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Haute école de gestion
Genève

How Feldschlösschen could reintroduce returnable glass bottles to gain a competitive advantage

Bachelor Project submitted for the degree of
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by

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Executive Summary

Today, Switzerland is known for being a relatively green country with many leading companies bringing a lot of innovation. Despite that their recycling system hasn't changed much since its implementation in the 1980s. 40 years later, part of some neighbouring countries, such as Germany, have already introduced a returnable waste system intending to reuse products that are still operational. In the example of glass, Germany adds a deposit to the glass bottle and is therefore able to wash and reuse the bottle without having to remould or rebuy materials to create new glass bottles.

Feldschlösschen being the leading beer company on the Swiss market is responsible for a big part of used-up glass. Although it is relatively well recycled, results showed that reusing the bottles would create relatively fewer emissions than having to create the bottle.

As consumers are getting more aware of the need to reduce emissions, they support companies that are fully implicated in doing their best to operate in an eco-friendly way. Despite most companies aligning to similar objectives such as net 0 by 2030 or 2050 and investing in renewable energy sources, companies that truly stand apart are those that go beyond what is expected from consumers. By doing so they can make it a strength and turn it into a competitive advantage if it is well communicated and well managed.

If Feldschlösschen can convince consumers to reuse glass bottles, they could create a campaign promoting this behaviour and push Swiss citizens to make the change together. By doing so, the brewing company could build a sense of community, which would increase consumer loyalty. Furthermore, they could increase their market share all while doing something beneficial for the planet and Switzerland.

Although as shown in report, Feldschlösschen doesn't seem to be interested in developing such a system on their own. Therefore, motivating the civilians to push a law on waste management to reintroduce returnable glass bottles would be an alternative that already worked in many other countries. The research study also gives an example of a campaign which is based on the marketing and sales funnel. This campaign is based on the principle of getting people aware of the environmental advantages of returnable glass bottles and motivating people to sign an online petition on the Feldschlösschen website. This would later bring a sense of community to the consumers that took part in this initiative.

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1. Introduction

Reusing and recycling glass bottles are two different things. Recycling refers to using the bottle and then bringing it back to a recycling plant where it is broken back into raw materials and sent to centers that turn the broken/old glass into new bottles. On the other hand, reusing is the action of bringing the bottle back so that it can be stocked, cleaned, and refilled intending to have the same bottle used and refilled for several cycles without having to break it or remold it. Most of the time the reusing of glass bottles requires a monetary deposit, which works as guarantee to ensure people return the bottles.

Recycling beer bottles is very much ingrained in Switzerland, with 94% of cans and glass being recycled according to Swiss Info (Misicka, 2020). These facts show that Swiss people already have the habit of not disposing of glass bottles and tend to make a bigger effort to recycle them. Although recycling is good, it still requires lots of energy as glass is melted at around 1500 degrees Celsius before being remolded. (Glass packaging institute, n.d.)

The concept of returnable glass bottles was already introduced many years ago in Switzerland and proved to work well as most brands did it. Some smaller brands as well as the restaurants and bars (Horeca) still implement this concept to this day, but most companies tend not to do so in retail anymore. It is up to the producer selling glass bottles to implement this concept if they see fit.

Swiss retailers such as Coop, Denner and others don’t have any infrastructure for re-using bottles and have not installed any infrastructure to collect the empty returnable glass bottles. Motivating retailers to take part is a key challenge, as they represent the main intermediary between the consumer and the manufacturer.

Therefore, if major Swiss beer companies like Feldschlösschen can convince consumers and retailers to adopt and accept returnable glass bottles, they could promote an eco-friendlier way of drinking beers and could gain a competitive advantage from it. Considering that Feldschlösschen is part of the Carlsberg group, they could build up a similar strategy as in Germany and other countries where such concepts proved to work well already (Keating, 2021).

In this report, we will be mostly focusing on returnable glass bottles in retail and won’t be addressing the bar and restaurant segment.

2. Literature review

A lot has been documented and written about the different systems to recycle or re-use glass bottles. Some articles describe the impact of these systems on the environment. Some compare different systems used in several countries while others also compare glass bottles to other forms of packaging. The articles below have been helpful to understand the processes and the advantages of using one system over another.

In the article discussing environmental-friendly drink packaging (Turner 2020), the author discusses the different eco-footprints of TetraPak's plastic bottles, glass, and aluminum cans. The article uses two indicators to rank them. The first indicator is regarding climate change, therefore measuring carbon emissions for the creation and transportation. The latter is mostly based on the weight of the packaging. In this instance, glass ranks as most polluting. Nevertheless, the second indicator is micro particle pollution and the material's ability to be reused or recycled. Then, glass is considered the best option and least polluting.

Basing ourselves on the information outlined above, we can argue that glass produces high carbon emissions for its creation process (it requires a lot of energy to heat the ovens and keep them running to melt the glass to mold it into a new bottle) as well as its transportation (due to weight and provenance of raw materials). Therefore, if glass can be reused rather than recycled or newly molded, its environmental footprint would be significantly reduced.

To confirm that returnable glass is better, there is an article addressing the estimated energy consumption of single-use and returnable glass packaging (Van Doorsselaer 1999). The author compares the energy needs of both, returnable glass bottles and single-use bottles. The first point made by the authors concerns the breaking point, meaning the number of cycles that a bottle will follow before being broken or getting lost.

The article analyzed the following graph outlining the breakage rate per number of uses. The average breakage rate was set between 20% and 40% depending on the distance the bottles traveled before being sold. This means that on average, one single returnable glass bottle could be sold 3-4 times before being broken or lost. Although considering these tests were made over 22 years ago, we can assume that these rates became lower over time due to better materials and better transport conditions enabling bottles to be used more.

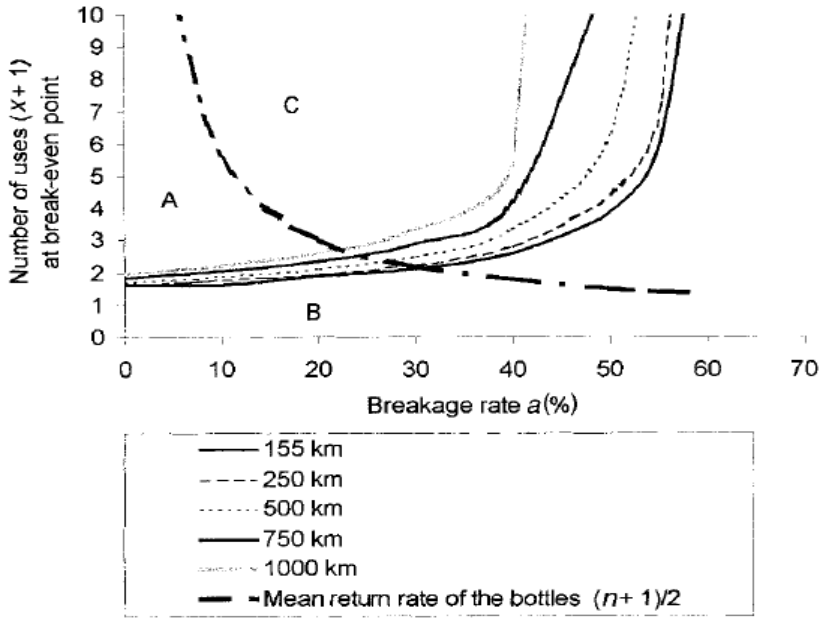

Figure 1 Breakage rate as a function of distance and number of uses

If we consider that reusable bottles are built stronger to resist the greater number of possible cycles, they therefore also require more energy to be manufactured.

In the graph below, the authors demonstrated the marginal energy consumption per bottle depending on the number of re-uses. One can also notice that returnable bottles start at a higher energy cost and that there is a minimum energy rate considering the return energy.

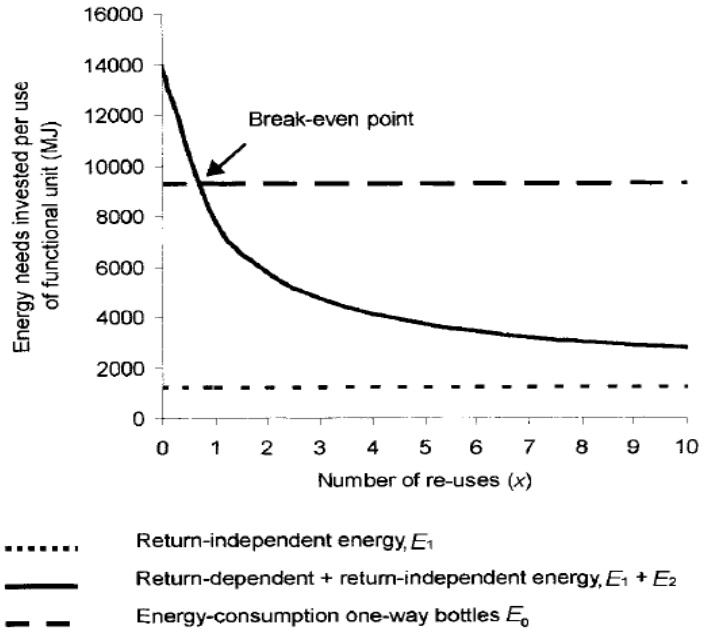

Figure 2 Returnable and single-use bottles in function usage and energy

This article gives a good comparison between returnable glass bottles and single-use bottles on an emission point of view. Although, as mentioned, it is important to keep in mind that the article dates from 1999. Therefore, the measures have certainly changed, but still allow a clear and comparable view of what the better solution is. As stated by the author, reusable bottles are a better and more sustainable solution as long as the bottles are used more than once, which was calculated in Figure 2 by the break-even point.

Another article discusses the lifecycle of different reuse percentages for glass beer bottles (Mata 2001). The author provides a deeper understanding of reusing percentages and focuses on returnable beer bottles, rather than general glass bottles as seen in Van Doorsselaer's article above. It also describes in detail the processes in which the beers are brewed and packed. It goes on to assess the environmental impact of returnable bottles versus single-use bottles. One of the key messages stressed in the article is the importance of minimizing waste in packaging and overall provides guidelines on packaging and reducing waste.

The authors use two well-defined process flows showing the steps needed to produce and reuse beer bottles. It goes in-depth and explains the different processes in its creation. It also contains detailed data from its emission (analyzing per emission type) and divides them into 3 processes which are described and graphed below.

The first key player is the bottle manufacturer, who creates the glass bottle from new or recycled raw materials.

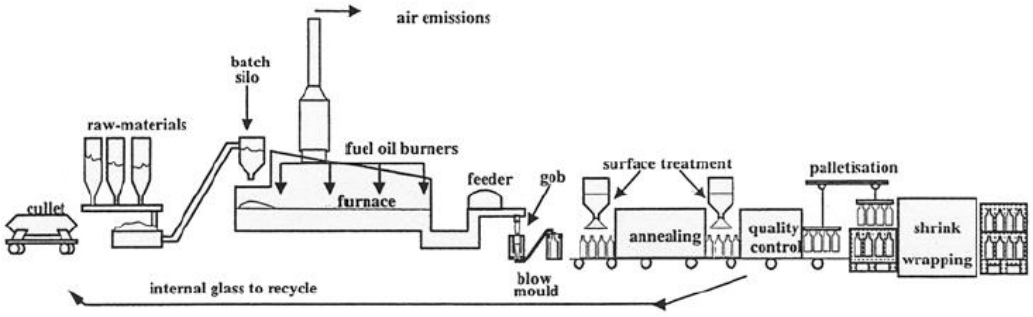

Figure 3 Inputs and outputs in the creation of glass bottles

Then if the bottles are returned for reuse, they are cleaned and presented as a new product, as seen below in the process.

