containers.

Currently, the average cycle time of Allas containers is 16 days. This number is significantly influenced by the time allowance given by Allas to its subscribers. Allas allows its subscribers to keep the containers for 14 days before returning because of a relatively high returning fee by pickup using Westbike. It is assumed that in 14 days, the subscribers could use Allas more frequently, thus have a larger quantity of containers to justify the returning fee.

There is an alternative return via drop boxes at F&B partners. However, limited number and location of F&B partners create another inconvenience in returning via drop box. Interviews with subscriber-informants, partner-informants, and Allas revealed that the majority of active subscribers have chosen to use the pickup service arranged by Allas. Allas is reluctant to put unmanned drop box in public areas for the possibility of people using them as trash can and Allas has not come up with other alternatives.

While delivery and takeaway orders have average cycle time of 16 days, Allas experienced faster cycle time for larger orders for event catering; it has the average of two to four days per cycle. For event catering, the customers are charged a lumpsum amount that includes returning fee. They have no objection about it because of large number of containers borrowed. Moreover, event catering contributes to faster achievement of targeted reduction in single-use packaging compared to delivery/takeaway.

3 Other environmental impacts

In addition to measuring the positive impact of reducing packaging waste, Allas could also identify and measure other environmental impacts of its business processes. Although the other impacts may not be the priority at this moment, however, regular monitoring will show how different decisions affect the overall environmental impacts and guide the processes to be more environmentally friendly comprehensively. Allas' collaboration with Westbike which has resulted in zero greenhouse gas emissions from returns in delivery orders. Table 3 compares the environmental impacts of different choices of packaging and the activities that cause them.

Table 3 Environmental Impacts of Single-Use and Reusable Containers for Delivery

Parameter	Environmental Impacts of Each Packaging ⁸ Type
Packaging waste	Single-Use Packaging generates higher quantities in comparison to Reusable Packaging
Lifetime	Single-Use Packaging has shorter lifetime in comparison to Reusable Packaging
Fuel consumption and related CO ₂ e emission from : <ul style="list-style-type: none"> • Delivery transportation (include returning) • Delivery transportation (include returning) 	<p>Single-Use Packaging consumes and generates lower quantities in comparison to Reusable Packaging</p> <p>Single-Use Packaging consumes and generates higher quantities in comparison to Reusable Packaging</p>
Water consumption and Wastewater from : <ul style="list-style-type: none"> • Washing at customers and/or at recycling facility • Washing at Allas facility 	<p>Single-Use Packaging consumes and generates lower quantities in comparison to Reusable Packaging, if single-use packaging is immediately trashed</p> <p>Single-Use Packaging consumes and generates a relatively equal quantities in comparison to Reusable Packaging, if single-use packaging is reused/recycled</p> <p>Single-Use Packaging consumes and generates lower quantities in comparison to Reusable Packaging, because of no washing activity at Allas facility</p>

All subscriber-informants were motivated by the awareness to reduce their impacts on the environment, specifically related to reducing single-use packaging waste. By joining Allas, the subscribers also help reducing the negative environmental impact of owning reusable containers. With the existence of services like Allas, subscribers do not need to own reusable containers. One container can serve more people; this is especially true with faster cycle time. Therefore, if more people borrow reusable containers via the service, there will be less overall demand for the containers. Less demand will turn into less production, which means less resources used, and less waste (including emission) generated at the end of their life.

⁸Packaging refers to the main packaging, such as the food or beverages containers, and excludes the extra packaging, such as plastic bag, cable ties, etc.

07.2

Economic Consequences

07.2.1

Economic Consequences for Allas' subscribers

1 Allas containers as alternative packaging

One subscriber experienced time saving from the reduction of waste management activities (sorting, cleaning, and disposing of) but did not associate it with cost consequences. By using Allas containers, the sorting activity is eliminated, the cleaning activity can be done together with the cleaning of other cutleries and tableware, and the disposing activity is replaced by the returning activity. The example of cost consequences of less packaging waste is explained in Illustration 2.

Illustration 2 Example of Subscriber's Potential Cost Consequences of Less Single-Use Packaging Waste

A subscriber of Allas has sorted their waste and sent the inorganic ones to a waste management company when reaching certain quantity. After using Allas for a month, they realised that they used lesser time dedicated for waste management activities (time saving). In addition to this experience, the number of single-use F&B containers can be reduced and the frequency of delivering inorganic waste is reduced to once a month.



