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## **Beverage Container Deposit Return System in Slovakia: Insights after One Year of Its Introduction**

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### **System zwrotu kaucji za opakowania po napojach na Słowacji: spostrzeżenia po roku od jego wprowadzenia**

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**Abstract:** Every year, consumers buy more and more beverages packaged in disposable PET bottles and aluminium cans. Most of this packaging is used only once and also very often pollutes the environment due to inappropriate consumer behaviour. Deposit return systems for bottles and aluminium cans play an important role in preventing such situations, offering consumers a financial incentive, a deposit that motivates them to return used packaging. The purpose of the article was to describe consumer and company insights related to the new deposit return system for PET bottles and aluminium beverage cans in Slovakia, based on the authors' own research and secondary research. Furthermore, the authors also wanted to show the solutions of some companies that try to facilitate to consumers the process of returning disposable packaging.

**Keywords:** deposit return system, beverage packaging, Slovakia, retail chains, consumers.

**Streszczenie:** Z każdym rokiem konsumenci kupują coraz więcej napojów pakowanych w jednorazowe butelki PET i puszki aluminiowe. Większość z tych opakowań jest używana tylko raz i bardzo często zanieczyszczają one środowisko na skutek niewłaściwego zachowania się konsumentów. Ważną rolę w zapobieganiu takim sytuacjom odgrywają systemy kaucyjne za butelki i puszki, oferując konsumentom zachętę finansową – kaucję, która motywuje ich do zwrotu zużytych opakowań. Celem artykułu jest opisanie spostrzeżeń konsumentów i firm związanych z nowym systemem zwrotu kaucji za butelki PET i puszki aluminiowe po napojach na Słowacji na podstawie badań własnych autorów oraz badań wtórych. Ponadto autorzy chcieli pokazać rozwiązania stosowane przez niektóre z firm, które starają się ułatwić konsumentom proces zwrotu jednorazowych opakowań.

**Słowa kluczowe:** system zwrotu kaucji, opakowania na napoje, Słowacja, sieci handlowe, konsumenci.

## 1. Introduction

The use of packaging affects all the spheres of the circulation and consumption of food products and the use of other products. In the case of food, throughout this chain, the food production, packaging production, transport, and storage of packaged food, its sale in the retail chain, and its consumption by the consumer can be distinguished, and in each of these steps the packaging requirements may be either the same or different (Borghesi et al., 2022; Ellsworth-Krebs et al., 2022; Macena et al., 2021). For a correct choice of packaging system, it is important to specify the packaging requirements from the consumer to the production of the food and to compare them also from an economic point of view. Packaging extends the shelf life of food, preserves its original quality, prevents microbiological and physicochemical changes, and ensures sales hygiene (Zhu et al., 2022).

Every day, around 1.5 billion plastic bottles are sold worldwide. In the European Union and the UK alone, more than 5 million tonnes of plastic are used to produce them each year. However, the majority of this raw material is around 60% of virgin plastic (plastic that is not recycled, but comes from a plastic factory) (Agnusdei et al., 2022; Wojajczyk, 2022).

Approximately 1.3 billion beverage containers are sold annually in Slovakia, which aims to collect at least 60% of recyclable packaging by the end of 2022 and 90% by 2025. This would put Slovakia four years ahead of the targets set by the European Union's Single-Use Plastics Directive, which requires Member States to collect 90% of single-use plastic bottles separately by 2029 (Tomra, 2022).

Products come on the market packaged in different types of packaging depending on the specifics of the product and the technological capabilities of the company concerned. However, consumers most often buy products packaged in various types of plastic packaging, most of which have not been recycled to date. Now, as a result of new European regulations and national legislation, more and more companies are working to change their packaging to more environmentally friendly ones. Some of them have already launched packaging that includes recycled material (e.g. we can find the label (rPET) on some plastic bottle packaging (Prajapati et al., 2021).