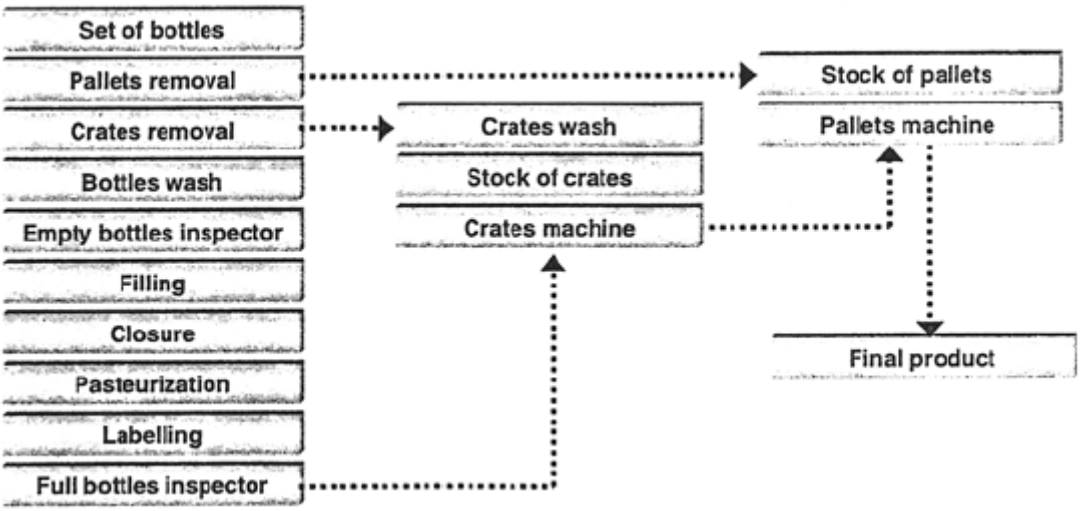

Figure 4 Industrial line in the process of reusing glass bottles

In the case of single-use bottles, the newly created bottles go through a very similar process but don't get washed as intensely (Bottle flush vs Bottle wash) as they do not have any impurities following the heating process they underwent during their creation.

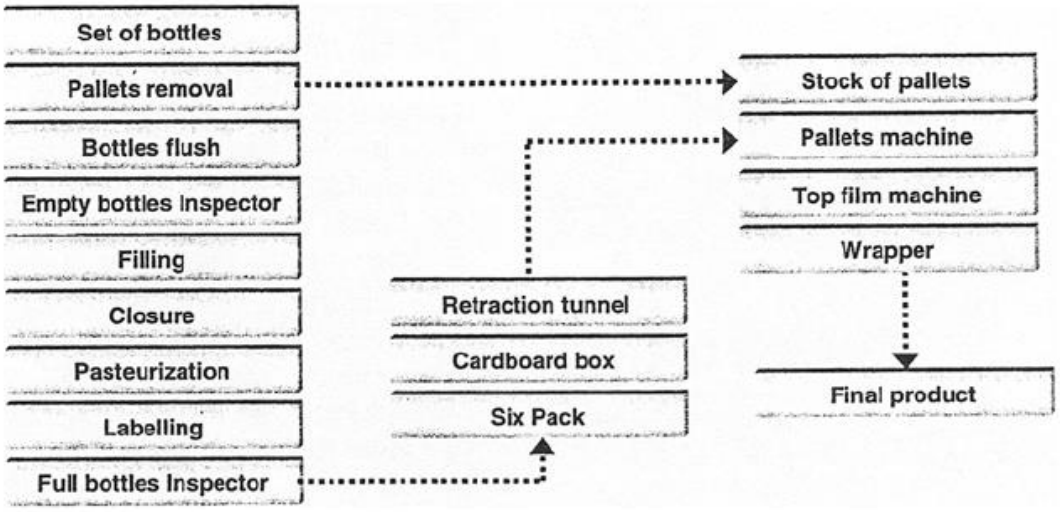

Figure 5 Industrial line in the process of filling single use bottles

The steps above are a mix of the bottle manufacturer creating or washing the bottle and the brewery preparing the beer and filling up the bottle.

But the article considers a third-party. It concerns the wastewater treatment linked to the washing of the bottles and products (which are sometimes polluting). Although, once again, techniques are becoming more and more eco-friendly and might now be more efficient since the article was released in 2001.

To have a general understanding of the wastewater treatment, outlined below, is the process, showing the complexity of its connections and the importance of reducing polluting sources in this circuit.

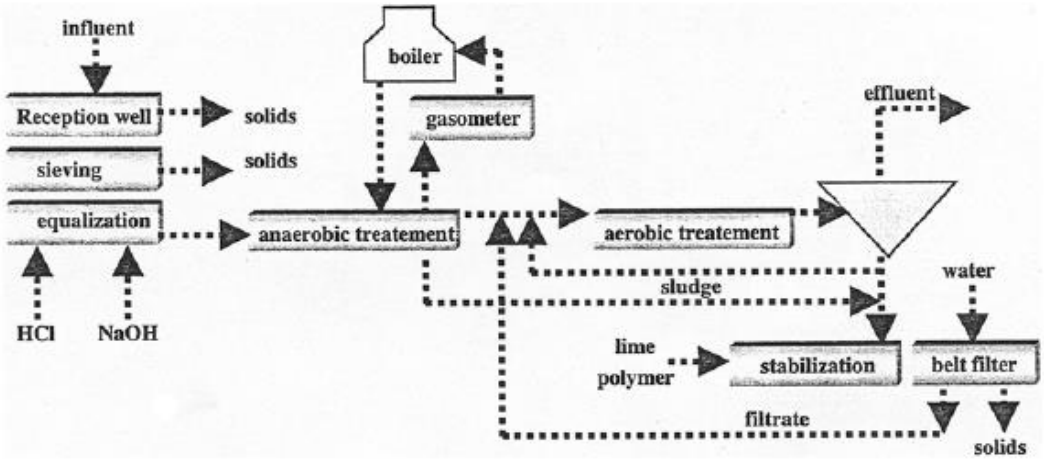

Figure 6 Wastewater treatment plant in a brewery

The article also includes a table measuring all types of emissions for the first cycle (creation of the bottle) and following cycles (all cycles after creating the bottle if it is reused). The table is split into the 3 parties mentioned above: the bottle manufacturer, the brewery, and the wastewater treatment.

Key numbers shown in the table for the bottle manufacturer are the carbon emission levels: 3.95kg/330l for returnable vs 20.66kg/330l for non-returnable.

Additionally, carbon emissions for the brewery and wastewater treatment are slightly bigger for returnable bottles justified by the bigger energy source in the bottle washing process.

A visual comparison per emission type is shown below in figure 7. It displays multiple types of emissions, including human contamination per kilo. All measures use a reference of 330 litres of beer production in order to proportionally reflect each emission type. (Please note, non-returnable stands for single-use bottles.)

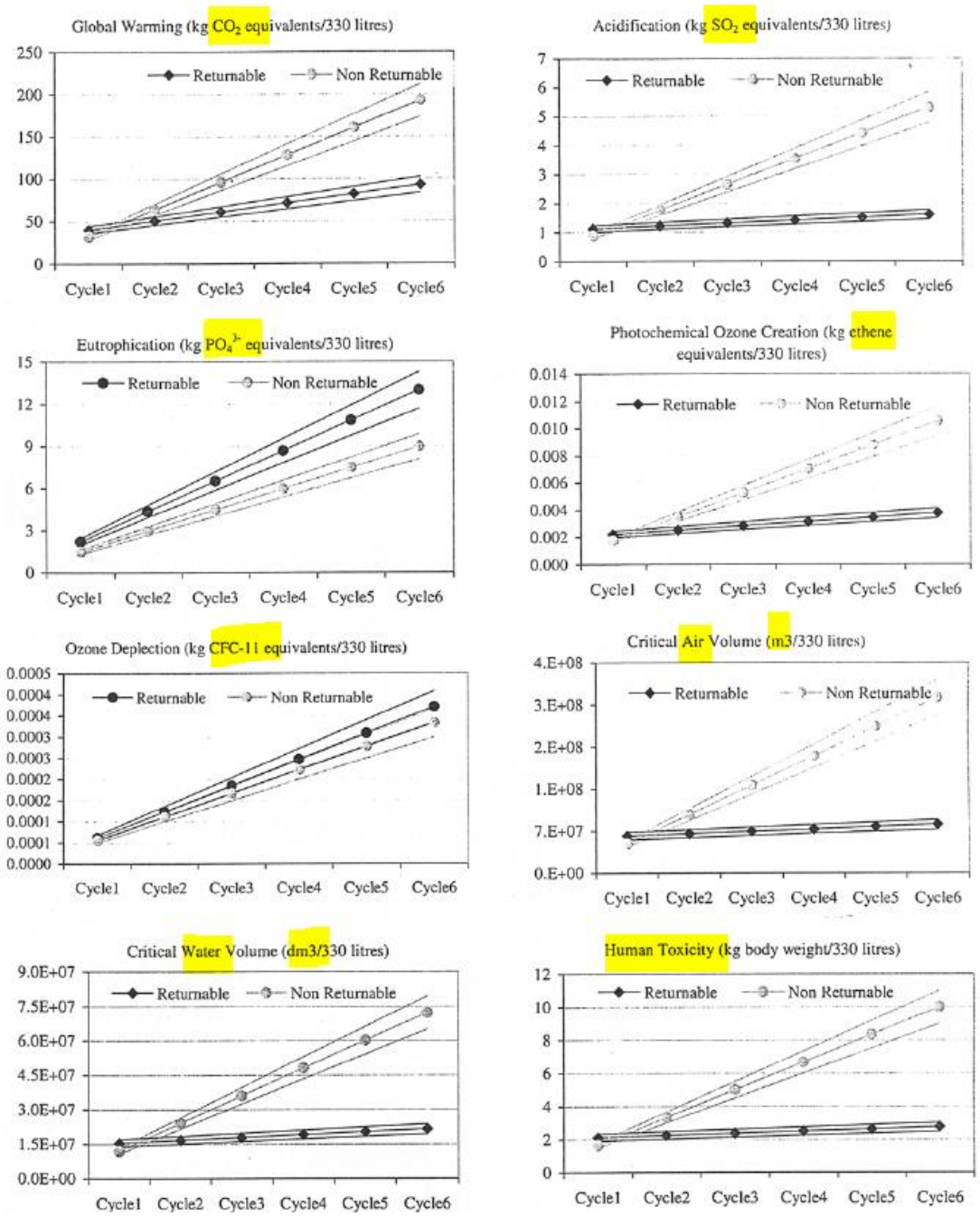

Figure 7 Environmental impact of returnable versus non-returnable bottles

This figure compares returnable bottles and single-use bottles per emission type and number of cycles. In this instance, 6 cycles for a single use represents 6 creations of new bottles. As mentioned above carbon emissions are slightly bigger for the first cycle for returnable but prove to be much more effective throughout the cycles. In fact, only eutrophication (ocean polluter increasing toxic algae resulting in killing marine life) and ozone depletion (reduction and holes in the ozone) are slightly bigger in comparison to non-returnable bottles. These emissions are linked to the chemicals used while cleaning returnable glass bottles which don't have to be used as much in single use bottles.

As a result, this article shows that returnable bottles are better for the environment and the additional steps required to clean the bottle are less damaging than remoulding new bottles after recycling glass. Although once again, it is important to keep in mind this article was published in 2001. The exact numbers might have changed in the meantime; however, they remain valid to interpret the key processes and the emissions that are made in the process. Furthermore, the study was not developed in Switzerland and therefore might not be applicable to Switzerland. Indeed, Switzerland could have different advantages and disadvantages in comparison to other countries (small country, well connected with railroads, remote villages, mountains making transfers more technical). For this reason, we compared the conclusion of the previous study with the article written about the roots of LCA in Switzerland (Fink 1997).

In this article, a study was conducted to determine the best packaging for a litre of milk.

The following 5 containers were compared:

- A plastic (polyethylene) tube - Bag
- A light plastic bottle polyethylene)
- A brick pack with polyethylene (Tetra Pak)
- A returnable glass bottle lasting 20-40 cycles
- A plastic bottle (polyethylene)

After comparing emissions, weight, and printing of the etiquette. The results showed that the returnable glass bottles and the plastic bag were the ones with the smallest impact on the environment.

Despite these results, the brick pack was already the most popular container for milk at that time representing over 90% of Swiss milk being sold in “Tetra Pak”. This shows that despite having Tetra Pak in all shops for milk and it being the most sold format, it is not the most recommended format. On the contrary, it is unfortunately part of the least eco-friendly options.