In regard to cost consequences, if this subscriber uses an online delivery courier to send their inorganic waste, then one reduction in delivery can save this subscriber a minimum of IDR 13,000 per month (Panca, 2022). This amount can be switched to pay for Allas containers' returning transportation (pick-up) fee.

2 Event catering by Allas

Allas arranges the delivery and returning transportation. Therefore, the use of Allas containers does not add to the hassle of arranging an event and there were no objections from current users of event catering regarding payment per event charged by Allas. Moreover, it reduces the investment of owning reusable containers and the need for storage. For event catering, Allas will arrange the pickup of used containers on D-day or D+1 after the event which makes washing by subscribers is not necessary.

3 Changes in subscription scheme

The new subscription scheme increases one-time upfront investment by subscribers (IDR 50,000 as opposed to IDR 20,000 in the previous scheme), but it eliminates the incremental payment afterwards. However, the non-existent of incremental payment and the convenience offered will not necessarily increase the number of borrows without improvements in other areas. The choice of menu offered by F&B partners is cited as the number one reason for not ordering using Allas, followed by a relatively high returning fee by pickup.

07.2.2

Economic Consequences for Allas' F&B Partners

1 Allas containers as alternative packaging

Financial benefits from offering Allas containers depend on the difference between the total cost of current packaging and that of Allas containers. All F&B partner-informants regard that collaboration with Allas has no economic benefits during this period of monitoring and evaluation. Based on the analysis of the interviews, it can be concluded that their conclusion is based solely on a comparison between the borrow cost of Allas containers with the price of single-use packaging. They did not consider the other positive economic consequences of adopting Allas containers.

F&B partners can reduce or even eliminate the upfront investment for purchasing single-use packaging because payment to Allas is done after use and according to the quantity of containers borrowed by subscribers from a specific F&B partner. The difference in payment timing has the potential to contribute to the partners' cashflows; partners can use money received from subscribers to pay for borrowing cost of the container used by those specific subscribers. Moreover, this will result in lower storage cost (lower storage space needed), lower ordering cost (simpler ordering process), lower freight

⁹In deliveries and takeaways, subscribers are not required to wash the containers before returning either. However, if there is a significant time between time of using and time of returning, they are expected to wash them to maintain the quality of the containers.

¹⁰Kindly refer to the 1st qualitative assessment report for details.

cost (this cost is included in borrow cost), and an opportunity to earn investment return (since money previously tied up in single-use packaging can now be invested elsewhere). Lower quantity of single-use packaging also means lower possibility of loss due to damage during storage. Illustration 3 shows the cash flows differences between types of packaging.

Illustration 3 Example of cash flows between single-use and reusable/returnable packaging

If 100 units single-use food packaging are bought at the beginning of the month with price per unit of IDR 1,000, then an F&B merchant's investment in packaging amounts to IDR 100,000.

With sales of 80 portions of food in that month, each using one packaging, there are 20 units unused packaging valued at IDR 20,000 of at the end of the month.

Based on interviews with partner-informants, the borrow cost of Allas' food containers is regarded in the same price range of single-use packaging and the payment are made at the beginning of the following months. Therefore, with Allas food container's borrow costs assumed to be IDR 1,200 per unit, F&B partners pay IDR 96,000 for 80 containers for each portion at the beginning of the following month.



For this case, aside for IDR 4,000 lower payment for Allas packaging, there is a month lag of payment for packaging. With Allas packaging, F&B partners does not need upfront cash to buy packaging and can wait for payment from the customers to pay Allas. The IDR 100,000 can be used to finance other operating activities or invested in short-term investment opportunities. Moreover, the F&B partners do not need to borrow a total of 100 units Allas containers at the beginning of the month, but can borrow in smaller amount gradually according to their needs.

This reduces the required storage space as well. Allas also monitors the stock level of its containers at F&B partners and initiates the restocking process. There is also additional financial benefit since the freight-in cost is included in Allas' costs. Damage costs are borne by Allas, F&B partners, subscribers, or courier partners depend on the parties that cause the damage.

2 Event catering by Allas

Event catering arranged by Allas creates convenience for F&B partners in handling large order since Allas takes care of the delivery arrangement of unused and used containers, unless agreed differently. It may also create new market for some of them.

3 Changes in the subscription scheme

Changes in subscription scheme does not create direct financial benefits for F&B partners. However, it provides time benefits with less time needed in order fulfilment process.

