

Situational Analyses of Reuse Initiatives

Central Transdanubia region

Developed by CTRIA with the involvement of Adwork Net Bt. as subcontractor

Székesfehérvár

2020

A magyar partner részvétele a projektben a Magyar Állam társfinanszírozásával valósul(t) meg.

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1. Purpose of the study

The aim of the present study is to assess and summarize the reuse situation Hungary's Central Transdanubia region. The issues examined cover the legal regulation and possibilities of reuse and waste management, the number of reuse centres, as well as charity and second-hand shops in the region. We also explored repair cafés and renters as important potential venues for reuse. Due to the geographical proximity, when we found no example in our region, we looked around in Budapest and its metropolitan region, as for example in the case of reuse centres. The topic may never have been as important as it is now, in the post-coronavirus economic and social crisis, it would be worth inventing a “new norm” in which we open new ways for shaping attitudes and look for opportunities that can lead to a new, sustainable economic model.

2. Presentation of Central Transdanubia region (Q1-2-3)

Central Transdanubia region is located in the western part of Hungary, west of the Danube river, in the central part of Transdanubia. It covers an area of 11 thousand square kilometres and has a population of approx. 1.1 million people, making it the most populous and the most densely populated rural region in Transdanubia. It is divided into three counties: Fejér, Komárom-Esztergom and Veszprém. The centres of the region are Székesfehérvár and Veszprém, other larger cities are Tatabánya, Esztergom and Dunaújváros. The number of settlements is totalling up to 401 in the region, most of them are small ones, only 35 of them are towns with an average population of over 20,000. It is the third most developed region in the country, where development is based on mechanical engineering industry (telecommunications, automotive industry, IT), and tourism also plays significant role. Several of the major tourist destinations in Hungary are in the region, such as Lake Balaton, Lake Velence, several mountain areas suitable for relaxation, as well as cities that are historically and culturally significant. Viniculture is outstanding there, with seven wine regions all over the region.

The geographical location of the region is favourable, the distance between Budapest and the central cities is short, they are easily accessible by motorway and highway. Under Hungarian circumstances, this is one of the most urbanized areas, but it still means few, smaller towns and many small

settlements. The area around the regional centres is characterized by the shaping up of agglomerations, with a stronger urbanisation process in the major tourist destination areas.

3. Reuse legislation in the region (Q4)

In Hungary, waste is subject to a general scope regulation: it is Act CLXXXV of 2012 on waste. (net.jogtar, 2012) There are no separate regional level regulations in this matter.

Section 3 (a) of the Act describes the principle of reuse and preparation for reuse, which is as follows: the reuse, repair, refilling, the preparation of waste for reuse, the networking of reuse and repair systems should be facilitated by legal, economic and technical means in order to prevent waste generation, and by setting criteria and quantified targets for the procurement of the substance or object.

Measures to prevent waste generation can be found in Annex 4 to the Act. Its aim is to promote the reuse or repair of still usable discarded products or their components through educational, economic, logistical or other measures. Such measures may include, for example, the establishment and support of certified repair and reuse centres and networks, especially in densely populated regions.

Closely related to this is the 197/2014. (VIII. 1.) Government Decree on waste management activities related to electrical and electronic equipment (net.jogtar.hu, 2014). This regulation specifies the rules for reuse. It lists the conditions that an object must meet in order to be re-circulated. Reuse requirements are specified in Annex 3. If the object or device in question does not meet the criteria set out in the Annex, it shall be considered as waste. These criteria are as follows:

- the equipment must be operational
- it must have all its components in good condition
- the insulation, heating elements and casing are intact, and the equipment must be safe
- the environmental criteria enumerate the list of hazardous substances that the device must not contain.

In addition to the above legislation, the National Waste Management Plan sets out the tasks of developing waste management for a given European Union planning period. Directive 2008/98/ EC of the European Parliament and of the Council on waste and repealing certain Directives ("hereinafter:

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HKI") requires the competent authorities of the Member States to draw up one or more waste management plans. The Directive has been amended since its entry into force and is currently in force on 05.07.2018. That plan, alone or in combination, shall cover the entire geographical area of the Member State concerned. Hungary fulfilled this condition by preparing the National Waste Management Plan (hereinafter: OHT) (eionet.kormany.hu, 2014). The document was discussed by the Government, and for the period 2014–2020, and the OHT with the National Prevention Program forming part of it was approved by the 2055/2013 (XII. 31.) Government Decree on National Waste Management Plan. (Magyar Közlöny, 2013)

The draft highlights that reuse is not unusual for the general public and it is even particularly popular for certain product groups.