Regranulate rPET is a sustainable alternative for the production of food and non-food plastic packaging that has a lower carbon footprint compared to virgin raw material made from petroleum by up to 60% (My Bystrica, 2021).

An example of a Slovak company that already offers Slovak consumers mineral water in packaging made from 100% recycled material (rPET) is "Kláštorna Kalcia" (Figure 1). One of the main values of the Kláštorná Kalcia brand is sustainability, which is why all of its bottles are made from this material, 100% rPET. As a result, the brand saves more than 420 tons of virgin plastic every year and also wants to inspire others to reuse.

Nowadays, plastic recycling a crucial topic. The introduction of the PET bottle and cans deposit return system is intended to help bring an even larger volume of

**Fig. 1.** Example of Slovak plastic packaging made from 100% recycled material (rPET)

**Rys. 1.** Przykład słowackiego opakowania z tworzywa sztucznego wykonanego w 100% z materiału pochodzącego z recyklingu (rPET)

Source/Źródło: <https://www.klastorna.sk/re-use/>.



plastic bottles into the recycling process (Chawla et al., 2022; Larrain et al., 2022; Maione et al., 2022).

According to M. Lukniš Sales Director of General Plastic (producers of hot-washed PET flakes and producer of PET pre-forms in Slovakia which also recycle used PET bottles and use our recycled product in the production of PET pre-forms), one of the major steps to successful recycling is to collect the used packaging (material). Currently, only approximately 20% of the volume of separated plastic waste is made up of PET, and the problem is not only in the limited willingness of residents to sort waste, but also in the set conditions of collection companies. PET is currently a commodity in demand all over the world and is inefficient for it to end up in incinerators or, worse, directly in landfills. The bottle returning system can direct many more PET bottles into the recycling process. The important issue on this topic is also to educate people as some do not understand the benefits of reusing PET bottles versus throwing them into yellow bins when they all end up on the same sorting line (TASR, 2021).

Slovakia is among the countries in Europe that already have a beverage container deposit return system, which has been operating since 1 January 2022. Other countries in which this system is applied are: Finland, Sweden, Denmark, Norway, Estonia, Lithuania, the Netherlands, Germany, Croatia, Romania, Belarus. In Sweden, for example, such a system for plastic bottles has been in place for 30 years. One of the main goals of the PET and beverage cans return system is to increase the volume of recycling of these packaging.

According to RTV (Radio and Television of Slovakia), Slovaks have collected more than 100 million PET bottles and cans in less than five months since the deposit return system has been in operation (RTV, 2022).

The advantages of the deposit return system are the following (Spravca zalohového systému, 2022; Startitup, 2022; TASR, 2021):

- increasing the sorting process,
- reducing the waste that usually ends up in the natural environment,
- zero contamination with other materials,
- increasing the reusability of collecting backup PET bottles and cans (up to 95% less energy is used in the production of a recycled can than in the case of a can produced for the first time, which leaves up to 80% less carbon footprint),
- by recycling and crushing used PET bottles, the so-called flakes that are used to make new bottles (in this way, the entire life cycle of the bottle can be repeated practically indefinitely),
- fulfilment of goals and obligations established by law,
- cost-effectiveness as a key aspect of the functioning of the value-for-money system,
- responsiveness to the consumer,
- transparency and non-discriminatory approach,
- fulfilment of requirements arising from EU legislation – higher collection rate, increase in the proportion of recycled content in new packaging,
- supporting the circular economy, closing the material circle “from bottle to bottle” and “from can to can”.

The purpose of the article was to describe consumer and company insights related to the new deposit return system for PET bottles and aluminium beverage cans in Slovakia, based on the authors' own research and secondary research. Furthermore, the authors also wanted to show the solutions of some companies that try to facilitate the process of returning disposable packaging to consumers.