Now looking at the 2030 agenda for sustainable goals written by the Platform Agenda 2030. (Swiss Civil Society Platform Agenda 2030 2018). The agenda shows the past Swiss background on the topic of glass and the advantage of returning it, one can even see different points relating to how Switzerland hasn’t taken much more initiatives when it comes to waste management. The agenda is split into 17 objectives all having different sub-objectives. Objective 12 concerns “responsible consumption and production” and has sub-objective 12.5 stating; “By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse”. As most Swiss companies are trying to align

their goals with the ones mentioned in the 2030 agenda, they should focus on reducing waste by reusing.

To resume what was said in the previous articles, returnable glass bottles are certainly a more ecological option than single-use bottles. Participating in such a change would not only align with the 2030 Swiss Agenda, but it would also avoid using sub-optimal practices, as seen within the milk industry. One can therefore justify the need to implement a returnable glass bottle system in Switzerland by reintroducing a deposit system. Furthermore, many countries have already developed similar systems and it has shown to work well. Some countries even extended the deposit system to other types of packaging such as PET bottles and Aluminium to ensure people recycle correctly.

The article, Reviewing the Deposit Systems for Beverage Packaging, written in the Journal of Cleaner Production (Zhou, Gu, Wu, Gong, Mu, Han, Chang 2020) compares how different countries that have introduced similar systems. They provide a good base to understand the different deposit systems that could be applied in Switzerland and help assess which deposit and return system would work best with the current Swiss recycling system.

Specifically, the article explains the deposit systems in Sweden, Germany, and South Australia. It includes technicalities and specificities of each system and compares them to one another.

The German system is based on the reverse logistic model and supported by the Packaging Ordinance law (with the famous *Grune Punkt* logo) that sets targets for the beverage manufacturing companies to collect the packaging they sell. The German deposit system is known as the" Pfandsystem" and has been working since 2003. Their recovery rate for glass was worth 97% in 2014.

The *Entreprise Deutche Pfandsystem GmbH (DPG)* is responsible for the system. As shown in the figure below, the DPG is responsible for the management and coordination but doesn't directly take part in the logistics of the material or deposit flow.

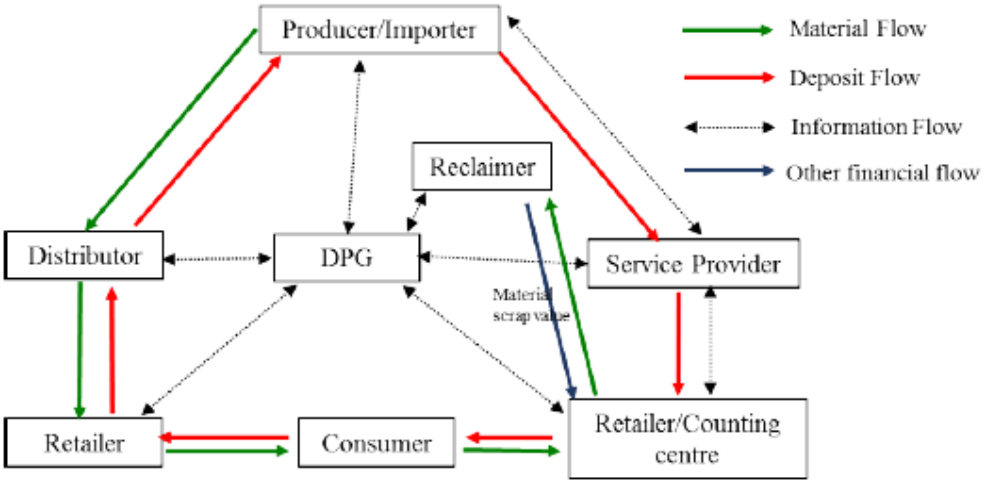

Figure 8 Operations of the German deposit system

Instead, the Pfandsystem works in a reverse logistics where the filled bottles go to the consumer and the empty bottles are brought back to the retailer. Most are returned via reverse vending machines, which are often found on retailer parking lots. Some are also returned via other collecting centres that then sell the bottles to bottle cleaners or recycle them. All the operations are supervised by the DPG except for the consumer's behaviour.

The Swedish system uses the Retail recycling model. After integrating a standardized mechanism for cans in 1981, Sweden did the same for plastic bottles and later standardized a system to recover glass bottles, although glass bottles do not use the deposit return system. The Swedes have an overall recovery rate of 84.9%. At the centre of this system there is a non-profit entity called Returpack, which is owned by Swedish beer manufacturer, the food and marketing association and large retailers.

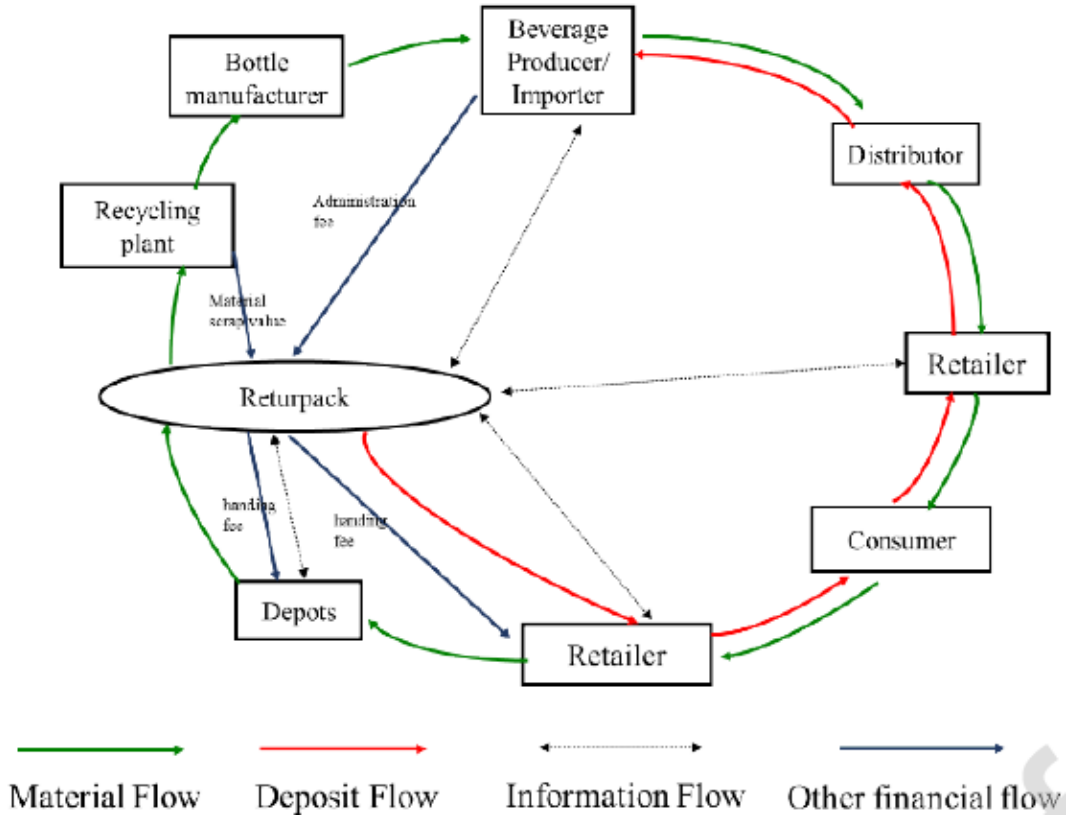

Figure 9 Operations of the Swedish deposit system

Similarly, to the German system that has its retailers display a reverse vending machine, the Swedish system includes retailers in the material flow twice since they represent the main collection and point of return for the consumer. However, in the Swedish system, Returpack also takes part in the physical material flow in addition to the information flow and key financial flow. Furthermore, as implied in its name, Sweden doesn't apply a general reusable glass bottle system but rather recycles them. Returpack nonetheless is the key stakeholder in the recycling system.

Finally, the South Australian system uses the rep recycling model introduced in 1975. At that time, the parliament passed the legislation of the beverage packaging deposit-refund system. Super collectors are responsible for recycling and act as agents for the beverage industry. They also coordinate the deposit system and have contractual arrangements with collection depots and beverage suppliers.

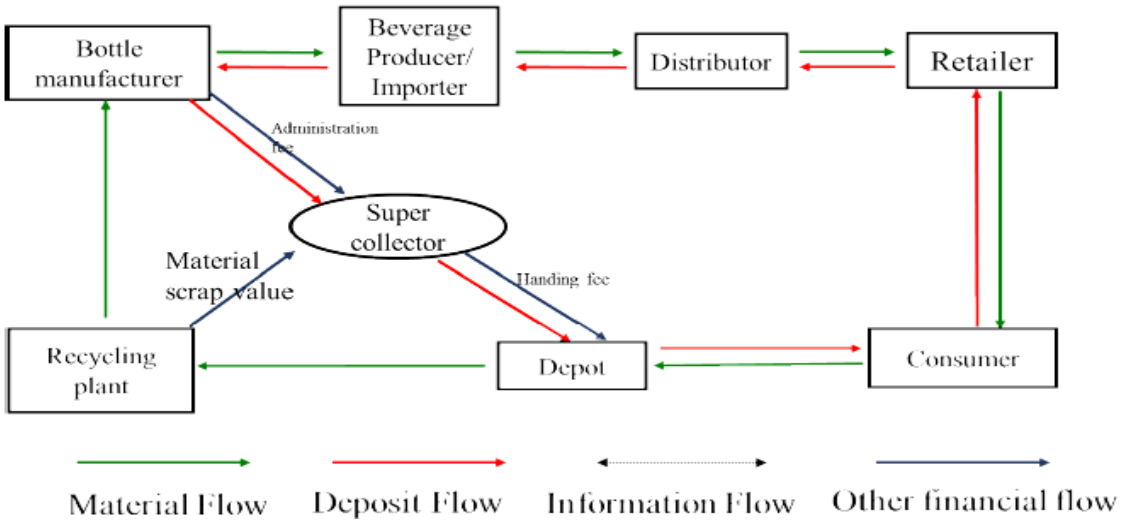

Figure 10 Operation for the South Australian deposit system

In the Australian system, the deposit system is legally binding and expected by the super collectors. This system removes “extra work” from the retailers and requires the consumer to deposit his bottles at one of 132 collection depots where the deposit is directly reimbursed to the consumer.

The study then compared all 3 systems based on different factors to determine their key pros and cons.

Table 1. Comparison of the three deposit-refund modes

	Reverse logistics mode	Retail recycling mode	Repo recycling mode
Producer burden	Highest	Average	Average
Consumer burden	Secured to a certain extent	Secured to a certain extent	Depends on the distance from the collection sites
Retailer burden	Highest but can increase passenger flow	Average and can increase passenger flow	Low
Collection sites	Not required	Required but the number can be relatively small	Required and the number needs to be sufficient
Transportation burden	Low (Existing logistics can be used)	Highest	Average
Regulatory burden	Highest	Average	Average

Figure 11 Comparison of the 3 deposit systems

In the table above, we can see that the German system (reverse logistics mode) has the biggest burden for producers and retailers, as they are required to take direct responsibility in the process and must be highly engaged for the system to work. The Swedish system (retail recycling mode) has the highest transportation burden due to the

fact all packaging is centralized at Returpack before being redistributed, thus causing extra logistics. Finally, the South Australian system (repo recycling mode) scores relatively low overall except if the number of collection sites is insufficient. In that case, consumers would have to do more effort to return their bottles.

All countries having a deposit system have a managing institution. Its main role is to liaise manufacturing companies with recycling enterprises. This is often also managed by the government. Once the decision is taken to start a deposit system, a company or non-profit is founded to coordinate the process and track its progress.

Regarding the deposit value, a study showed that 50% were recovered with a deposit of 2.5 cents, 65% were recovered with a deposit of 5 cents, and 95% were recovered with a deposit of 10 cents. This study (Zhou, Gu, Wu, Gong, Mu, Han, Chang 2020) was made in New York and Massachusetts.

Regarding the funding of such operations, most countries often use different strategies to pay for different operations. Revenue can be generated from selling materials to a bottle manufacturer, keeping the unredeemed deposit fees for non-returned bottles or can be provided by government, company funding or container and recycling taxes.

Below is a table showing the different funding ways used in different countries:

Country/Region	Material revenue	Unredeemed deposits	Administration fee	Container recycling fee	Government finance
British Columbia	■	■	×	■	×
California	■	■	■	×	×
Denmark	■	■	■	×	×
Germany	×	×	■	×	×
Norway	■	■	■	×	×
Sweden	■	■	■	×	×
South Australia	■	■	■	×	×
Yukon	×	■	×	■	■

■ means included in the system, × means not included in the system

Figure 12 Funding mechanism to cover the operating costs of the deposit system

As seen above, Germany is solely funded by administrative fees. They do not take funding from unredeemed deposits or from reselling the materials while Sweden and South Australia do.