3.1. The emergence of reuse in Hungary

According to the (OHT) document, reuse in Hungary is taking place in diverse forms:

1. „Junk trading” (importing non-domestic waste): it is an illegal activity which is both economically and environmentally important to restrain. During this activity, a significant amount of waste enters the territory of Hungary from abroad, which is sold as a product, and the treatment of the residue is not solved. Bringing foreign waste to Hungary incurs costs and economic damage, the treatment costs of which are incurred here.
2. Retail trades including reuse activities in their business profile as a private initiative: a useful economic activity, sometimes combined with a repair activity.
3. Preparation for reuse on an industrial scale, organized reuse: a useful economic activity developed mainly in connection with clothing.
4. Reuse centres established at the level of initiative (pilot) on under development, experimental basis. (Since the adoption of the document, three recycling centres have been operating in the country, none of them in the Central Transdanubia region.)

The document also states that the initiatives present in the country are still operating in isolation, independently of each other.

3.2. Principles of the National Waste Management Plan

The National Waste Management Plan includes the following important principles:

1. The main point of widespread reuse is the development of an appropriate reuse system. Its elements are:
 - developing a certification system for reuse centres
 - establishment of certified reuse centres
 - networking them.

Documented procedures applied in certified reuse centres should cover the processes of logistics, refurbishment, preparation for reuse, sales, and reuse. In the field of reuse, it is an important principle that refurbishment and preparation for reuse should take place within an appropriate framework, thus ensuring life and health protection and the proper fulfilment of important product functions for consumers.

2. Reuse aspirations may be interconnected to social measures. These can be employment policy measures as well that provide retraining, access to employment for a limited period of time for the unemployed, or access to assets for certain low-income groups through the renovation of second-hand products. In this case, a social distribution system should also be elaborated.
3. Equipment suitable for the preparation for refurbishment or reuse shall reach the centres from residential, corporate or institutional sources through the implementation of own logistics or through waste and second-hand goods collectors. The centres can act as refurbishment sites, which can include shops selling products ready for reuse, or online shops. Customers can purchase products after properly performed and documented renovation and preparation for reuse. It is advisable that the resources be available not only to municipal centres, but also to centres set up by the private sector. The aim is to create a reuse network maintained by local governments and to organize the established reuse centres into a network.
4. The OHT also aims to launch as many awareness-raising campaigns on reuse as possible. These are the Green List campaign encouraging conscious shopping (energiaoldal.hu, 2016), the Körforgó series of events promoting selective waste collection (szelektalok.hu, 2013) or the TeSzedd (Pick Yourself) movement encouraging garbage collection by volunteers. A magyar partner részvétele a projektben a Magyar Állam társfinanszírozásával valósul(t) meg.

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(szelektalok.hu, 2020). These actions should be supported by wide-ranging media campaigns. Joining the European Waste Reduction Week program series is an important step, as on the one hand we learn new good practices of waste reduction, and on the other hand we can publicize domestic good corporate and civil practices within the framework of the program (hulladekcsokkentesihet2019.hu, 2019). Good practices in reducing municipal waste generation include initiatives by civil society groups, such as Humus Association. One of the main goals of Humus is to prevent the generation of waste, and the population is constantly informed about the possible ways of doing so. (humusz.hu, 2020) The activities of the Association of Conscious Customers in attitude-forming are equally important. It promotes ethical, environmentally and socially conscious shopping and lifestyles, with the aim of enforcing environmental and social aspects, including the prevention of waste generation, in individual decision-making (tudatosvasarlo.hu, 2020). In our region, the activities of Who? - You & We (Who can do for the environment? You and We) and Mum Goes Green - Reuse Lake Velence! non-governmental organizations can be mentioned in this field.

5. The usual in West-Europe spring-autumn second-hand books and clothes exchanges, which are becoming more and more common in Hungary, as well as the spread of flea markets, the increasingly popular garage sales and the donations accepting institutions are also good practices. Online second-hand trade is also constantly evolving.