4 Networking opportunities with those concern with environmental impact

By joining as F&B partners of Allas, F&B merchants can gain access to other entities providing alternatives to less eco-friendly single-use F&B packaging and related supplies. Aside from enables them to pursue their commitment in reducing negative environmental impacts, this creates networking opportunities with vendors and others F&B merchants with similar values, and access to their customers.


07.2.3

Economic Consequences for Allas

1 Addition of F&B Partners

Answering to the concern of existing subscribers, Allas has consistently added F&B merchants as its partners (Table 5). The majority of Allas' F&B partners are still offering so called healthy food, although some of the newly acquired ones are coffee shops. Table 5 shows there was an increase of three F&B partners from August to October 2022. Actually, there were five additional F&B partners, however, two F&B merchants were ceased as F&B partners. One F&B merchant stopped being Allas' partners because of the type of food it carries (burger) and another may have closed its business.

Table 4 Number and type of F&B partners



	June 2022	August 2022	October 2022
Number of F&B partners	10	14	17

2 The launching of Allas' cup

The number of subscribers had grown only 3% from August to October 2002 (2nd QA, Table 6); no data available for the 1st QA. From June to October 2022 (Table 7), number of active users had increased 40%, while the number of borrows had increased 181%. Table 8 shows that the growth rates in the 2nd QA are higher for both parameters. Therefore, it can be concluded that Allas' initiatives implemented during the 2nd QA create positive results.



Table 5 Growth of Subscribers

Indicator	2 nd QA Aug to Oct
Growth in number of subscribers ¹¹	3%

Table 6 Growth of Active Users, and Borrows in 1st and 2nd QA

Indicator	The 1 st QA (Jun to Aug 2022)	The 2 nd QA (Aug to Oct 2022)	Overall Period (Jun to Oct 2022)
Growth in number of active users	17%	20%	40%
Growth in number of borrows	47%	91%	181%

During the 2nd QA, the collaboration related to Allas cup was started with four F&B partners; three of them were the new F&B partners. During the same period, there were also increases in event catering. Without additional data available, the introduction of cups and increases in event catering seem to be the driving force behind the increase in the number of active users and the number of borrows. Cups might also drive the number of subscribers. Whereas, increases in event catering may not relate to increases in the number of subscribers because customers of event catering do not need to register as subscribers; they place the order by contacting Allas admin through WA or by fulfilling the given online form for ordering.

3 Changes in subscription scheme

With the new subscription scheme for delivery and takeaway orders, Allas' revenue sources from these types of orders are only from its F&B partners; the revenues depend on the number of containers borrowed. Other sources of revenue come from event catering's customers, in the form of payment for every container borrowed and for every order. The payment by order is intended to cover expenses arise from the arrangement of event catering.

Without adjustment to current pricing applied to F&B partners and/or enough increase in the number of borrows resulting from more convenience of current

¹¹Subscribers comprise all interested users that have inputted their personal information into Allas' database, whether or not they have paid the registration fee.

pricing for subscribers (for delivery/takeaway), the changes will have negative financial consequences in the short run. The changes may create financial benefits in the long run because the convenience they offer may encourage existing subscribers to start using Allas or to use Allas more frequently in the future and for potential subscribers to try and use Allas.

4 Collaboration with Westbike

The use of bicycle courier, Westbike, enables Allas to provide returnable packaging without additional fuel and emission from returning activities. Currently Allas does not receive direct financial benefits from this collaboration. However, this will generate future economic benefits since it shows Allas commitment to provide a comprehensive solution to environmental issue and will attract those with high level of environmental consciousness. On the other hand, collaboration with Allas benefits Westbike as it provides new market for its service.

5 Allas online communication media

In addition to serve as promotional media for the products, Allas communication media also serve as educational media. Reusable packaging system for ready-to-eat F&B consumed outside the premise of the merchant, or reuse as a service in general, is relatively new, especially in Indonesia. This requires the introduction and socialization of the business model, business processes, and the environmental and economic consequences of the system. Some positive initiatives and contribution of Allas have gone unnoticed because of the lack of information in its communication media. This prevents the achievement of expected results of the initiatives and may limit the market for Allas products.

6 Return rate

Return rate is an important parameter for Allas. It is calculated by comparing the quantities of containers at the end of period/after event to those at the beginning of the period/before event. Low return rate shows low understanding of the business model by the subscribers since it means that many of the containers are not returned. To ensure a high return rate, Allas has arranged returning activity of the used containers. Allas' high return rates from June to October 2022 (Table 9) show the success of its initiative in arranging returning activity.