## 2. Methodology

In this study, primary and secondary research methods were used. According to the primary research method, the observation method was applied. Observation is a method of collecting primary data used in marketing research that consists in making systematic observations in a planned and intended manner. The information collected during the observation is to help in finding answers to previously asked and specific questions (Mazurek-Łopacińska, 1999). The objective of the observation was to identify consumer problems with the return of disposable PET bottles and aluminium cans to the deposit return machines. The paper includes insights from the authors, who, as beverage consumers themselves, have participated in the process of returning empty packaging to the deposit return machines for packaging located in 12 stores (Billa (3), Tesco (2), Yeme (3), Lidl (2), Terno (2), whose locations are given below:

- Billa (ul. Námestie SNP 7, 811-06 Bratislava; Mýtna 46, 811-05 Bratislava; Karadžičova 14, 811-08 Bratislava);
- Tesco (ul. Kamenné námestie 1, 811-08 Bratislava; Cesta na Senec 2, 82104 Bratislava),

- Yeme (3) (ul. Námestie SNP 18, 811-06 Bratislava; Landererova 6-8, 811-09 Bratislava; Mlynské Nivy 5A, 821-09 Bratislava),
- Lidl (ul. Dunajská 2, 811-06 Bratislava; Mlynské Nivy 5A, 821-09 Bratislava),
- Terno (Križna 34, 811-07 Bratislava; Záhradnícka 57, 821-08 Bratislava).

The selected stores were close to the authors' place of residence or where they purchased food and beverages. The observations were carried out in the period from March 2022 to August 2022 in Bratislava, Slovakia, in discount stores, supermarkets and hypermarkets where food is sold and in which deposit return machines were placed for PET bottles and aluminium cans by consumers.

In the secondary research, the source of data were scientific articles which are indexed in SCOPUS and Web of Science Core Collection databases, the daily press, and information from the websites of companies responsible for organizing these deposit return systems. Based on the information obtained from the primary and secondary research sources, the article was divided into five thematic areas:

- legislation and labelling of beverage packaging that belong to the deposit return system,
- functioning of the deposit return system,
- packaging deposit return machines,
- problems with returning PET bottles and cans of beverages under the new deposit return system from the point of view of consumers and retailers,
- the activities of companies in helping consumers to move PET bottles and cans in a more convenient way,
- collecting returnable packaging for charitable purposes.

Methods of analysis and synthesis were applied to obtain theoretical background on this issue.

The analysis method is the process of breaking a concept down into more simple parts so that its logical structure is displayed (Blackburn, 2008). Research synthesis is defined as the combination of a particular set of characteristics of the literature review. Research synthesis attempts to integrate empirical research for the purpose of creating generalisations (Cooper and Hedges, 1994).

### **3. Results**

#### **3.1. Legislation and labelling of beverage packaging that is related to the deposit return system**

The European Commission has decided that by 2025, all EU member states must ensure that 90% of single-use PET plastic bottles and aluminium cans to be collected. Based on this, the Ministry of the Environment of the Slovak Republic drafted a bill on the deposit of disposable beverage packaging, which was approved by Parliament on 11 September 2019.

As mentioned already, the beverage container deposit return system for PET bottles and aluminium cans was launched in Slovakia on 1 January 2022. Slovakia is

committed to increasing the current amount of beverage packaging collection from 60% to 90% in 2025, and has chosen an advanced system that combines the efforts of producers, traders, consumers, and the state, represented by the Slovak Ministry of the Environment. The return system gives the opportunity to collect more material of higher quality for recycling and its reuse in new packaging, reduce litter and thus save natural resources (Malindzakova, Štofková, and Majernik, 2022; Spravca zalohoveho systemu, 2022).

Among the most important legal provisions related to the beverage container deposit return system for PET bottles and aluminium cans in Slovakia are:

- Act no. 302/2019 Coll., dated September 11, 2019 on returning disposable packaging for drinks and on amendments to certain laws,
  - Act no. 347/2019 Coll., dated October 14, 2019, which implements some provisions of the law on depositing disposable packaging for beverages.
- Act no. 302/2019 Coll. includes information about:
- rights and obligations of legal entities and natural persons when depositing disposable beverage packaging,
  - position and tasks of the administrator of the return system for disposable beverage packaging (hereinafter referred to as the Administrator),
  - competence of state administration bodies in the field of depositing disposable packaging for drinks and waste from this packaging,
  - state supervision and the procedure of state supervision bodies in its performance, administrative offences, and proceedings on the imposition of fines.