Reuse within the right framework significantly reduces resource use, which is the main goal of resource management. In the case of things intended for reuse (products, waste prepared for reuse), a decision must be made for or against reuse, taking the whole life cycle into consideration. In all cases, the decision must be based on the relationship between the environmental impact of further use, the lower level of waste management procedures and the environmental impact of production.

The method and those responsible for the preparation of the National Waste Management Plan and the National Prevention Program was regulated by Paragraph 74 of Act CLXXXV of 2012, which also included the preparation of plans at the territorial level. However, this was repealed by Section 19 of Act CXCVI of 2017 (net.jogtar.hu, 2017). **Thus, at regional level, it is no longer a legal obligation to prepare a waste management plan.** Such a plan was prepared in Veszprém and Fejér counties, as well as in the Székesfehérvár micro-region, in 2004, and for Székesfehérvár for the period up to 2012-2017. In Tatabánya, the environmental protection program prepared in 2015 and valid until 2020 contains a description of the current state of waste and waste management system, which also states that the

obligation to prepare a plan has been abolished. The program includes the development of environmentally conscious waste management systems and the reduction of waste generation. (tatabánya.hu, 2015) The Environmental Protection Program prepared in Veszprém County for the period from 2018 to 2022 covers the data of waste management and states that "The primary goal is prevention, however, if this is not possible in certain circumstances, then in the case of waste whenever it is possible, reuse or recycling shall be applied and only as a last resort shall waste be incinerated or landfilled. " (veszpremmegye.hu, 2018) The Environmental Protection Program of the City of Székesfehérvár (szekesfehervar.hu, 2020) valid until 2020-2025 has the same goal. In this document, we can also see the goal of moving towards a circular economy.

In 2019, the Central Danube Region Municipal Waste Management Association was established with the participation of four counties (Fejér, Komárom-Esztergom, Veszprém and Pest) and 143 settlements. The aim of the association is to create an integrated waste management system.

3.3. Waste collection points in the light of reuse

No specific reuse activities are yet underway at the waste treatment plants in Central Transdanubia. At the level of thought, ideas were born for the establishment of reuse centres, but no draft has yet been made and no concrete steps have been taken. There have been advances in selective waste collection: partly in the form of selective islands and partly in the form of home-based waste collection. More information and attitude formation can be read on the website of the given waste treatment plant.

Depónia Kft., located in our region, namely in Fejér county, also performs attitude-forming activity. Unfortunately, due to the absence of capacity, the establishment of reuse centres in the region has not yet taken place.

4. Reuse initiatives in the region (Q5)

Based on the experience described under the previous section, it can be concluded that reuse initiatives in our region have much more private character than those proposed by the public sector.

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Typically, private companies and enterprises deal with this field within their own sphere of activity, or NGOs are engaged in this field.

I would like to highlight some examples of initiatives in the region:

1. A small enterprise named Old Blue, seated in Veszprém, collects used jeans and prepares a wide range of home furnishing and utility items from this raw material, from carpets to keychains. The company was founded in 2014, with the goal of reusing one million jeans, so far it has reached one hundred thousand. The company's mission is to reduce waste and waste production, and to reduce the environmental damage caused by the production of new textiles. Through their activities, they employ a staff of ten people on a permanent basis and work with a number of subcontractors. (oldblue.hu, 2020)
2. Textrade Kft is the largest sorting plant in Hungary, located in Székesfehérvár. Founded in 1990, it employs 350 people and processes about 40,000 tons of used clothing annually. Used clothing is also collected in Western Europe and Hungary, then sorted and graded in Székesfehérvár, then sold locally and for export in its original state, as an industrial raw material, as a machine cloth or in the form of shredded textiles. The import is necessary because the quantity collected in clothes collection containers in Hungary is not enough to make the operation of the plant profitable. The recycling of smaller quantities of locally collected clothes is made possible by the fact that the collection in Hungary is supplemented with clothes purchased from Western Europe. The amount of clothing they sort and sell is thus not sent to landfills. The company has 1,500 collection containers all over Hungary in the parking lots of hypermarkets and grocery stores, in the junkyards of Budapest and next to the buildings of the Hungarian Red Cross. They have been cooperating with the latter organization for 20 years, the clothes being in good condition and suitable for the season are delivered to those in need. The location of the containers is changed from time to time, because experience has shown that over time, the population begins to use it improperly: the clothes are taken out of it, and its contents are scattered.