To conclude, given the information found in the different journal articles, one now better understands the functionalities of returnable glass bottles and grasp the benefits it can bring to better manage and reuse waste. Not only is it better than recycling, but it would

also be a good fit with the Swiss objectives despite their strong existing recycling processes. As Swiss civilians are relatively used to recycling and go to recycling plants near their homes, it could be interesting to adopt a similar system to south Australia and add glass collection machines, as done in Germany. Ideally, one would also leverage new technologies to enable direct reimbursement. Returnable bottles could therefore be returned to a glass manufacturer or cleaner who would disinfect and rinse the used bottles before selling them to breweries. Breweries could then resell filled bottles and account for an added deposit fee.

Based on the information given in the articles referenced above, one reviewed ecological detail, carbon emissions as well as various countries' system structures. Based on those insights, one could conclude that the deposit system for returnable glass bottles could be well implemented in Switzerland.

The article about roots of LCA in Switzerland (Fink 1997) already mentioned above, also discusses the "Yoghurt Study". This study doesn't discuss the returnable glass system but can serve as a good example on the effect of marketing more sustainable options and positioning them as a competitive advantage in Switzerland.

The case speaks about*, Toni,* a big Swiss dairy producer that decided to use glass packaging rather than polystyrene containers with an aluminium lid like all other yogurt producers. They were supported by the Swiss glass manufacturers and used a voluntary return without deposit system. As part of their offering, they created a big marketing campaign promoting how eco-friendly their products are and promoted different arguments (which were not fully backed-up) to gain a competitive advantage. Professionals having analysed the campaign and the real environmental impact noticed that some facts were actually misleading. Nevertheless, they still managed to convince most of the population with their arguments. This case demonstrates how Toni introduced a returnable glass jar system and was able to motivate people into buying their products. This case also proves how effectively environmental arguments resonate with the Swiss population. At the end of the day, despite all the positive awareness and marketing campaign, the returnable jars were mostly recycled rather than returned due to the voluntary return without deposit. This case not only highlights how much Swiss consumers value environmental packaging but also shows the importance of setting up a better infrastructure, such as a deposit system and collection centres, to ensure waste is returned to its appropriate location. By doing so, one also creates a virtuous cycle.

3. Methodology

To help us understand if Feldschlösschen could gain a competitive advantage from reintroducing returnable glass bottles. We needed to collect primary data to figure out whether Swiss beer consumers are in favour of using returnable glass bottles and how their return system would suit them best.

The first step of the project was to gain information on secondary data, coming from the journal articles mentioned in the literature review as well as different websites. This was helpful to understand the different possible options. One learned that deposit systems are done in many countries in similar ways, even though the details of their functioning are specific to the country and its citizens. After searching for information about similar projects in Switzerland, very little information was found. In order to define what possibilities would match the preferences of Swiss civilians and whether such a system would be of interest to them, it became clear that a survey ought to be done to collect primary data (questions are found in Appendix 1). Quantitative data seemed more insightful, as the system would have to model and fit a wide range of consumers across Switzerland. To ensure a relevant collection of answers, the sample had to match Swiss demographics, which is why the survey was created in three languages (German, French and English). It was distributed with Qualtrics, being a survey platform that adapts the survey's order or questions based on previous options. This was how one was able to collect answers matching our target audience: people that drink or/and buy beer in Switzerland.

The survey was shared using social media, such as Instagram and LinkedIn, and was sent through private channels asking French- and German-speaking people to share the survey with their networks.

To maximize the number of responses, one ensured the survey does not take more than 5 minutes to complete. One also formulated the questions and answers as easily as possible. The survey was structured in 5 parts:

- Filtering the audience, to only collect intended target audience's answers
- Understanding individuals' beer consumption and habits
- Understanding their view on the deposit system in Switzerland
- Questioning the best options for returning Returnable Glass Bottles
- Demographic questions

The Survey was set up in a way that if the respondent does not match the target group, they would automatically be directed to the end page to avoid the data being biased by people not buying beer in Switzerland. People that don't drink beers but buy some (example of a wife buying beers for her husband) were kept in the survey and requested to answer all questions, as they would also be contributing to the returnable glass bottle system.

If the respondent was considered among the target group, the respondent got some questions about their beer consumption and habits before being asked whether they were in favor or not for having a reusable glass system in Switzerland. Given their answers, they were either asked why they are against the idea before being redirected to the end page or asked about how the system would best suit their habits. The latter would then also select their preferred system details.

After collecting 311 answers in a period of 3 weeks the survey was closed to avoid new answers disturbing the data set. At that time, the data could be sorted and analyzed in the following way:

- The data set was extracted to Excel and cleaned in the following way
    - All incomplete lines were deleted and not considered.
    - All answers containing an answering period shorter than 2 minutes were deleted as these were considered non-serious answers.
    - All 29 respondents who do not buy beers in Switzerland were removed since they do not fit our intended target group.
    - Remaining responses were numbered and sorted based on their weekly beer consumption.
    - Keeping respondents that drink "less than a beer a day" but still drink "from time to time" for the sake of comparison later in the research.
- The same sorting was done on Qualtrics as some analytics can be done better on the platform directly. This way data could be compared and viewed in Excel and the results could be extracted on Qualtrics directly.
- Once the data was cleaned, the demographics of the respondents were analysed and added to the report.
- One compared the answers given in German, English and French to see if they are any major differences between "regions" to avoid biasing the results as German is a minority in the sample but a majority in the population. Answers were colour coded (green for English, orange for German and black for French) in order to spot differences visually.

- The first analysis was made by seeing how many people believe a returnable glass bottle system would be useful or not in Switzerland and splitting them into two different sheets in the excel file. (One sheet with these in favour and another with these not in favour.)
- Data was compared from the excel database, which was cleaned, and later more complex actions were carried out on Qualtrics using filters basing themselves on the answers provided in previous questions.

With the goal of having feedback from retailers, such as Coop, one initially wanted to interview a purchasing director to understand their view about returnable glass bottles but finally decided that interviewing a Brand manager for Feldschlösschen could provide a more complete and aligned view for this research. One, therefore, wrote an email (in German, see below) to Mrs. Delcò, who is working as a Brand Manager for Feldschlösschen to know more about their sustainable ambitions, glass usage, and their marketing capabilities to launch such types of campaigns. After receiving her answers, one was able to get a better understanding of what their objectives are and how feasible the project is in real life.

4. Results

4.1 Results from the survey

4.1.1 Overview of the demographics:

The survey had a total of 311 responses, including 279 complete and valid ones (appropriate time spent and fully completed). 250 answers were among the target group (buying beers in Switzerland). From these, the average age stood at 34.9 years and the average weekly beer consumption was measured at 4.1.

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Avrg. weekly beer consumtpion	0.00	30.00	4.09	4.58	21.02	250

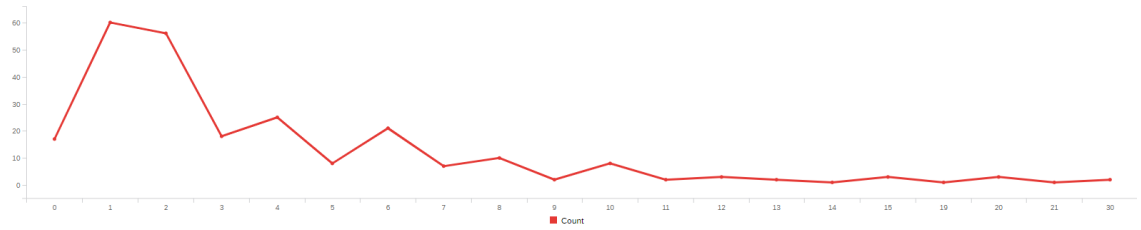

Figure 13 Average weekly beer consumption, n=250

From all the respondents 166 qualified as males, 82 females and 2 preferred not to specify.

44% of respondents said they live in a city, 39.6% said they live in the countryside and 16.4% live in a suburb.

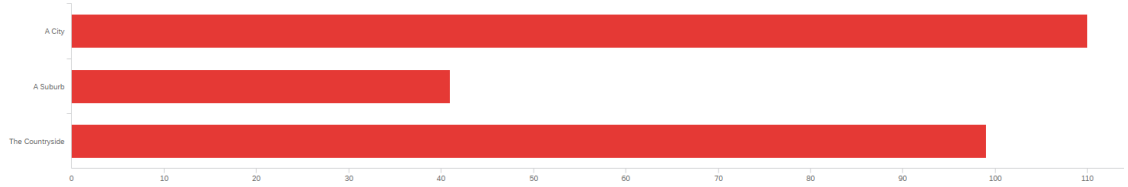

Figure 14 Where do the respondents live? n=250

14 of the respondents, answered in German, 78 in English and 158 in French.

As the survey was based to address the overall Swiss population it was written in German, English and French and the chosen language could be used to determine where the respondents are from. The results showed that 5.6% answered in German (Swiss German), 31.2% in English (International citizens living in CH) and the remaining

63.2% in French (French side). These numbers are not proportional to the distribution of the Swiss population as it was harder to get answers from the Swiss-German part. Although, comparing the data between languages (regions) on different questions, one could not notice any significant differences in the answers based on the region they are from.

4.1.2 Who sees the need for a returnable bottle system?

Out of the 250 answers, 199 (80%) of respondents believe a returnable glass bottle system could be interesting to develop in Switzerland and see a need for it. While the other 51 (20%) responded they don't see the need or use for it.

Comparing this information to the average weekly beer consumption we notice that the ones in favor of returnable glass bottle (RGB) system have a lower average than those who are not in favor of such an implementation (3.9 vs 4.9). This could be justified since one would be asking bigger beer drinkers for more effort due to higher amounts of bottles.

Up to 18% of the respondents who are not in favor for a RGB system, say that they hardly ever buy beer in glass bottles. While respondents who are in favor of such a system, only have 6% who hardly buy glass bottles.

Those who answered they do not see the need for such as system were asked what main reasons make them resist such change. Here are the main reasons based on their replies (several answers were allowed, totaling to 111 choices despite having only 51 respondents):

#	Field	Choice Count	
1	The Recycling system works better	30.63%	34
2	It is inconvenient to return bottles	27.93%	31
3	I can't dispose of them as easily - Less access points	19.82%	22
4	Recycling is better for the environment	7.21%	8
5	I have to pay more for my beer	12.61%	14
6	Other	1.80%	2
			111

Figure 15 Reasons to be against a RGB system in CH, n=51

Those who answered “Other” said that transaction costs would be increased (more to cash out due to deposit). They also said that bringing bottles to a different place than where they are recycled would take too much time.

As a final (non-mandatory) question for respondents not in favor of the RGB system, respondents were asked what could motivate them to take part in such a system. This then provided some qualitative insights about what key motivations a company like Feldschlösschen should leverage to motivate the bigger part of the laggards (based on the Innovation Adoption Curve)

Some argued that having many and accessible return points in shops and in their usual recycling place would help. Others felt that a clear and transparent overview of the process and explaining why it is best would help motivate them. Some don’t want to feel financially disadvantaged, and others want an easy to use returning system. Lastly, some believe the price of the beer should be reduced. Overall, the qualitative data drawn from this open question was closely aligned with the suggestions given to respondents who are in favor of in a RGB system in Switzerland.

4.1.3 How do current Swiss beer shoppers consume and recycle?

After sorting Swiss beer shoppers and beer drinkers, one asked some questions about their preferences and consumption habits.

One identified 14 answers of beer shoppers that do not consume beers, which corresponds to 5.5% of the sample size. These people are probably people that shop for the household and buy beers for someone else. Their motivation for a RGB system is very similar to the spread found in the rest of the sample (21% against and 79% see an interest in it). Their view on this matter was kept as they too would participate in the RGB system, despite not drinking beer. Finding similar results between this target group and the beer consumers is, therefore, good news.

One then asked respondents whether they buy their beers in glass bottles. 54.8% said that most of the time they do, 37.2% said that they do sometimes and the remaining 8% said they hardly ever buy glass bottles.