Table 7 Return Rate of Allas Containers

	June 2022	August 2022	October 2022
Return rate	94%	94%	96%

7 Cycle time

In addition to creating environmental benefits as discussed in section 7.1., faster cycle time of the containers creates economic benefits. Faster cycle time enables a smaller quantity of containers to serve the same number of customers or borrows over a certain period of time, compared to the quantity needed with a slower cycle time. Therefore, less investment is tied up in the container, while at the same time the same amount of revenues is generated. With this condition, Allas can have higher asset turnover, i.e., ability to generate the same amount of revenue with lower amount of investments, *ceteris paribus*. As a consequence, Allas will have extra fund to serve another purpose and prevent it to borrow money and incurs interest. Or Allas can invest it to gain return. In line with this, event catering order with faster cycle time has the potential of giving greater economic benefits compared to delivery/takeaway orders. Illustration 4 shows a simple case as an example.

Illustration 4 Example of Potential Financial Benefits from Faster Cycle Time of Containers

For example, current average cycle time for delivery and takeaway [A] = 16 days.
Daily borrow of containers [B] = 20 units

Cost per container [C] = IDR 50,000

The quantity of containers needed to serve one-month demand [D]
= [A] * [B] = (20 containers x 16 days/month) = 320 containers
The value of investment in containers [E]
= [C] * [D] = IDR 50,000 * 320 = IDR 16,000,000

If the average cycle time becomes [A'] = 12 days, then:
The quantity of containers needed to serve one-month demand [D']
= [A'] * [B] = (20 containers x 12 days/month) = 240 containers
The value of investment in containers [E'] =
= [C] * [D'] = IDR 50,000 * 240 = IDR 12,000,000

Assuming the activities and other costs are the same, then a faster cycle time requires a smaller quantity of container, which means smaller investment, to generate the same amount of revenue in a period. In other words, it generates higher asset turnover (*ceteris paribus*).

If: Average price charged to F&B partners [F] = IDR 1,000 per borrow
Number of days in the month is 30 days,
Then Sales in the period [G] = [B] * [F] * 30 = 20 * IDR 1,000 * 30 = IDR 600,000

Asset turnover = Sales in the period / Value of Asset in the period

With 16 days cycle time, asset turnover = [G] / [E] = IDR 600,000 / IDR 16,000,000 = 37.5

With 12 days cycle time, asset turnover = [G] / [E'] = IDR 600,000 / IDR 12,000,000 = 50

08.

Recommendation

1

Promotion/awareness raising

The online communication media should be utilized effectively by providing regular updates and maintaining consistency among them. They serve as promotional and raising awareness means of the reusable packaging system. Some suggested information to be communicated consistently through all online communication media are:

- ▲ List of updated F&B merchants partnering with Allas;
- ▲ Allas current and planned collaboration and initiatives;
- ▲ Processes and information related to subscribers and partners, such as cleaning process or pricing, and any changes in them;
- ▲ Allas progress in achieving the solution it offers, i.e.: the weight of single-use packaging avoided.
- ▲ A comprehensive comparison between the consequences (especially the economic ones) of reusable and existing single-use packaging system (including the eco-friendlier packaging alternatives) and ownership of reusable containers.

The promotion/raising awareness could be extended through collaboration, such as with:

- ▲ F&B and courier partners to include co-creation of promotional or educational campaigns and distributing them through the online communication media of participating partners. This enables the distribution to wider audience and help in branding.
- ▲ Other parties sharing similar values to access and raise awareness of the wider communities and reducing the resistance to change. Also, the collaboration could help in the formulation of policy framework by the regulator to support the implementation of reusable packaging system.

2

Design a reusable business model with shorter cycle time

Initiate collaboration to increase convenience for subscribers in returning process, which will lead to the reduction of cycle time. A shorter cycle time could result in positive environmental and economic consequences. This can be done by:

- a. Providing more drop boxes at convenience location through collaboration with entities that have widely distributed location e.g.: chains of minimarket or supermarket, transportation hub, etc. In addition, in selecting F&B merchants as partners, location can be added as another factor for consideration.
- b. Providing another alternative for pickup service e.g., collaborate with waste collection service. Dedicated boxes for used containers should be provided to avoid contamination from waste.