Act no. 347/2019 Coll. includes information about:

- regarding the type of packaging that is subject to system of returning,
- the minimum amount of the deposit for a disposable packaging for drinks,
- labelling of returning disposable packaging for beverages,
- records and reporting of data on returned disposable packaging for beverages.

The decree Act no. 347/2019 Coll. establishes the method of marking returned disposable packaging for drinks so that each mandatorily returned package has an unmistakably identifiable unique barcode (EAN) with the text “Returned disposable packaging” or “returned” in Slovak “ZÁLOHOVANÉ”. An example of the marking is shown in Figure 2. The text must be easy to read, and the graphics of a sufficient size has to guarantee its easy recognition. It will be located in a visible place on the packaging of each returned item or on its label. The unique return symbol features the letter “Z” and arrows in a circle to symbolise recycling (Spravca zalohového systemu, 2022).

Disposable PET bottles and aluminium cans with a volume of 0.1 l to 3 l from mineral water, sweetened drinks, fruit juices, iced teas, energy drinks, beer, wine are mixed alcoholic beverages are returnable. Packaging from milk, drinks containing milk, syrups, and alcoholic drinks with an alcohol content of more than 15% is not returnable. The packaging should be returned with caps.



**Fig. 2.** Example of packaging with the Z symbol (means that this packaging can be returned)

**Rys. 2.** Przykład opakowania z naniesionym symbolem „Z” oznaczającym, że opakowanie podlega systemowi zbiórki opakowań

Source/Źródło: <https://www.bionatural.sk/a/zalohovanie-pet-flias-a-plechoviek-bolo-spustene-ako-to-funguje>.

If the consumer does not know whether the package he has is subject to the take-back scheme, he/she can check its EAN code on the website <https://slovenskozalohuje.sk>. After entering the EAN code, the consumer will be informed if he/she can return the packaging to one of the deposit return machines available in the stores (Spravca zalohovacieho systemu, 2022).

### 3.2. Functioning the system of deposit return beverage packaging in Slovakia

One can divide the operation of the PET bottles and aluminium cans deposit return system into eight stages, briefly described in Table 1 below.

The administrator of the return system in Slovakia is a non-profit organization, created by a consortium of four entities:

- Slovak Soft Drinks and Mineral Waters Association (Asociácia výrobcov nealkoholických nápojov a minerálnych vôd na Slovensku – AVNM),
- Slovak Beer and Malt Association (Slovenské združenie výrobcov piva a sladu – SZVPS),
- Slovak Alliance of Modern Trade (Slovenská aliancia moderného obchode – SAMO),
- Association of Commerce of the Slovak Republic (Zväz obchodu SR – ZOSR).

These companies represent soft drink and mineral water producers, beer producers, and representatives of the wholesale and retail trade. Together, their members deal with almost 80% of all returned packaging and represent more than 3000 commercial outlets. The deposit return system is funded by producer fees, material sales, and uncollected deposits. The established deposit return system is normally in deficit, and, as it is an extended producer responsibility system, the management deficit is

**Table 1.** Stages of functioning of the deposit return system for PET bottle packaging and beverage cans  
**Tabela 1.** Etapy funkcjonowania systemu zwrotu kaucji za butelki PET i puszki po napojach

| 1   | 2  | 3   | 4  |
|---|--|---|--|
| The manufacturer registers the beverage packaging with the Administrator. It will pay a deposit and a fee for each item put on the market.        | The producer sells the beverage to the trader, who pays a deposit in addition to the price.        | The trader sells the beverage to the consumer, who pays both the price of the beverage and the deposit. | The consumer returns the packaging to the trader, who returns the deposit to the consumer.             |
| 5   | 6  | 7   | 8  |
| The trader returns the collected packaging to the Administrator who pays the deposit and the handling fee as a reward for handling the packaging. | The Administrator will ensure the inspection, counting, transport and processing of the packaging. | The material from the Administrator goes to the recycler.   | The recycler processes the material. The manufacturer can then use it to produce new bottles and cans. |