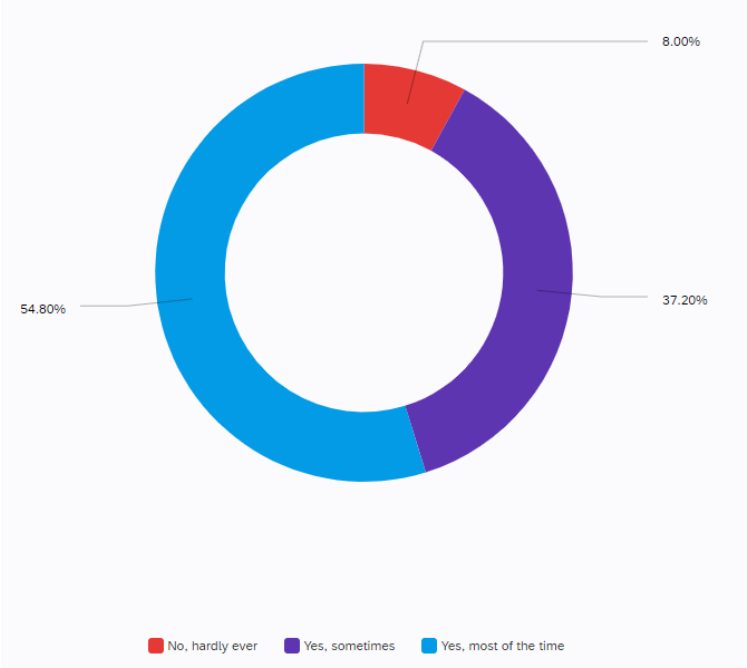

Figure 16 Do you buy your beers in glass bottles? n=250

Pairing the results above with beer drinkers having an average of 5 beers or more a week represented only 29.6% of the sample size.

The results show that people who indulge in higher average weekly consumption are less likely to buy beers in glass bottles. People hardly ever buying glass bottles go from 8% to 12.2%, whereas people mostly buying glass bottles go from 54.8% to 36.5%. The remaining 51.4% are attributed to people who sometimes buy glass bottles.

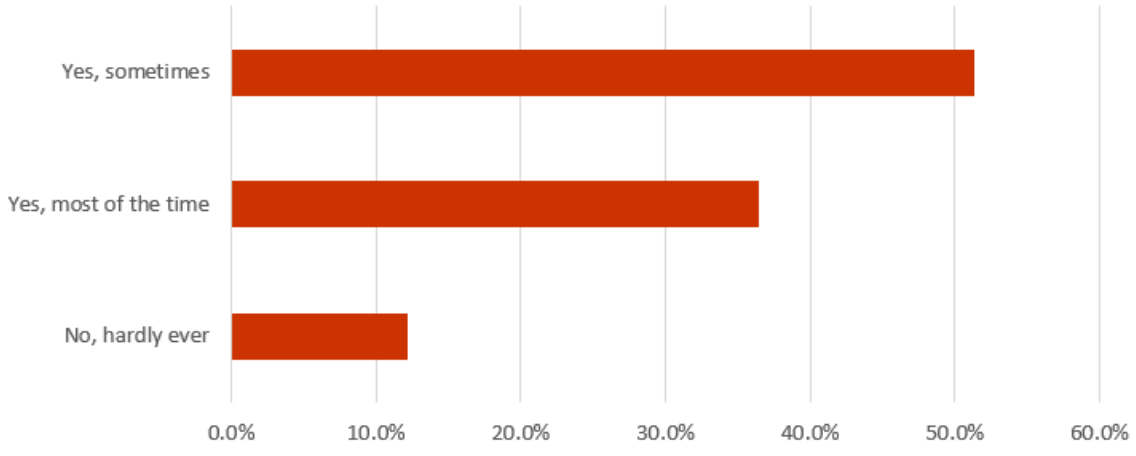

Figure 17 Glass bottle purchase based on average weekly consumption, n=233

These results show that glass bottles aren't the most convenient option for people having higher average beer consumption, even without a RGB system. But overall, the results

still show a high consumption of glass bottles as around 90% of consumers claim to purchase glass beer bottles sometimes or frequently.

Given the wide amount of beer brands available to consumers in Switzerland, we asked our respondents if they buy Swiss beers.

Out of the 250 answers, 127 (50.8%) stated they buy Swiss beers most of the time and 9 people (3.6%) even said they only buy Swiss beers. While 92 respondents (36.8%) said they sometimes buy Swiss beers but mostly go for imported beers. The remaining 22 people (8.8%) stated they hardly ever buy Swiss beers.

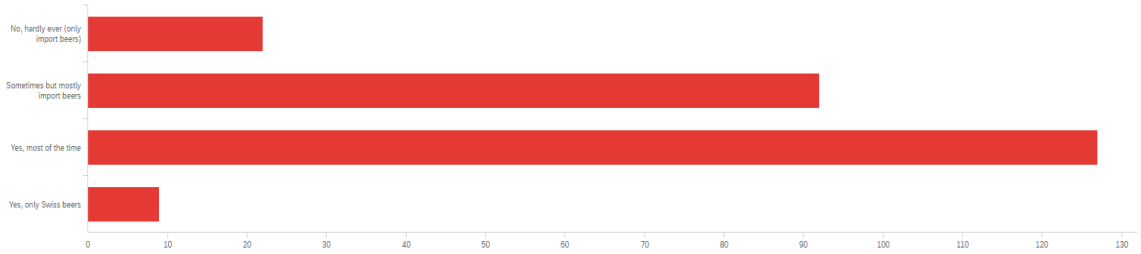

Figure 18 Do you buy Swiss beers? n=250

To compare the Swiss beer purchase percentages with the average consumption, we used the average weekly consumption as a weighted average to see if there is a correlation between local beers and the purchased quantities.

All 250 answers added up to a weekly consumption of 1022 beers. Out of these one was able to determine how many of the 1022 beers belong to the 4 given categories:

Swiss beers ?	n° of beers	Weighted avg.	Per person
No, hardly ever (only import beers)	48	4.7%	8.8%
Sometimes but mostly import beers	393	38.5%	36.8%
Yes, most of the time	550	53.8%	50.8%
Yes, only Swiss beers	31	3.0%	3.6%
Total	1022		

Figure 19 Weighted average of Swiss beer consumption vs individual results, n=250

Comparing the results given from the weighted average (which gives more importance to respondents having a high average weekly consumption) with the one given directly from the survey (which gives the same importance to all answers), one notices that the distribution remains similar. With this information, one can conclude that the overall

consumption habits of the entire sample match the consumption habits of the bigger beer consumers. Based on these results, one can also estimate that around 55% of the beers bought in Switzerland are Swiss beers.

Now that one knows about the consumption habits of our respondents, one can analyze their recycling habits. They had to indicate whether they recycle their beer bottles or containers (including aluminum) and had the following 4 answers to choose from.

1	No, I don't recycle them	6.00%	15
2	Sometimes	4.80%	12
3	Yes, most of the time	21.20%	53
4	Yes, all the time	68.00%	170

Figure 20 Do you recycle your beer containers? n =250

As shown above, only 68% claim they recycle their bottles all the time and 21.2% claim they do most of the time. Totaling to an amount of 89.2% of frequent recycling, this still leaves 6% of people who don't recycle the bottles and 4.8% that do sometimes.

When comparing the weighted average per bottle, as done above, one observes that bottles sometimes recycled and not recycled correspond to a total of 9% (92 bottles out of the 1022 weekly consumed bottles). While this amount can seem small when taken from our sample of 250, the number of bottles becomes much more important when pulled against the Swiss population number, estimated at over 8 million people.

Comparing the same recycling data to their willingness for a RGB system, the people saying that they do not recycle surprisingly seem interested in the RGB system. Indeed, only 3 out of the 15 of non-recycling respondents said they don't see a need for the system. One could hypothesize that people not recycling don't have any incentive to do so, as there is no punishment (such as losing money) to the unredeemed deposit.

Finally, we gave our respondents a definition and an explanation of a returnable glass bottle system using deposits and asked them if they already heard of this system.

Most of the respondents (86%) knew about the system but surprisingly still 14% claimed they never heard of such a system before.

4.1.4 How and where do Swiss beer buyers plan to return their bottles?

To understand how people in favour of a RGB system would feel about the practicality of such system, we asked them different questions about where and how they would like to return their bottles and get their deposit back. Bearing in mind that it is very important to align with Swiss preferences, since one wants to build a system that makes it easy and motivating for Swiss consumers to take part.

The respondents were allowed to select multiple answers, as there is often more than just one suiting solution but were not obliged to pick multiple choices if they only saw one suiting answer. For those who had another idea from the listed choices, an open text option was provided as “Other” to add other suggestions.

Our first question concerned the glass drop-off place, whereby one asked the respondents where they would prefer to return their empty bottles.

The results came in as shown below:

2	Bring it back to any shop (selling similar products)	29.89%	142
4	Bring it to a "reverse vending machine" that collects the bottles (located in various places)	25.26%	120
3	Bring it to the recycling center near your house.	17.89%	85
1	Bring it back to the shop where you bought the bottles	14.74%	70
5	Bring it back to a designated place for glass collection	11.16%	53
6	Other...	1.05%	5

Figure 21 Where would you rather return your glass bottle? n=199

The preferred option is to bring it to shops, to reverse vending machines and to the local recycling centres (these are not designated return glass collection centres but are the recycling centres that already exist and are currently being used for recycling).

As one could have expected different tendencies depending on where the respondents live (suburb, city, or countryside), one segmented the answers based on the demographics. Surprisingly, one did not find any big differences depending on the location type.

The graph below outlines the coherence despite recycling habits being different in cities, suburbs and countryside.

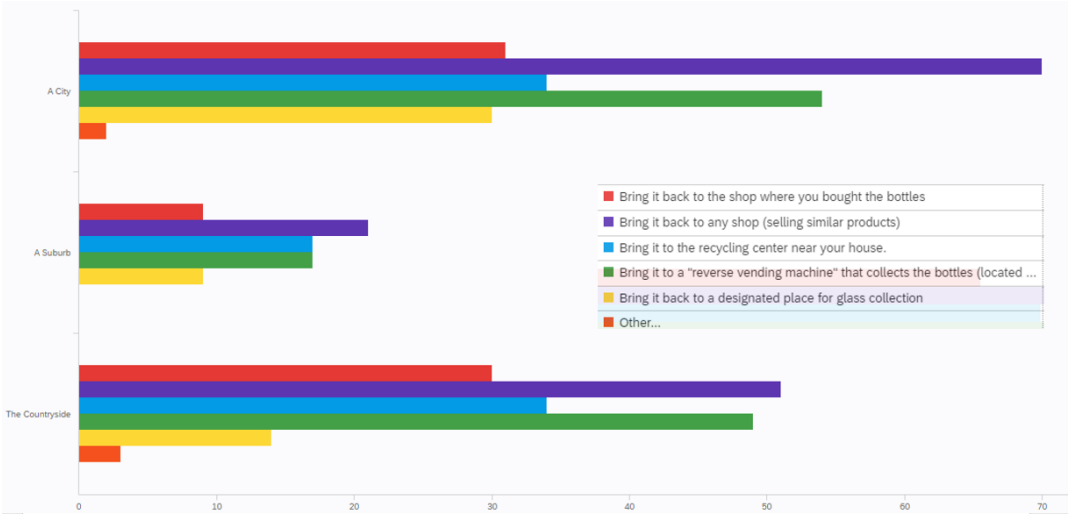

Figure 22 Where would you prefer returning your glass bottle based on where you live? n=199

Even when compared to the recycling habits, people saying they recycle all the time still tend to prefer bringing them back to the shop before bringing them to the recycling center near their house.