Without the work of Textrade Kft millions of clothes items would end up in landfills in Hungary in one year, and without Western European imports, the amount of waste would be many times higher due to the higher consumption in Hungary. 99% of the clothes collected are processed in some form: some are passed on in their original state, some become machine rags, 5% are bought as fuel by cement factories, and only the remaining 1% goes to landfill.

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The clothes are sorted on a state-of-the-art, robotic technology line, and this is followed by manual sorting. Used clothes are sold in Eastern Europe and Africa. (hulladekbarát.hu, 2020)

3. The Who? - You & We (Who can do for the environment? You and We) civil initiative is organizing projects for reuse in and around Székesfehérvár while the Mum Goes Green initiative around Lake Velence. Canvas bags collected from all over the country and distributed to buyers in the farmers' market, the BögRePolc introduced at the Percussion Festival for using instead of disposable cups as well as the reusable glass bought for the village day festival of Úrhida, or the tables made from cable drums, the butt-collectors made from baby food bottles used at the lakeside music festival; they all serve for reuse and its promotion. These civil organisations regularly report on their activities on social media platforms.
4. There are several companies in our region that consider the use of existing products as raw material important. The Kaptafa workshop and gift shop renovates and sells furniture and ornaments, and they teach the know-how of furniture renovation and painting as well in workshops. RegAndina Creative Workshop is a similar enterprise in Székesfehérvár which aims to reduce waste and overproduction, and to save and renovate old pieces of furniture. In addition to their workshops, they also sell finished furniture and raw materials. In Komárom-Esztergom county, Andrea Jóvér, a furniture painter, deals with the transformation and saving of peasant furniture and Old German furniture, and her business is named as Fess-tett bútorok (Nice Painted Furniture). The Farmervarázs (Jeans Magic) company in Székesfehérvár makes bags, telephone and tablets, toys from used jeans and other garments. Borgica Textilékszer in Dinnyés makes jewellery and scarves from t-shirt yarn and used carrier cloths, Alba Könyvmentők (Alba Booksavers) sells books from legacy to be discarded at very reasonable prices, their book carts can be found in Székesfehérvár and Veszprém within the region. Calligrapher Dóra Baboth from Zámoly decorates decorative props, stop signs, garments with calligraphy, in which the product itself is often reused, and the inscription often conveys this message.

5. Governmental financial support for reuse and preparation for reuse in the region (Q6)

The waste collection plants of Central Transdanubia are almost 100% Hungarian-owned. Most of them are operated and maintained by local governments in the corporate form of non-profit Ltd. Their main profile is residential waste transportation, landfill operation and the operation of residential junkyards.

The services of non-profit companies include waste clearance for the population once a year. During waste clearance, we may often come across discarded items, some of which could actually be reused, but the absence of organizational and handling capacities does not make possible to sorting this out.

During the mapping process in our area, we found that no state contribution is currently available for reuse activities. Experience has shown that the management would be open to introducing and encouraging reuse, but in the absence of relevant state support, the issue of its implementation is still unresolved. We received the following information about the financing of the reuse centres in Budapest:

„The centres were put into operation in two parts of the capital within the framework of a tender submitted jointly by the Municipality of Budapest and FKF Nonprofit Zrt. The Municipality of Budapest is the investor and owner of the centres, while the current operator is FKF Nonprofit Zrt. Thanks to the storage system operating in the Centres, the citizens of Budapest can hand over their redundant but usable items free of charge after registration, while even the rural population has the opportunity to take the items away after registration after paying a small storage fee in cash. The storage fee charged for the items varies depending on their size, the gross storage fees are 100, 300, 500, 1000, 3000, 5000, 7000 and 10,000 HUF. The storage fee of 100 HUF is charged for such products as books and small consumer items (e.g. glasses); these are the items that are delivered here and carried away in the largest quantity. The operation of the Educational and Reuse Centre is not regulated by an implementing provision, legal regulation is applied only to the junkyard in the area”.

In the absence of support, the resources allocated to the reuse of landfills will be depleted for the time being in the public awareness-raising proposals on their website. An example of this is the information on the website of Veszprém Waste Management Public Service Nonprofit Zrt. with good practice (vhkn.hu, 2020):

Waste is generated in an environmentally conscious household as well, but it is not garbage: it can be used in another form or recycled in its material if it is collected and transported properly.