Source/Źródło: <https://www.spravcazaloh.sk/>.

always financed by producer fees. The Ministry of the Environment regulates and controls the deposit return system (Spravca zalohového systému, 2022).

The amount of the deposit, 15 euro cents, was determined on the basis of analyses so that it would be sufficiently motivating and at the same time not too financially burdensome for Slovak consumers. Each item in the deposit return system is registered and traceable from the moment it is placed on the market until it is recycled and used in the production of new packaging. This works in all countries where the deposit return system exists and therefore all collected beverage packaging is demonstrably recycled and can also be used for the production of new packaging. These are valuable materials that do not have to end up in the natural environment or in an incinerator; they can be used to produce new packaging for the same purpose, thus saving natural resources (Spravca zalohového systému, 2022).

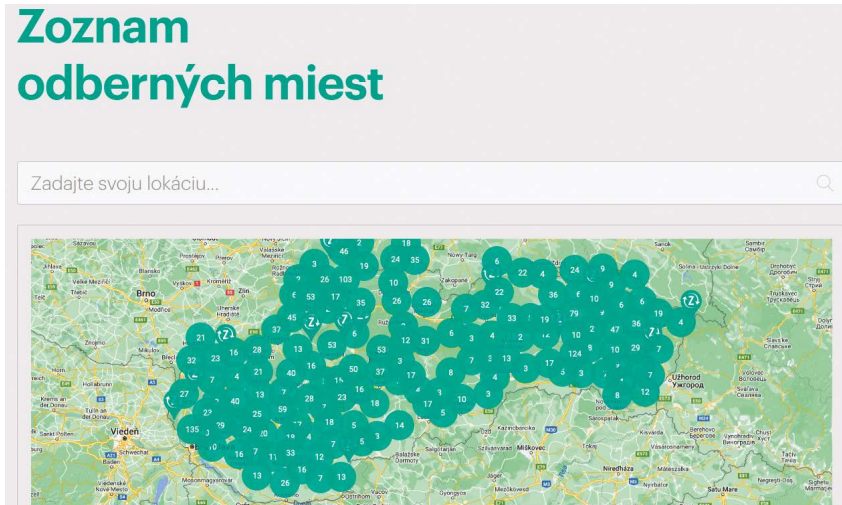
The introduction of the return machines is mandatory for stores larger than 300 m<sup>2</sup>. For smaller stores, it is voluntary, and they do not have to return cash to the customer but can only give a discount on the purchase. The discount or cash can only be redeemed at the store where the customer returned the packaging (Spravca zalohovacieho systému, 2022).

### 3.3. Hardware technology of the deposit return system (packaging storage machines)

It is possible to return the returned packaging in any shop that is involved in the return system and has an established collection point, regardless of where the consumer bought the items in Slovakia. A map of take-back points is available on this website <https://www.slovenskozalohuje.sk/> (Figure 3). Every distributor who sells PET bottles



and beverage cans is obliged to deposit them, to respect the deposit amount of 15 euro cents, and to indicate it separately on the price tag and on the cash register block.



**Fig. 3.** List of off-take points returnable packaging  
**Rys. 3.** Lista punktów odbioru opakowań zwrotnych

Source/Źródło: <https://www.slovenskozalohuje.sk/>.

For the registration of packaging and control of its flow in the return system, it is important that the deposit return machine for bottles and cans recognise the shape of the packaging and a readable barcode. Returned packaging must therefore be returned uncompressed, empty and with a legible barcode. The packaging is then compressed to save space, make transport more environmentally friendly and protect against possible fraud.