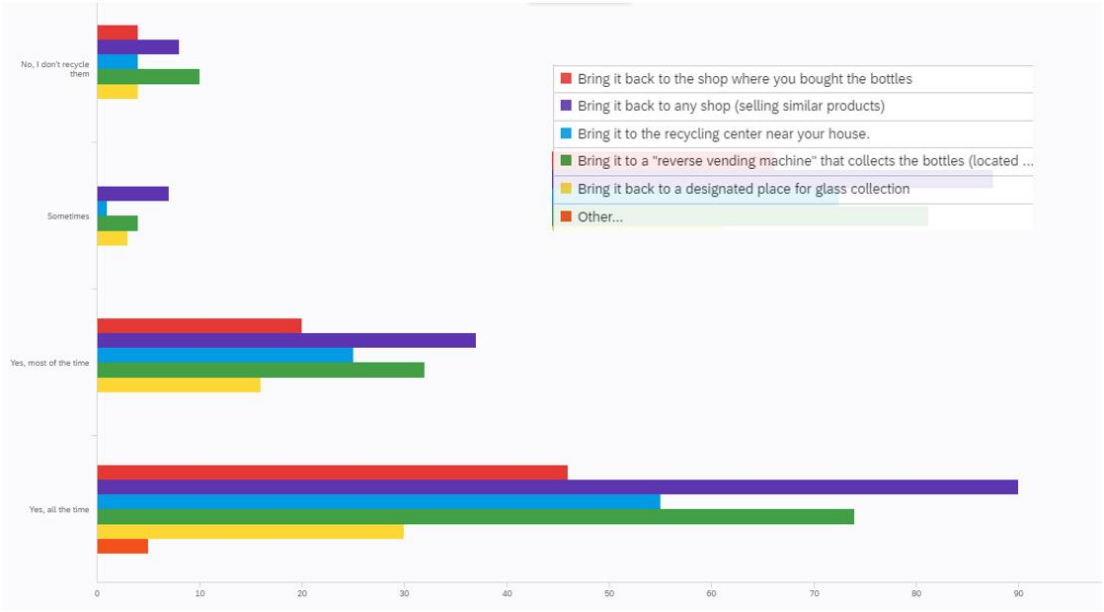

Figure 23 Where would you prefer returning your glass bottle based on recycling habits? N=199

One then asked the respondents about the way they would like to return bottles: if they would rather bring back cases of same or different bottles, single bottles, small groups of bottles, etc. To do so, we let them rank in order of preference the options that suit them best. The results show that 68.8% of people prefer being free in terms of bottle returns. This means they prefer bringing different bottles back in various quantities. Additionally, 49.2% chose a full case of 12 or 24 bottles of different bottles as their second preferred option.

#	Field	1		2		3		4	
1	One full case (12 or 24) of the same bottles	9.05%	18	9.55%	19	26.63%	53	54.77%	109
2	One full case (12 or 24) of different bottles	16.58%	33	49.25%	98	29.65%	59	4.52%	9
3	Small cases of the same bottles	5.53%	11	31.16%	62	36.18%	72	27.14%	54
4	Different bottles in any quantities	68.84%	137	10.05%	20	7.54%	15	13.57%	27

Figure 24 How do you prefer returning your bottles? N=199

The next question was regarding the cash-back method when the empty bottles are returned. We asked what different methods were preferred (multiple choices possible) to get the deposit back.

The results came in as shown below:

1	Getting cash back	28.74%	148
5	Receiving a direct payment via TWINT or other online money transfer options	27.18%	140
7	Donating the deposit value to charity	10.87%	56
3	Receiving a virtual voucher for the purchased quantity (QR code)	8.93%	46
2	Trading one unit for another (no cash back)	8.74%	45
6	Receiving a physical voucher that can be discounted on any purchase	8.54%	44
4	Receiving the value in points on a loyalty card (Supercard, Cumulus card)	6.60%	34
8	Other	0.39%	2
			515

Figure 25 How would you like to get your deposit back from a reverse vending machine? n=199

The two favorite methods were getting cash (28.74%) and receiving money back with Twint or other money transferring options such as PayPal, Revolut, etc. Donating the money to charities is also a highly ranked method.

The next question was whether respondents felt beer companies should drop their prices if a returnable glass bottle system was put into place. The results were relatively close as 49.25% feel prices don't have to change while the other 50.75% feel prices should be reduced.

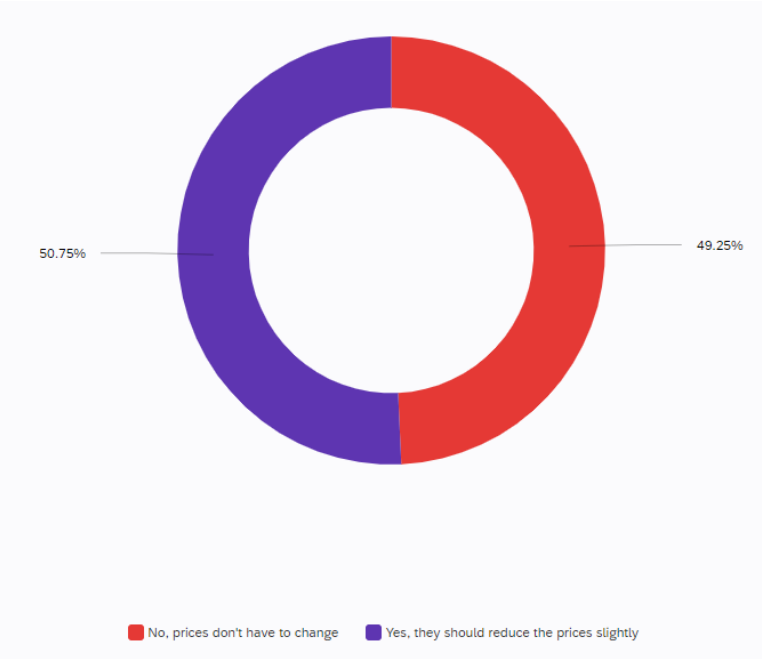

Figure 26 Should beer prices be reduced with a RGB system? n=199

To understand at what amount the deposit value should be set, we asked respondents to give their estimation of a good deposit cost.

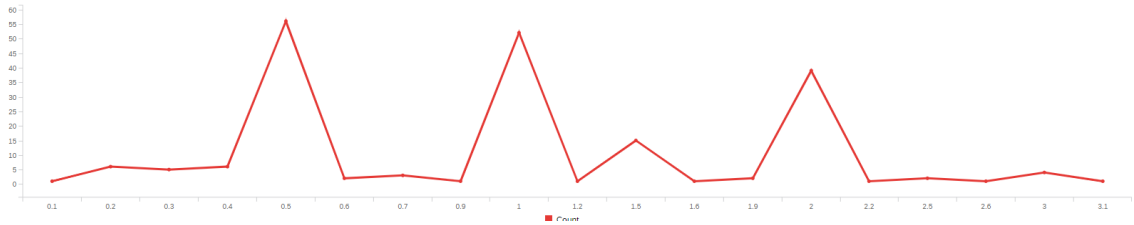

Figure 27 Estimated deposit value per bottle, n=199

Respondents suggested a mean of CHF 1.11 as a deposit per bottle. Although when compared with the weighted average based on average weekly consumption the mean falls to CHF 0.95 (733.8/772) but still seems relatively overvalued in comparison with the article discussing deposit price.

To compare the value perception and how accurate the respondents were, we asked them to estimate the price of a pack of 10 Feldschlösschen full glass 33cl lager bottles. The average price on the market is CHF 12.- but any answer from CHF 9.- to 14.- was accepted. Comparing the suggested deposit price with the estimated price we kept only the answers from those who guessed the price of a 10-pack correctly. The average of this sample came back to CHF 1.08, which isn't very far from the two values estimated above.

4.2 Results from the discussion with the Brand manager

To get information linked to Feldschlösschen and to understand the feasibility of such a project we interviewed Mrs. Ramona Delcò, who works as a Brand Manager. Different questions were asked and the extract formulation of the question, as well as the provided answer, can be found in Appendix 2 (communication was done in German via email).

The first question we asked the brand manager, was whether the company is evaluating the possibility of reintroducing returnable glass bottles in retail, as it is currently done in the restaurant and bar sector. She answered that such a launch wasn't planned for the moment but that they are always careful and eager to minimize their emissions. They are also aware that this is a system they would have to develop jointly with Coop or other retailers selling beers. She also mentioned that Coop has recently launched a refill system where customers can bring their reusable bottles and fill up their beers and/or sparkling water (project was launched last year in a few shops).

The next question asked was to know if Feldschlösschen had launched a recent campaign to make their brands more sustainable. Ramona answered that just this year a sustainability campaign was launched to promote the importance and care they give to Swiss water. They also introduced new methods such as 20 electric trucks that are now in use and operating since 2020.

Their recent campaign is called "Together Towards Zero" and has 4 main objectives of which 2 are based on emissions and water.

The next question was to better understand the level of freedom they have from the Carlsberg group and to know if a big campaign could be launched independently. We asked our contact about the overall process and whether they need approval from the group before launching new ideas and campaigns. The answer was that they are very free in the Swiss market and that campaigns don't have to be reviewed by the group beforehand. Indeed, only Feldschlösschen directors and other departments must approve of those initiatives. Only big tangible investments, which require bigger capital, are coordinated with the Carlsberg group.

With a more technical view, in order to compare existing data with research conducted by Feldschlösschen, we asked them if they tested different models and compared their

impact. Their answer was as follows: they did some research regarding the impact of the packaging regarding emissions. Although for glass the only optimization they could find was to reduce the thickness of the glass of the bottle. But even this possibility isn't feasible as the production line gives a high amount of pressure and speed to the bottle. Same goes for the packaging and shipment processes. Therefore, this measure wasn't taken to avoid breaking glass.

Linked to their brand image, one asked the contact whether the biggest brewer in Switzerland had already been criticized or attacked regarding their environmental impact. The answer was that thanks to the importance they give to sustainability they haven't received any accusations.

To better understand the overall mentality of the company, we asked our contact her personal opinion regarding returnable glass bottles. She responded that their use is perfect in restaurants or bars, as these businesses take care of returning them directly. She claims she already bought returnable beer bottles in Switzerland with the site Justdrink.ch, which takes care of taking them back for the next order. She sees this as a perfect method as it is hassle-free in comparison to the effort that is required from retailers and consumers to return the empty bottles.

Our last question was regarding their marketing budget and whether they would be able to create a campaign reaching the entire country of Switzerland to promote their sustainability or a returnable glass bottle system. She answered that yes, the budget is sufficient and is currently being done with their responsible water campaign.

5. Discussion

5.1 What is the best solution?

Based on the different insights pulled from the survey, one can already say that Swiss citizens are positive about a returnable glass bottle system including a deposit system. Indeed, roughly 80% said they see an interest in doing so and part of the resisting 20% have arguments that could be solved such as “they don’t want to bring the bottles back to the shop”. From Feldschlösschen’s point of view, they seem to be reluctant to introduce such a process. They are concerned it will require too much work for the retailers, such as Coop. Nevertheless, the beverage producer shows that they want to be more and more sustainable and are looking into ways for reducing their emissions to net zero carbon emissions by 2030.

Comparing what we know regarding the different parties described in the literature review and the different systems we described from Sweden, Germany, and South Australia, one could imagine a mix of the different operating models for Switzerland. As a big majority of Swiss civilians tend to recycle, one could imagine having bottle return spots directly located at the recycling plant (like in the south Australian model). One could use reverse vending machines to minimize human labor, especially since the survey showed that returning the bottles to the shop was the preferred option together with the return vending machine option (like the German system). With that said, reverse vending machines could be installed near shops and in recycling plants. This way people who are used to bringing their bottles to their usual plant to recycle can now return them at the same spot and people that prefer returning them on their way to the shop (in the parking or close to the entrance) can dispose of them there. For the collection of these bottles, super collectors could be leveraged similar to the Australian system by having them empty the reverse vending machines installed near shops. This solution could use the network already put in place for the glass recycling system, all while introducing a smarter collection system that does not break the glass. Furthermore, Feldschlösschen also has an agreement with online web shops, such as JustDrink.ch, where returnable bottles can be purchased and returned at the next order free of charge. This stakeholder could help expand the RGB offering in more remote places, where super collectors would be obliged to do a detour. As they are a delivery service, they cover a big part of the regions where these “remote” reverse vending machines could be found. They could therefore offer an extra service for Feldschlösschen or even increase their offer to attract customers by suggesting a pick-up of returnable bottles. As already suggested on their website, as long as consumers buy for a minimum of 50.- on their website, they would

be willing to pick-up and accept returnable bottles, even if they were not all initially purchased on their own website.