- *Washed, rinsed jam, baby food, canned jars can easily be transformed into candlesticks, spice racks, vases or lovely souvenirs (e.g. filled with various crops) with a little dexterity.*
- *Colourful magazines, posters, wall calendars can be used to cover school booklets and gift wrapping.*
- *Bird feeders for the winter can easily be made from stronger bottles. (Wash it thoroughly beforehand to prevent damage to the small animals visiting us!)*
- *Plastic bags received during shopping are excellent for lining our trash can.*
- *The newspapers read don't necessarily have to be discarded. Maybe our neighbour, a relative, would still love to read it before placing it in the selective collection container*
- *Obsolete official papers and damaged documents are excellent for taking notes.*
- *We can pass on the grown-up children's clothes to familiar families, charities (e.g. Red Cross, Hungarian Charity Service of the Order of Malta) or exchange them for one of ours on one of the second-hand exchange fairs.*
- *Worn, torn garments can be cut and nailed to be used as wipes in our household."*

On the website of Depónia Nonprofit Ltd, the reuse service provider in Fejér county, visitors are encouraged to reuse, recycle and selectively collect by the instruction of short films, but unfortunately on the website of Vértés Vidéke Waste Management Nonprofit Ltd. in Tatabánya and Komárom-Esztergom counties no attention is paid to this.

6. Reuse centres in the catchment area of the region (Q7)

Reuse centres aim to increase reuse and reduce waste. For the time being, three Educational and Reuse Centres have been opened in Hungary, two in Budapest and one in Northern Hungary region, so none of them are located in Central Transdanubia but it is worth presenting these facilities as a good practice. Due to the geographical proximity, I am providing details on the centres in Budapest.

6.1. Operation of reuse centres in Budapest

Both centres are available to locals, who can drop off items that are no longer needed but are still usable. However, the rural population also has the opportunity to take things away. Whether we intend to deliver or take something, registration is required. There is a small fee for storage, which is charged for the new owner of the item.

The range of items that can be delivered to the reuse centre is wide: baby equipment, toys, sports equipment, furniture, utility items, books, kitchen equipment, tools. The only condition is that it must fully perform its original function. It is not possible to deliver mains power operated devices for contact protection reasons. The items are personally inspected by the staff of the reuse centre; those no longer fulfilling their original function, can only be delivered as waste in a junkyard operated by the centre.

The range of objects that can be taken away corresponds with those delivered here, so naturally it is the same groups of objects, thus we cannot find mains-powered devices among them. Most often, furniture, toys, books, home furnishings are found among them, and it may happen that although an item fully fulfils its function, it needs some minor, non-functional repairs. The list of items can be browsed on the website of the maintainer. Depending on the size, a storage fee is charged for an item, but for example, you can get a book or sound carrier for 100,- HUF + VAT, and a full set of furniture for 10,000,- HUF. (fkf.hu, 2019) It is important that the centres are open from Monday to Saturday, from 8 am to 8 pm, so they are really accessible to the population even after worktime.

The reuse centres are maintained by FKF Zrt., a non-profit public service company owned by the municipality of Budapest, which also manages the capital's residential waste and keeps the public areas clean. The Zrt. also considers education and CSR activities to be important, attitude-forming is among the aims of the centres as well. The centre's staff, who have pedagogical degree as well, give free

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lectures and interactive lessons from preschool to high school age, as well as for adults such as educators. The centre also has outdoor installations, an educational trail and other creative games. They also provide space for external projects that are in line with the Company's activities, with a training room for up to 100 people.

There is a junkyard operating in the area together with the reuse centre. The centres provide accurate information on the types of waste they can dispose of, from green waste to electronic waste, and ensure that they are properly treated.

6.2. Conclusions for Central Transdanubia region

For Central Transdanubia region, the operation of the two Education and Reuse Centres in Budapest can serve as a model in many respects. Their key features are as follows:

1. The centre is operated by a public cleaning company owned by the municipality, so its operation is non-profit. Waste management companies operate by a similar scheme in our region: Depónia Kft in Székesfehérvár, VHK Kft in Veszprém, Dunanett Kft in Dunaújváros, and NHSZ Tatabánya Zrt in Tatabánya. However, none of them operates a reuse centre. As there is no way for the rural population to drop off objects in the Budapest centre, only to buy, it is definitely worth drawing attention to the need for regional reuse centres. It would also be worth studying the possibility of running a for-profit reuse centre.
2. There is also a junkyard in both centres in Budapest. With regard to the establishment of a regional centre, this raises the question of whether such close cooperation is necessary or can the establishment of a reuse centre be physically further away from the landfills. In order for the population to truly use the reuse centre for its intended purpose, more serious education is needed.
3. It is only local residents who can drop off objects in reuse centres in Budapest, so despite the physical proximity, this is not a solution for Central Transdanubia. Some features are also missing, such as repair service and the fact that mains-operated devices cannot be delivered. All these certainly raise the need for a regional centre.