3 Continues advisory/education for subscribers and partners

Involve, educate, and assist potential and existing subscribers and partners to reduce the environmental impact of reusable business model by:

- ▲ Prolonging the life of the reusable containers through proper use and maintenance, such as for subscribers in term of using, washing, and storing them; for F&B partners, in term of storing and packing the food; and for courier partners, in term of delivering them (including when returning).
- ▲ Reducing the CO₂e emission from transportation activities through the extension of collaboration with zero emission courier service to also handle returning activities of event catering, when possible, and to use it in restocking activity. Also, by providing more information about them to encourage more use by subscribers.

4 Monitoring of performance

Performance of the implemented initiatives or strategies needs to be monitored and evaluated to assess their effectiveness and to determine whether they should be continued, modified, or stopped.

To provide more insights, some modifications to current parameter can be done, as follows:

- ▲ Differentiate the weight of single-use packaging avoided based on different types of single-use packaging materials.
- ▲ Breakdown the number of borrows by type of containers (food containers and cups) and by type of services (delivery/takeaway, personal catering, and event catering).

In addition to cycle time and the utilization of online communication media, there are other parameters that can be added to assess Allas performance better, i.e.:

- ▲ Frequency of use of each container. This parameter measures the life of the containers.
- ▲ Breakdown the number of borrows by type of containers (food containers and cups) and by type of CO₂e emission, water use, and wastewater generated.

09. Lesson Learned

There are some lessons identified from this 2nd assessment as considerations for those offering reusable packaging system. First, do comprehensive cost-benefit (including quantitative) analysis between the reusable and single-use packaging system in term of environmental and economic consequences of both systems. For the environmental impacts, it can start with the environmental

impact that become the reason for the establishment, while at the same time identifying and keeping track of the others. Then, collaborate with related parties to encourage the formulation of policy recommendation that will support the implementation of reusable system, specifically in this case the reusable packaging system in F&B sector. Some benefits of the reusable system can be realized with the existence of proper policy framework.

10. References

Apaco. (n.d.). <https://apaco-vn.com/lepironia-articulata-grass-and-sarus-cranes/>.

Retrieved December 20, 2022, from www.apaco-vn.com:

<https://apaco-vn.com/lepironia-articulata-grass-and-sarus-cranes/>

Badan Pusat Statistik. (n.d.). Industri Mikro dan Kecil.

Retrieved September 26, 2022, from www.bps.go.id:

<https://www.bps.go.id/subject/170/industri-mikro-dan-kecil.html>,

BioPak. (2022). <https://www.biopak.com/uk/resources/circular-economy-design>.

Retrieved December 20, 2022, from www.biopack.com:

<https://www.biopak.com/uk/resources/circular-economy-design>

Borneo Nature Foundation. (2022).

<https://www.borneonaturefoundation.org/conservation/back-to-earth-replacing-plastic-polybags-with-purun/>.

Retrieved December 20, 2022, from www.borneonaturefoundation.org:

<https://www.borneonaturefoundation.org/conservation/back-to-earth-replacing-plastic-polybags-with-purun/>

Duanyam. (2022, November 30).

<https://duanyam.com/the-environmental-impacts-of-purun-and-its-impacts-on-carbon-emissions/>.

Retrieved December 20, 2022, from www.duanyam.com:

<https://duanyam.com/the-environmental-impacts-of-purun-and-its-impacts-on-carbon-emissions/>

Material District. (2017, July 3). <https://materialdistrict.com/article/bioplastic-bags-cassava-shrimp/>.

Retrieved December 20, 2022, from materiadistrict.com:

<https://materialdistrict.com/article/bioplastic-bags-cassava-shrimp/>

Panca, A. (2022, mei 22). <https://harga.web.id/biaya-layanan-pengiriman-barang-go-send.info>.

Retrieved November 11, 2022, from harga.web.id:

<https://harga.web.id/biaya-layanan-pengiriman-barang-go-send.info>

Stuber-Rousselle, K., Prakash, S., & Löw, C. (2021, November 9).

<https://www.greentechknowledgehub.de/publications/material-choices-environment-friendly-packaging-design>.

Retrieved February 2023, from <https://www.greentechknowledgehub.de/publications>:

<https://www.greentechknowledgehub.de/publications/material-choices-environment-friendly-packaging-design>

Tempo.co. (2021, December 12). *bisnitempo.co*. (D. Arjanto, Editor) Retrieved November 8, 2022, from *tempo.co*:

<https://bisnitempo.co/read/1538411/mengenal-umkm-soal-kriteria-dan-jumlahnya-tembus-puluhan-juta>


#:-:text=Selain%20itu%2C%20Badan%20Pusat%20Statistik,antara%2020%20hingga%2099%20orang.