The system can be adapted depending on the company's willingness to take care of the collection process. They could directly do it themselves or ask someone else to take care of the process, as suggested before. In the case of the Australian system with super collectors, the lost deposits, and revenues on sold bottles as well as already existing waste taxes would cover the expenses of these operations and therefore not make the beer any more expensive. Depending on the price of resale of the cleaned returnable bottles, beer companies might even make a bigger margin and could consider reducing their prices or increasing their benefits. As displayed in the results, 50.75% of respondents voted that they should reduce beer prices while the remaining believe they don't have to reduce prices.

In the case where Feldschlösschen would manage most of the operations, they would create a cost advantage. It is then up to them to decide whether they wish to reduce their prices or reinvest for bigger profit margins by spending more in marketing activities or research to fund other projects.

Specifically, Feldschlösschen's competitive advantage would be especially evident against the up-and-coming micro-breweries and import beer brands. Implementing a costly and capital-intensive returnable bottle system, would be too costly for micro-breweries, given their small scale and low volumes. At the same time, import beers would be constrained even more given their long logistical process across borders. As such Feldschlösschen would be more protected against its uprising competitors.

5.2 What alternatives are possible?

As mentioned above, Feldschlösschen stated that for the moment it is not willing to launch such a big initiative to collect bottles, mainly because they feel retailers will be reluctant as they will be required to do more. A start could be just negotiating a place where these vending machines can operate without adding any work for the retail employees. Therefore, this step could incentivize retailers to accept such offering. Needless to say, it would add a lot of work, time, and costs to Feldschlösschen if managed all independently. As seen in other countries, returnable bottle and deposit system only works in cooperation with the government and other industry players.

Getting subsidies from the government, as they reduce the amount of waste would be a reasonable suggestion. Furthermore, if Feldschlösschen suggests reintroducing the deposit system in retail with a petition, it could later become a general vote and make the law pass nationally. The company could then be supported by the government and claim to have helped to reintroduce this system, to reduce emissions and worked on a closed-loop cycle. Besides, most countries where the deposit system is in place and working well were created based on a change of law regarding waste management, as explained in the first part of this document.

As an even bigger step, Swiss beer companies could standardize bottles in a way to make logistics easier and even more sustainable. On a marketing and branding aspect, using standardized bottles reduces the unique “look & feel” aspect of the product, which could be problematic as part of brands’ heritage. Removing special bottles would mean losing the traditional aspect of the bottle. Using standardized bottles could also be a solution for smaller artisanal brands since their volumes could make their marginal costs more expensive.

Based on the interview with the brand manager, the interviewee also informed us about their new practice of in-shop refillable beer and sparkling water displays. This too is a good suggestion but can lead to taking a long time to refill (if the person has a high weekly consumption) and can also lead to being more polluting as these bottles are not returnable but fillable therefore the customer has to take care of washing the bottle themselves. This can lead to higher water consumption as well as jeopardized food safety.

5.3 *How could Feldschlösschen use this as a competitive advantage – creating the campaign?*

Feldschlösschen being the biggest beer company in Switzerland, they have a lot of power in the market and can therefore be leaders in decisions. By creating a big campaign suggesting to the Swiss population to make a move towards more sustainable habits, they can start generating awareness with consumers. By showing them how much switching from one-way bottles to returnable bottles could reduce carbon emissions, boost the internal economy (no need to purchase glass from foreign countries anymore) and reduce local waste Feldschlösschen could position that they are willing to make the change to be more sustainable. They could also create a sense of community by explicitly asking civilians for help. They could incentivise them to vote to change the law regarding waste management, therefore requiring all businesses selling glass to be responsible as well. This will take the consumer through the consideration field of the marketing and sales funnel, as they will have to choose if they want to help the company make its operations more sustainable and push all Swiss beer companies to do so as well. Considering this "pre-vote" is free and easy to do on their website (as signing a petition), they will be required to provide a minimum amount information. Other fields could be optional giving the choice to the consumer if they agree that Feldschlösschen uses their data for promotional reasons or not. Considering the customer voted to go in the same direction as Feldschlösschen, they will unconsciously or consciously relate to the brand.

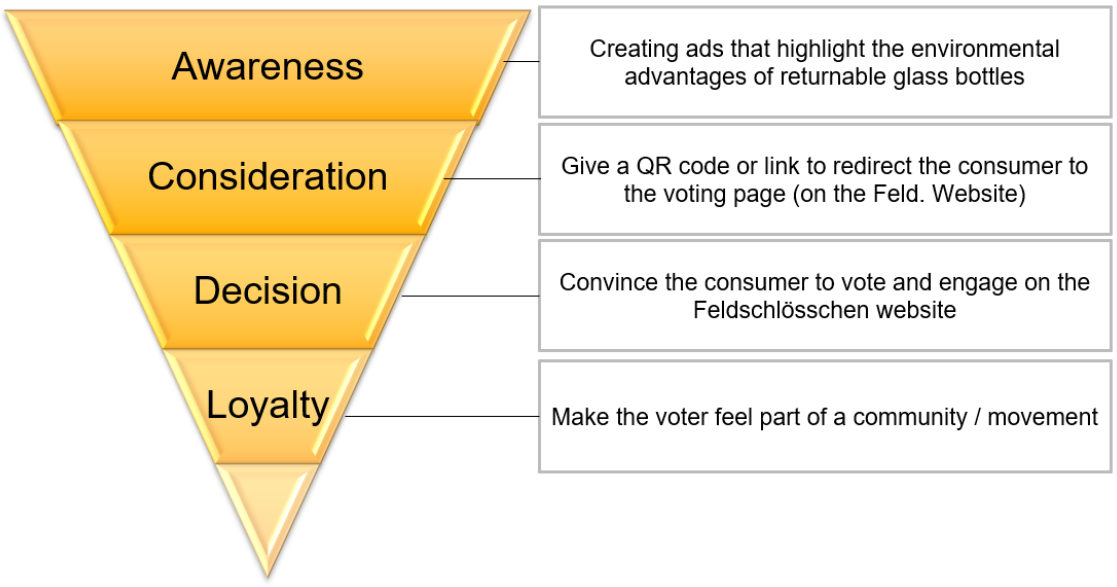

Figure 28 Overview of the campaign based on the sales funnel

If Feldschlösschen manages to push a change of law, they will be remembered as the company that brought back returnable glass bottles in Switzerland and with that, the company will be making a big statement about their motivation to make their brewery and operations more sustainable. The entire process will lead people to be intrigued by the campaign and exposed to the brand in different ways, which will all have a positive effect on their sales.

Whether they manage to push this law forward or not will make them gain a competitive advantage due to their sustainable reputation and people will see that their actions speak louder than the words of their competitors, which all have similar objectives. The campaign wouldn't cost more than a regular campaign launched across Switzerland (as done now with their water campaign) but will be more engaging therefore retaining more attention from viewers and making them feel part of the team and movement. If the law does pass, all brewing companies and other glass selling companies will be required to pay taxes for the maintenance of reverse vending machines or other returning costs, which might be covered by the costs of beer bottle reusing.

By coordinating the project, they will be ready for such a switch before their competitors. They will have proved their willingness to be more sustainable and pivoted their brand identity to be the most sustainable of all Swiss beer companies, which is aligned with their existing goals and mission. In times where people are more and more mindful about company efforts and concerned with greenwashing, this campaign will help them walk the talk.

Overall, Feldschlösschen could gain a competitive advantage by taking the leading position in switching to a returnable glass system and convincing Switzerland that it is the most responsible choice. Their competitive advantage would be that they could claim to be truly motivated in making their products and processes sustainable. In parallel, they could attract consumers with ecological interests, which are growing in numbers every year. As mentioned, marketing campaigns based on environmental and ecological actions have a stronger effect than most campaigns. Furthermore, pushing such actions goes much further than claiming current mainstream environmental actions such as planning to reduce emissions in the following year or even some greenwashing campaigns, which are more and more common in today's society. Feldschlösschen would have a clear and tangible topic to communicate and would be at the center of such operations. They also have the budget and the motive to do so and could drive customer loyalty around Switzerland by making them take part in the movement.

As next steps to ensure a transition from single use bottles to returnable glass bottles Feldschlösschen must convince consumers that RGB are better for the environment and motivate them to vote in favor. Feldschlösschen has to lobby the government to best introduce the RGB system using deposits. As well as motivate retailers to take their part in the system and find a well working solution that doesn't require too much extra work for both parties.

If such a campaign proves to be effective for Feldschlösschen, it might convince other companies (that use PET packaging's such as the Coca-Cola company) to introduce some SKU's using returnable glass bottles for the more Eco responsible drinkers.

5.4 Other alternatives – Pilot City

In the case where Feldschlösschen would want to develop the RGB system independently from the government to avoid needing the votes from Swiss citizens. They could also develop a "Pilot City" where Feldschlösschen would sell their returnable bottles rather than the single use bottles. They would need to install reverse vending machines and discuss with suppliers to implement this system in a way to collect data. To maximize the chances of such a test to be successful, Feldschlösschen should focus on a city which has a high representation of eco-responsiveness and many overall RGB motivated consumers. Using the data provided from the test city on a given time-period, Feldschlösschen could use these results to show the possibilities of such a system as well as understanding the key improvements needed before installing it to the bigger scale (Switzerland).

5.5 Conclusion

As proven in the literature review, the articles mentioned show a clear environmental advantage in using returnable glass bottles rather than single-use bottles. Countries around the world are starting to see the advantages of such practices and most of them use the deposit system. Our research has showed that such an implementation is possible and highly accepted by the Swiss beer consumers. 80% of our sample (n=250) showed that they believe such a system could be interesting in Switzerland. Furthermore, part of the remaining 20% which are reluctant to such an implementation stated they could be convinced to take part, if the system was as practical as the recycling system existing today (close to home, quick to drop off, clear process).

Based on our research we were able to determine that there is a high percentage of consumers drinking beer in glass, 54.8% of the sample (n=250) claim to drink in glass most of the time and 37.2% claim to sometimes drink in glass. With such a wide range of consumers using glass bottles, carbon emissions could be reduced using the returnable system.

Furthermore, our research questioned how the system should be put in place by understanding where people would like to bring back their empty bottles and how they would preferably do so. The results showed that bringing back the same bottles in big cases might be too much. Our sample (n=199) seemed to prefer flexibility in the way they can return bottles (different bottles in any quantities). Respondents also felt that bringing the bottles back to reverse vending machines in stores or recycling plants is the best suiting option and what is most practical. Overall, the return system would be similar to what is done in most countries but would be found in recycling plants and should give more flexibility to the consumer. Interestingly, 50.75% of the sample (n=199) feel that beer companies should reduce the price of their beer if reusable glass bottles are used.

Although, as discussed with a Feldschlösschen brand manager, such a campaign isn't at the center of their current objectives and launching such a project on their own might be too costly and complicated to solve. Therefore, pushing for government support to reintroduce a law regarding waste management specifically for returnable glass, would be best route to introduce it in Switzerland. By promoting to change the system, Feldschlösschen creates a movement and engages directly with its consumers to create a sense of community.

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Appendix 1: Survey questions

L1.Q1 *

Do you live in Switzerland ?

- Yes
- No

L1.Q2 *

Do you consume beer?

- No
- Yes

L1.Q3 *

Do you buy beer in Switzerland?

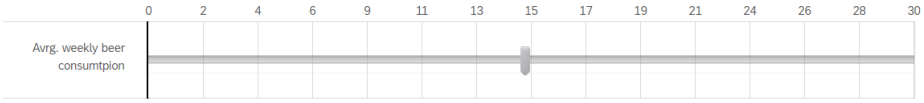
- No
- Yes

If they answer no to L1.Q3 -> End of survey

Level 2

L2.Q1 *

In average, how many beers do you drink per week?



L2.Q2 *

Do you buy your beers in glass bottles?

- No, hardly ever
- Yes, sometimes
- Yes, most of the time

L2.Q3 *

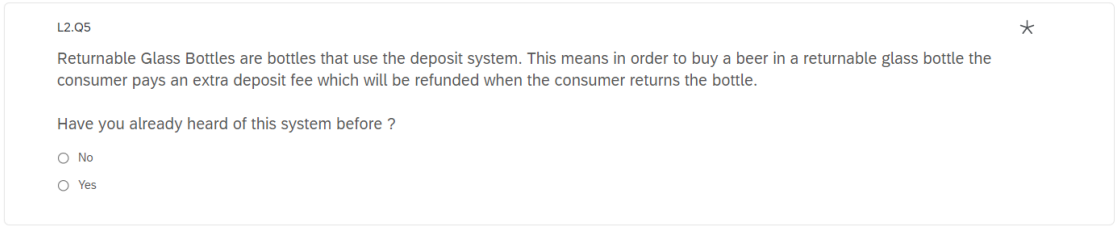
Do you buy Swiss beers ?