Only the Ministry of the Environment can decide which packaging can be stockpiled. The take-back started with the category of beverages packaging that are the most efficient for recycling and subsequent reuse and for which stricter targets are set at the level of the Slovak Republic and the European Union. It is possible that once the deposit return system is in place, deposit return systems for other plastic food packaging will also be developed, and the beverage sector will become an inspiration for other food sectors (Spravca zalohovacieho systemu, 2022).

### 3.4. Problems with returning PET bottles and cans of beverages under the new deposit return system from the point of view of consumers and retailers

Below are the problems and observations related to the return of returnable packaging based on everyday work and the authors' own experience. The most repeated problems were (see HNonlineSK, 2022; Plus Jeden Deň, 2022a, 2022b; Startitup, 2022):

- Problems with carrying more bottles to the store where the packaging deposit return machine is located.
- Problem with infrastructure to return packaging.
- There are no packaging deposit machines.
- Transportation of bottles and cans to the store where the machine for collecting packaging is located (the containers cannot be compressed not to damage the barcode, they take up a lot of space, they are not storable, and they do not even fit into ordinary canvas bags or plastic bags, in which they can be crushed by impact).
- Consumers typically return packaging over the weekend (there are long queues).
- The packaging deposit return machine does not accept ‘good’ packaging.
- The process of returning a bottle to the deposit return machine has to be repeated several times, because the machine does not accept it.
- The packaging deposit machines fill up quickly (consumers have to look for other stores where they can return the packaging or wait for a store employee to allow them to return the items). Such activities are carried out by store employees at hand, most often those who work at the cash register. Shops do not hire new employees for this purpose.
- When handing over more empty undamaged bottles and asking to be paid on the basis of a receipt from the deposit return machine, the sales assistant was nervous and the customers to buy some goods in the store.
- The price of the drink is listed in stores without the 15-cent deposit.
- There are different rules of payment for returnable packaging in various retail chains (Table 2).

**Table 2.** Different rules of payment for returnable packaging in various retail chains

**Tabela 2.** Różne zasady wpłat pieniędzy za opakowania zwrotne w różnych sieciach handlowych

| Retailer     | Validity of the deposit                  | Where to apply                                     |
|--------------|--|--|
| TESCO        | Unlimited                                | In any TESCO store                                 |
| Kaufland     | 3 months<br>(then exchangeable for cash) | In any Kaufland store                              |
| Lidl         | Unlimited                                | Only in the shop where one exchanged the packaging |
| Billa        | Unlimited                                | Only in the shop where one exchanged the packaging |
| Coop         | Unlimited                                | Only in the shop where one exchanged the packaging |
| Terno a Kraj | One year                                 | In any Terno a Kraj store                          |

Source/Źródło: (Plus Jeden Deň, 2022c).

### Problems faced by retailers

The most repeated problems were as follows:

- Problems with the storage of collected packaging. Many people return their packaging over the weekend, and companies have problems storing it. They have limited space for storing empty packaging that should not be compressed or damaged.
- The collected packaging was not taken away by an authorised company from the store as often as it should be and therefore accumulates in the stores' warehouses (Sme domov, 2022).
- Some consumers try to put into the machine defective bottles that do not have the "Z" symbol on them, indicating that they are returnable packaging.

### 3.5. Selected activities of producers and retailers to help consumer return beverage packaging

Practical bags and holders offered to the consumer by companies for easier handover of PET bottles

Companies are trying to help consumers transfer returned packaging to deposit machines by designing special bags for this purpose. They offer practical bags and holders for the easy handover of PET bottles and cans, for example Budiš offers their customers practical bags and holders with a capacity of 6 to 9 bottles, while Slovnaft offers motorists a compact car bag for 6 bottles or cans (Figure 4).