11. Annex

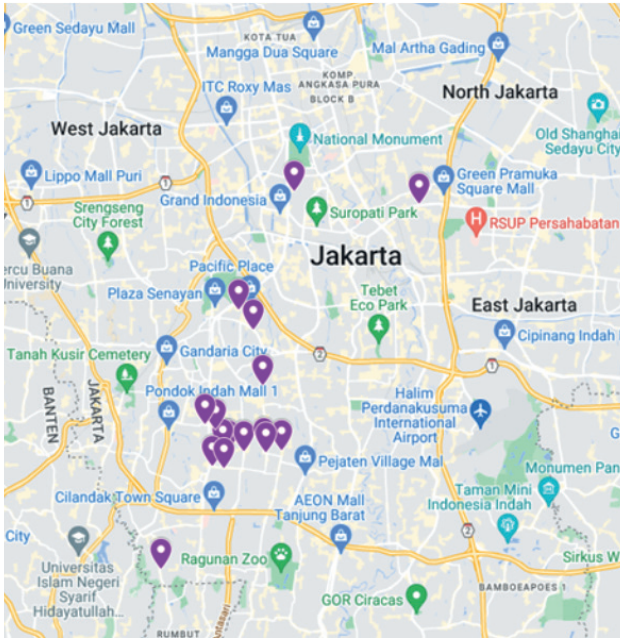
Annex 1 Allas' F&B Partners

Based on reviews of Allas' websites, WhatApps, and Instagram accounts, as well as interviewed with Allas' co-founders, there were new Allas' F&B partners at the end of October 2022. The comparison of Allas' F&B partners in the 1st and 2nd qualitative assessment reports is available in the following Table.

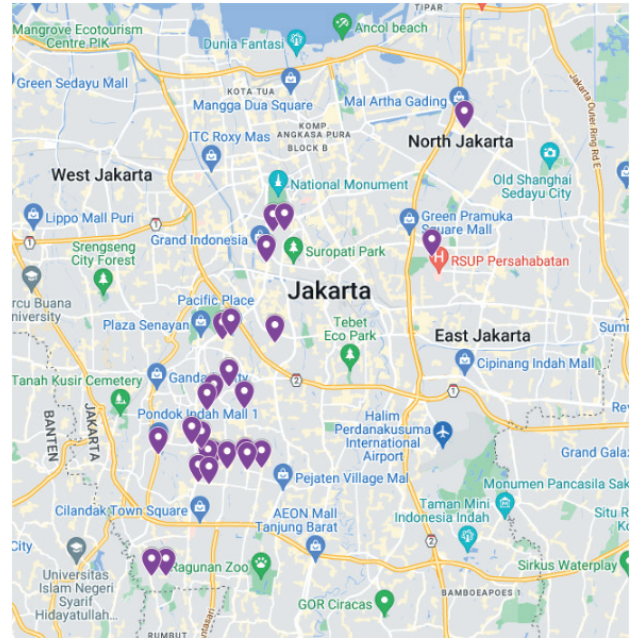
Allas' F&B Partners

	1 st Qualitative Assessment	2 nd Qualitative Assessment
F&B brand	14	17
F&B location	16	25

Allas' F&B partners' location are still concentrated in southern part of Jakarta as shown in the following partial map of DKI Jakarta; Allas' F&B partners are shown as purple dots on the map.

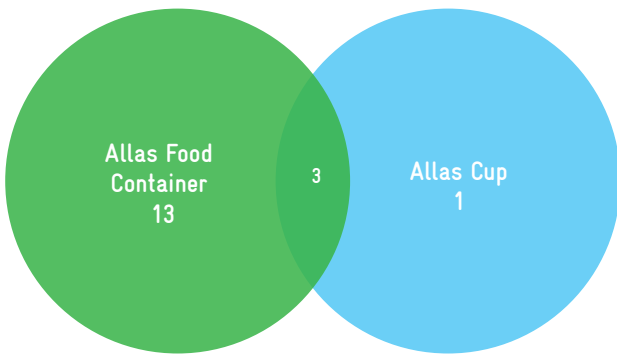


1st Qualitative Assessment (16 location)