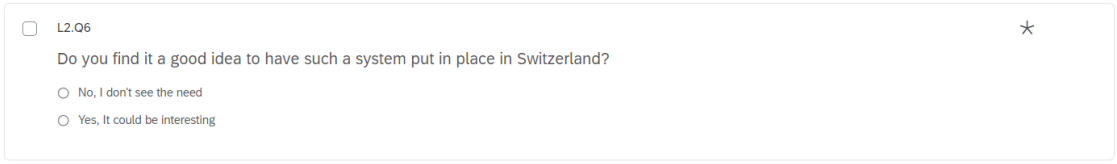
- No, hardly ever (only import beers)
- Sometimes but mostly import beers
- Yes, most of the time
- Yes, only Swiss beers

L2.Q4 *

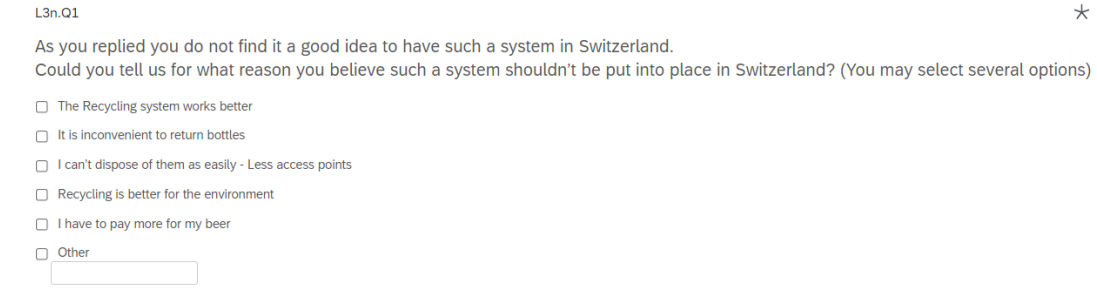
Do you recycle your beer bottles / containers?

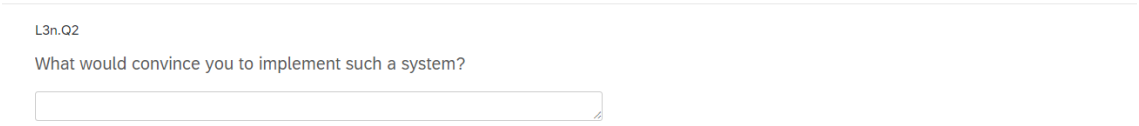
- No, I don't recycle them
- Sometimes
- Yes, most of the time
- Yes, all the time



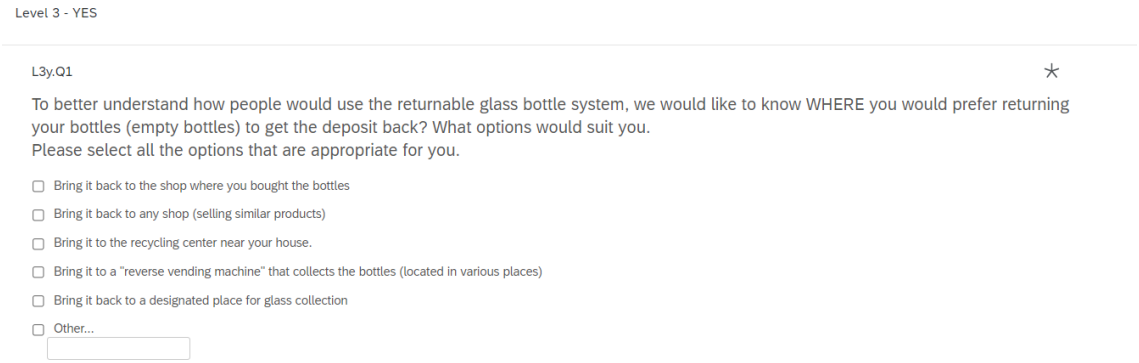


If they answer No to L2.Q6 (see below)





If they answer Yes to L2.Q6 (see below)



L3y.Q2

HOW would you prefer to bring them back. Rank the options that would work best for you in order of preference (1=best / 4=least preferred)?

One full case (12 or 24) of the same bottles	1
One full case (12 or 24) of different bottles	2
Small cases of the same bottles	3
Different bottles in any quantities	4

L3y.Q3

Please indicate what options you prefer to receive the deposit back?
Please select all the options that are appropriate for you.

- [ ] Getting cash back
- [ ] Trading one unit for another (no cash back)
- [ ] Receiving a virtual voucher for the purchased quantity (QR code)
- [ ] Receiving the value in points on a loyalty card (Supercard, Cumulus card)
- [ ] Receiving a direct payment via TWINT or other online money transfer options
- [ ] Receiving a physical voucher that can be discounted on any purchase
- [ ] Donating the deposit value to charity
- [ ] Other

L3y.Q4

Do you feel beer companies should slightly reduce the prices of the products if they use reusable glass bottles?

- ○ No, prices don't have to change
- ○ Yes, they should reduce the prices slightly

L3y.Q5

How much do you feel a good deposit value would be? How much should the bottle be worth?

L3y.Q6

How much would you pay for a pack of 10 Lager Feldschlösschen beers (without any deposit included) ?

Final demographic questions:

Level 4

L4.Q1

I live in

- ○ A City
- ○ A Suburb
- ○ The Countryside

L4.Q2

What is your age?

L4.Q3

What is your gender?

- ○ Female
- ○ Male
- ○ Prefer not to answer

Appendix 2: Questions and answers from Ramona Delco Brand Manager for Feldschlösschen.

Below are the questions (in black) and the answers (in blue) from Brand manager Ramona Delco apart for the answer from question 4 which was answered from the production department:

1 Hat Feldschlösschen kürzlich in Erwägung gezogen, ein Mehrwegflaschensystem für ihren Retail-Markt zu verwenden? Ich bin mir bewusst, dass dies im B2B-Bereich (Gastronomie und Bar) damals und auch heute noch der Fall ist.

Wir konzentrieren uns mit den Mehrwegflaschen auf die Gastronomie und Grossverteiler, eine Lancierung im Retail ist zur Zeit nicht geplant. Das wäre ein System, welches zusammen mit den Retailern (z.b. Coop) entwickelt werden müsste, damit die Flaschen natürlich auch wieder im Retail abgegeben werden könnte. Dies bedingt, dass die Ressourcen auf beiden Seiten vorhanden sind (Rücknahme der Flaschen seitens Coop, Abholung/Reinigung seitens Feldschlösschen). Wir sind immer daran interessiert, dien C02 Ausstoss so gering wie möglich zu halten, dies wird auch bei der Lancierung von neuen Produkten evaluiert.

Wir haben jedoch für eine unserer Marken im letzten Jahr eine Beerstation in ausgewählten Coop lanciert, wo sich Konsumenten ihr Bier oder Mineralwasser in Mehrwegflaschen abfüllen können: Coop lanciert erste Abfüllstationen für Mineralwasser und Bier

2 Gibt es Kampagnen, die gestartet wurden, um Ihre Marken nachhaltiger zu machen?

Wir haben in diesem Jahr eine Nachhaltigkeits-Kampagne gestartet, um den Konsumenten aufzuzeigen, dass wir uns aktiv um die Schweizer Gewässer kümmern. Du findest weitere Infos dazu auf dieser Landingpage: schweizergewaesser.feldschloesschen.ch

Ausserdem sind wir als Firma sehr daran interessiert unseren C02 Fussabdruck zu verringern (Nachhaltigkeit » TOGETHER TOWARDS ZERO « Feldschlösschen (feldschloesschen.swiss)). Wir haben zum Beispiel seit 2020 20 neue Elektro LKW im Einsatz: Medienmitteilungen » 20 neue 26-Tonnen-Elektro LKW für Feldschlösschen « Feldschlösschen (feldschloesschen.swiss)

Weitere Projekte sind im Nachhaltigkeitsbericht zu finden: Nachhaltigkeitsbroschüre deutsch (mhd-druck.de)

3 Wie viel Freiheit haben Sie, um große Kampagnen zu starten? Werden die Entscheidungen direkt von Feldschlösschen getroffen oder gehen sie vor jeder Aktion an die Carlsberg-Gruppe zurück?

Unsere Freiheit in der Schweiz ist sehr gross. Die Kampagnen müssen wir nicht mit Carlsberg-Gruppe abstimmen. Die Kampagnen werden nur intern mit der Geschäftsleitung und anderen Abteilungen abgestimmt. Grössere Investitionen, z.b. neue Maschinen mit grossem Investitionsbudget müssen je nach Projektgrösse mit der Carlsberg-Gruppe abgestimmt werden.

4 Gibt es aktuelle Forschungsergebnisse zu den Auswirkungen der derzeit verwendeten Glasflaschen sowie zu Glasoptimierungen?
Hier gibt es leider keine Forschungsergebnisse. Wir haben interne Studien, welche den Footprint für CO2 und andere Umwelteinflüssen zwischen Verpackungstypen (EW und MW Glas) vergleichen. Beim Glas kann man nur die Dicke der Wandung reduzieren und optimieren. Das geht immer nur bis zu einem gewissen Grad, da die Flasche bei hohen Geschwindigkeiten auf Der Abfüllanlage performen muss, und auch im späteren Handling in der Verpackung und beim Kunden enormen Belastungen ausgesetzt ist. Hier gibt es dann Limitierungen, und man macht die Flasche lieber 5 g schwerer, hat aber nachher keinen Ärger mit geplatzten Flaschen im Lager.

5. Gibt es Kritik von Verbrauchern an Ihren ökologischen Auswirkungen oder an Ihrem Beitrag zum Schweizer Markt? (Zwei Elemente, die mit einer Kampagne zur Wiedereinführung von Mehrwegglas bekämpft werden könnten).
Wir haben diesbezüglich bislang keine Kritik oder Reklamationen erhalten. Feldschlösschen legt einen grossen Wert auf Nachhaltigkeit und fördert dies auch intern sowie extern.

6. Wie ist Ihre persönliche Meinung zu wiederverwendbaren Glasflaschen?
Ich finde die Mehrwegflaschen für die Gastronomie und den Grosshandel perfekt, die Gastronomen müssen sich somit nicht um die Entsorgung kümmern und können die Flaschen wieder an Feldschlösschen zurückgeben. Ich habe bereits mehrmals Mehrwegflaschen auf justdrink.ch gekauft. Dies aber nur, da ich die Harasse bei der nächsten Lieferung wieder abgeben kann und nicht an einen zusätzlichen Ort gehen muss, um diese zu entsorgen. Ich glaube, es ist bei den Konsumenten nicht gelernt, für den Privatkonsum Mehrwegflaschen zu kaufen. Die Assoziation mit der Gastronomie oder Event ist noch sehr stark verankert. Ich persönlich bin ein grosser Fan von Dosen, da diese ebenfalls nachhaltiger sind als Einwegflaschen und im Recycling einfach zu handhaben sind. Nachhaltigkeit wir ein immer wichtigerer Konkurrenzvorteil für Firmen. Das Bedürfnis nach nachhaltigen Produkten ist auch verstärkt bei der jüngeren Zielgruppe zu spüren. Diese Entwicklung finde ich persönlich sehr schön und dies wird in Zukunft bei Projekten oder Neulancierungen immer einen höheren Stellenwert erhalten.

7. Ist das Marketingbudget ausreichend, um eine nationale Kampagne zu starten, die die große Mehrheit der Schweizer Konsumenten erreicht?
Das Marketingbudget wäre ausreichend, um eine nationale Kampagne zu starten. Dies geschieht bereits bei laufenden Feldschlösschen Kampagnen (schweizergewaesser.feldschloesschen.ch). Jedoch ist nicht geplant, dass wir eine Kampagne zum Thema Mehrwegflaschen und deren Vorteil lancieren werden. Unsere interne Kommunikationsmitteilung sorgt jedoch regelmässig dafür, dass die Medien über unsere Nachhaltigkeits-Projekte erfahren.