In addition to Budapest, a reuse centre operates in Miskolc, in the centre of Northern Hungary region, on the basis of principles similar to the capital's, but it is not an option for the population of Central Transdanubia due to its large distance.

7. Charity shops and second-hand shops in Central Transdanubia region (Q8)

7.1. Charity shops or gift shops

In Hungary, charity shops or donation shops are not yet widespread. There have been and are attempts to run them with more or less success, we also know in our region about a donation shop in Tata, for example, which was forced to close after a few years. It is a characteristic feature of the centralized scheme of our country that we can find more of reuse centres and donation shops in Budapest; a whole network of Cseriti brand stores has been built there. However, in Central Transdanubia we found only six operating donation shops:

- In Fejér county: in Székesfehérvár and in Velence
- In Veszprém county: in Veszprém, in Várpalota and in Pápa
- In Komárom-Esztergom county: in Esztergom.

Donation shops are typically run by non-profit organisations, social cooperatives, or charities, they are non-profit, and built on a social base including municipalities, individuals, and corporations. Their main goal is reuse and waste reduction, as well as job creation and employment. When they open shops they do not specifically do it for the sake of the socially deprived, they are rather targeting the young age group of 15-45, and promoting this form of reuse, shopping, and disposing of things that have become redundant. They are assisted in this by such organizations that deal with building cooperation between NGOs and the for-profit sphere (infotatabanya.hu, 2013). Cooperation with local municipalities is manifested in the goal of employing the disadvantaged, in job creation, in community services through charity, volunteering, and the promotion of the donation culture. Donation shops perform a social task by implementing environmentally conscious attitudes, educational goals and community building. See Appendix 1 for a list of gift shops in the region.

The most typical offer of the gift shops is clothing (it is 25% in the case of Cseriti shops), but among their stock we can also find many books, household utensils (kitchen utensils, porcelain, ornaments and machines), jewellery and accessories, toys and sports equipment. Some shoppers choose these stores because of the better price, another group is seeking for a kind of flea market character, rare treasures, and a third segment is an ever-widening range of environmentally conscious shoppers.

A website, tulsokcucc.hu helps in making the donator and the recipient meet. This website is operated by HUMUSZ (Waste Workers' Association). (humusz.hu, 2020) This association is a member of the European Environmental Bureau, it draws attention to the waste problem with actions, organizes campaigns, has attitude-forming educational programs and the operation of tulsokcucc.hu website is also a part of its wide-ranging activities. If someone can't find a donation shop around, here, he can also offer his things that have become redundant, and can also apply as a recipient (tulsokcucc.hu, 2020).

7.2. Second-hand shops

There are far more second-hand shops in the region than gift shops. Most of them are engaged in clothing sales, as well as children's toys, books, furniture, jewellery, or electronics in commission stores, but the latter one occurs in far less cases. Unfortunately, second-hand shopping and the environmentally conscious aspect of reuse are less widespread in Hungary for the time being, and it is only the cheap prices that attract people to these stores. In order to change this, a continuous attitude-forming work is needed. We found 50 such shops in Fejér county, 40-40 in Veszprém and Komárom-Esztergom counties, so there are about 130 second-hand dealerships in the region, which also includes used car dealerships. According to the results of our questionnaire assessing the attitude of the population to reuse, shoppers are most likely to look for clothing and furniture in these stores, as well as buying household appliances, electronic devices, books, toys, sports equipment or baby-mama stuff.