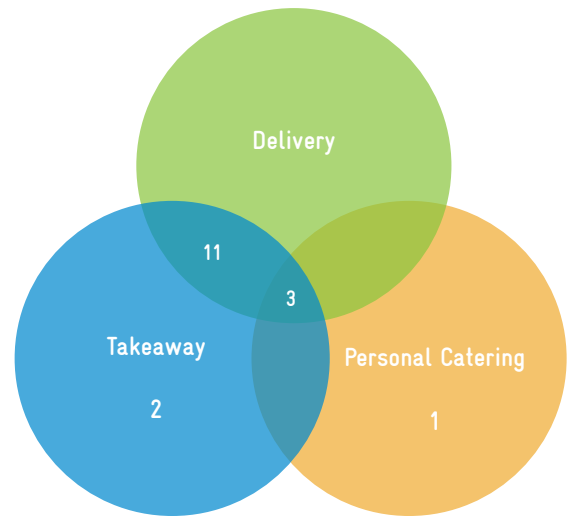


2nd Qualitative Assessment (25 location)

The following figures show the number of Allas' F&B partners by types of Allas containers and Allas services, in that order.



Number of Allas' F&B partners by types of Allas containers




Number of F&B Partners by types of Allas' Services

Annex 2 Description of additional F&B partners interviewed in the 2nd qualitative assessment report

In this 2nd quality assessment, the representatives of two additional F&B partners were interviewed via Zoom platform. The characteristics of the F&B partners interviewed (for the 1st and 2nd qualitative assessment) are outlined in the following table. Based on the number of employees as criteria (Badan Pusat Statistik, n.d.); (Tempo.co, 2021), the first two were categorized as small enterprises and the other two as medium enterprises.

The Characteristics of F&B Partners Interviewed

	The 1st Qualitative Assessment		The 2nd Qualitative Assessment	
	MerchR01	MerchR02	MerchR03	MerchR04
Food Type	Vegan Indonesian Food	Indonesian Food	Raw Food	Variety of Food and Coffee
Join Allas in	October 2021	August 2022	2021 (among the first F&B partners)	August 2022
Number of employees	15	17	+/_ 50	40
Number of locations	1	3	7	1
Number of locations	1	1	3	1
Types of Allas containers used	Food container	Food container	Food container	Food container and Cup
Use of Allas containers	Delivery and Personal Catering	Delivery	Delivery and Personal Catering	Takeaway
Interviewee	General Manager	Owner	Owner	Event Manager

- MerchR03 owned two brands of restaurant and both of them have used Allas food containers for delivery and personal catering. The decision to join Allas was influenced by its concern for the environment, as stated by the owner "...in choosing packaging or related products, we try and think of positive or negative impact to the environment, while balancing it with business consideration.."

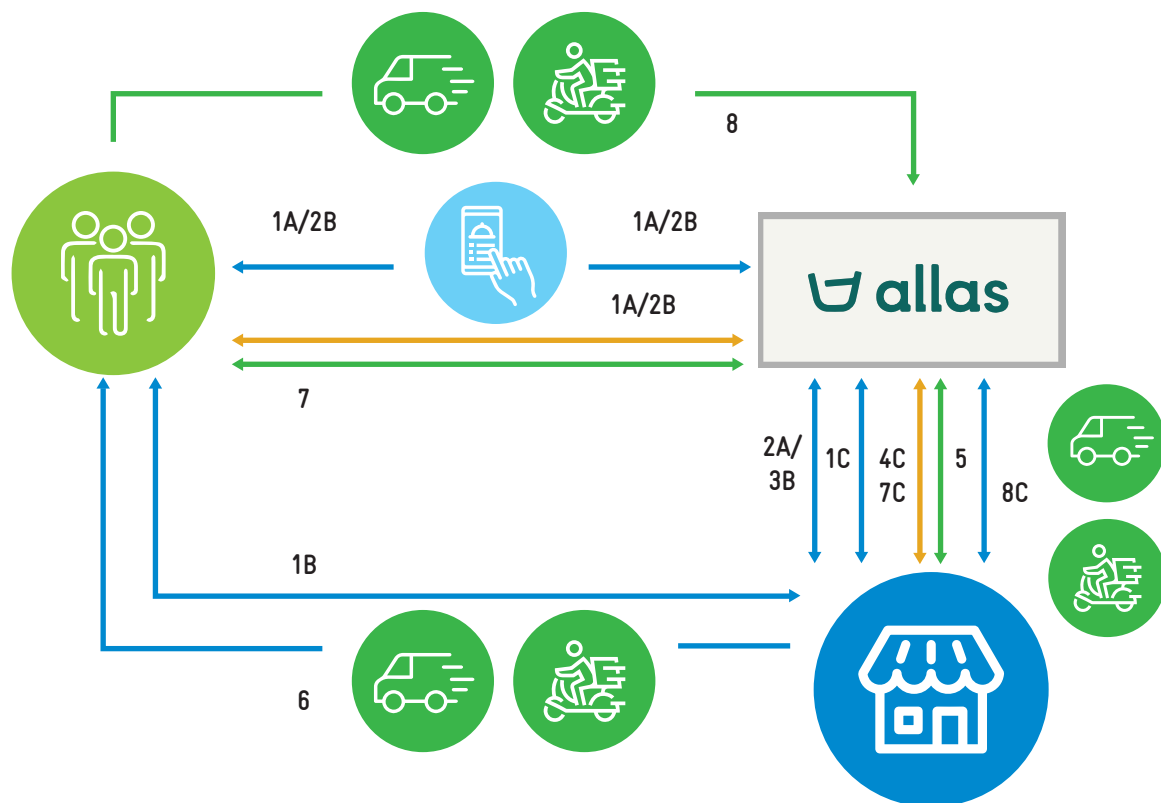
In addition to offering Allas containers, MerchR03 has used cassava bag at both brands and bagasse as packaging at one of the brands; both are regarded as eco-friendlier alternatives to SUP packaging.