These bags were given to customers for free when they bought Budiš, Fatra and Gemerka waters in retail chains and in March at Slovnaft gas stations.



**Fig 4.** Examples of practical bags and holders for carrying empty beverage packages offered to the consumer by companies producing beverages

**Rys. 4.** Przykłady praktycznych toreb i uchwytów przeznaczonych do przenoszenia pustych opakowań po napojach, oferowanych konsumentowi przez firmy produkujące napoje

Source/Źródło: <https://www.svetbaleni.cz/2021/12/12/slovnaft-a-budis-budu-zakaznikom-davat-tasky-na-odnos-pet-flias/>.

### Collecting returnable packaging for charity purposes

The village of Skalité and the parish charity Skalité came up with the idea of charitable assistance to people in need (Figure 5), collecting returned PET bottles and cans marked with the return symbol “Z”. The village has thus added a lockable container into which people who want to help can leave a plastic bottle or can. The same and larger containers can be used at various sports and cultural events, swimming pools and the amusement park, bus stops near the elementary school, wherever beverages in such packaging are sold (My Kysuce, 2022).



**Fig. 5.** Portable 1100 litre container for returnable beverage packaging at cultural and sports events  
**Rys. 5.** Przenośny 1100-litrowy pojemnik na zwrotne opakowania po napojach przeznaczony na imprezy kulturalne i sportowe

Source/Źródło: <https://mykysuce.sme.sk/c/22982710/na-kysuciach-nasli-sposob-ako-zberom-zalohovanych-obalov-pomahat-ludom-v-nudzi.html?ref=temacl>.

## 4. Conclusion

The new return system is experiencing problems, of which there will be fewer over time. More and more consumers are returning PET bottles and aluminium cans to deposit return machines. There are still consumers who are confused about the rules regarding packaging return because, as the article cites, there are differences in the payment of money for returned packaging. Retail chains should communicate more clearly to consumers what rules apply to them. The administrator who collects the return packaging from the take-back points in question should do so more often, which would help the retailers (they would have more space to store the returned packaging).

The problem of long queues of customers waiting to return their bottles to deposit return machines most often occurs at weekends. Retailers should encourage shoppers to try to return the packaging during the week. Scanners to recognise returned packaging also need to be improved. It often happens that the packaging has the necessary marking, is not misshapen and still has to be put into the machine several times. For consumers, it is still a problem to deliver more 'non-crushed' packaging to the collection points.

Any (sustainable) brand of the product, respectively the category of products is acceptable for customers, the environment, or any stakeholder only if it represents legitimate and justified sustainable products, including all elements of the product strategy. In this article, an important element in building a sustainable product strategy, product packaging, was included. The packaging of the product is an important tool that the customer can use. Packaging also communicates the brand and its message, and is often the element of the product strategy that is more significantly involved in the pollution and degradation of ecosystems. In the concept of sustainable marketing management, the packaging and labelling of products must therefore also be in accordance with the conditions and criteria of a sustainable product strategy.

Among all elements of the product strategy, packaging has an almost immediate return on the efforts made (in the form of cost savings, lower volume of produced waste) in the construction process, or the transition to a sustainable product strategy, the relatively new return system in Slovakia is an excellent example. In addition to taking into account environmental and financial aspects, sustainable packaging must also take care of the customer in the sense that it must provide benefits in the form of easier handling, opening, repeated use, and recycling. In this case, it contributes not only to saving the organization's costs but also to increasing customer satisfaction (not only to just receiving some extra money). Innovation in packaging towards sustainability requires a reduction of the materials needed to produce packaging. In some cases, this is a very difficult task, as many managers emphasise the function of packaging as a means of attracting the customer's attention. In such cases, the process of building sustainable packaging is a challenging but not impossible task.

The implementation of a deposit return system is clearly a solution that will help reduce the environmental impact of plastic beverage packaging by ensuring maximum collection, recycling, and subsequent reuse of the material for the same purpose, from bottle to bottle and from can to can.

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