- MerchR04 uses both Allas food containers and Allas cups for takeaway orders only. This is in line with its vision "...to serve our customers without plastics...". It does not serve delivery orders, even with Allas, because of the possibility of the usage of plastic bags or other plastic products in delivery. Other than offering Allas containers, MerchR04 also use other eco-friendlier alternatives to plastic products, such as straws from purun, packaging from bagasse, and cassava bag. They know Allas because of Allas' participation in another pilot project related to SUP reduction arranged by different organization.

Annex 3 Business Processes for Event Catering

Business processes of using Allas containers (food containers and cups) for takeaways and personal catering from F&B partners are similar to those of deliveries, as explained in the 1st qualitative assessment report.

Subscribers and non-subscribers of Allas can borrow Allas food containers and cups to cater for an event. Different from customers of delivery, takeaway, and personal catering, customers of event catering do not need to register as Allas' subscribers. Currently, there is no minimum number of containers applied and the order can be made to non-participating F&B merchants or other food establishments (e.g.: catering business).



Processes for Event Catering

1 Ordering processes

There are three types of ordering processes for event catering:

- ▲ (1A) A customer contact Allas via WhatsApp or through <https://bit.ly/allasevent> to borrow Allas containers for event catering. Then, (2A) Allas discusses the details with the intended F&B merchant, e.g.: the number and types of containers needed, the time of the event, etc.
- ▲ (1B) A customer first contacted the intended F&B merchant about catering an event using Allas' containers. Then, (2B) the customer contact Allas through WhatsApp or <https://bit.ly/allasevent> about the event and the detail of Allas containers needed. (3B) Based on the information, Allas contacts the F&B merchant for confirmation.
- ▲ An F&B merchant can also be the customer for event catering. In this case, (1C) the F&B merchants contact and discuss with Allas about the arrangement.

2 Invoicing and payment processes

(4A and 4B) After the customer and Allas agree on the order detail, then the invoicing and payment processes are taken place. Or (4C) the invoicing and payment processes are taken place between Allas and F&B merchant as customer.

Therefore, different from delivery and takeaway processes, the payment for event catering is settled before the order is fulfilled.

3 Order fulfilment processes

(5) D-1 from the date of the event or any other time agreed with the F&B merchant, Allas will send the containers to the merchant. Containers will be delivered using a motorcycle or car courier depending on the quantity of the order. Allas records the number and types of containers that are used for a specific event order by scanning the QR code before delivering them to ensure an up-to-date record of the containers.

(6) On the D-day, the merchant sends the order packed with Allas containers to the customer, using motorcycle or car courier. Or (6C) the merchant packs the menus using Allas containers for event.

4 Returning used containers

(7) The customer or (7C) the F&B merchant will contact Allas right after the event or on D+1 for containers pickup.

(8) The containers are returned to Allas from customers or (8C) F&B merchant. Allas scan the QR code of each container returned to update its record.