8. Waste collection points in the region (Q9)

There are several types of landfills in Central Transdanubia, their establishment and operation is regulated by Decree 20/2006 on certain rules and conditions related to landfills and landfills. (IV. 5.) of the Ministry of Environment and Water Management. (net.jogtar.hu, 2006)

There are approximately 35 landfills in our region. Central, state run landfills are typically non-profit, they are the largest, and they perform public service tasks as well. In addition to municipal and junk waste, other types of waste are also accepted here, such as construction or hazardous waste

The state landfill centres are located in county seats and collect the rubbish of the surrounding villages and towns, and also perform a waste clearance activity for the population once a year. Other private landfills in the region are not allowed to take over municipal waste, but they also accept other waste in certain quantities and under certain conditions. Based on the waste management permit of landfills, collection points and waste incinerators, we can find out what types of waste the given company takes over. In addition to the Waste Identification Codes (HAK), the permits also contain the annual quantity that can be taken over for the given site. The list of wastes is provided by Decree 72/2013 (VIII.27.) VM on the list of wastes (net.jogtar.hu, 2013).

The sites of MÉH Zrt also play an important role, as they mostly deal with the collection of metal and paper waste, and the collected waste is typically forwarded for recycling.

Each type of plant receives waste that is transported for energy use, i.e. to an incinerator. Unfortunately, reuse currently is not addressed by any landfills.

9. Repair Café in Hungary and in the region (Q10)

Repair Café is a community place where users can repair their broken tools themselves. To do this, they are provided by the instruments, tools and expertise assistance to make the repair, so that whoever chooses it will not only have a working tool, but can also learn from the local staff.

This initiative started in the Netherlands in 2009 and currently operates in 600 locations in Europe, but there has been only one Repair Café in Hungary so far, in Budapest. We cannot find such a place in Central Transdanubia yet, but due to its proximity and good practice, it is worth examining the example of the capital city. The Repair Café in Budapest operates as a voluntary movement, for the time being; in the absence of its own venue, the days when applicants can gather and repair the items brought are announced as a community event. The main goals of the movement are community building, raising environmental awareness, attitude formation and education for frugality. Unfortunately, this lonely initiative is struggling with difficulties, very few people know about it and no supporters have been found yet. Greater cooperation and more extensive marketing activities are needed for Repair Café to spread over Hungary as well, and receiving cooperation from waste management centres or local municipalities would also be useful. (A napfény illata blog/The Scent of Sunlight blog, 2015)

10. Equipment rental and hire in the region (Q11)

Car rental and equipment rental are already more common in our region than community repair. In each county, in a larger city and in some places in smaller settlements, we also find rental companies where we can rent machines or equipment for serious handicraft work (carpentry or construction work) or for housework, gardening and cleaning. In several cases, specialist dealers and brand stores deal with renting as an ancillary activity, and in addition to the machines that can be rented, they also provide professional repair service and other services. We found six car rentals in Fejér county, 13 in Veszprém county - partly due to the proximity of Lake Balaton - and only five in Komárom-Esztergom county. In addition to machines, trailers, bicycles, restaurant and event equipment - tents, screens, catering equipment - sports equipment, clothes and costumes can also be rented in our region. Rental is supported by several advertising spaces and a community website, the latter one is veddberbe.hu, where the necessary objects can be searched for in various categories based on type, price and county (veddberbe.hu, 2016).

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Thus, the popularity of renting instead of shopping is spreading over Hungary and the region, but its awareness needs a further increase. Attitude-building should aim to make letting or hiring come into people's mind first as a primary option instead of buying when they need a product.

11. Sharing schemes in the region (Q12)

In our region, community use of different devices or vehicles is still uncommon. Again, we can use the example of Budapest as a basis. There are community bike, scooter and car rentals in Budapest. The MOL Bubi public bike-sharing scheme can be used with tickets or passes valid for different periods. In case of regular use, the MOL Bubi card can be redeemed, otherwise a mobile phone number and PIN code or mobile phone application is sufficient for use. There are currently more than 2,000 bikes within the system of 157 docking stations, the route can be chosen and combined with other means of transport as desired, and at the end of the route the bike can be parked at any nearby docking station. (molbubi.hu, 2020)

In addition to the bicycle, the use of the community scooter has also started in Budapest, but due to the COVID pandemic situation, it has stopped completely, and it is not certain that the opportunity will return for the time being.

MOL Limo is a similar initiative which allows to use 100 cars with electric and 350 internal combustion engines after registration, which is also supported by a mobile application and a website. (mollimo.hu, 2020)

In rural areas such as Central Transdanubia, none of the community sharing opportunities has become established. Cycling is popular in the region, there is a cycle path around both of our lakes, and the Bicycle Route of the Year 2020 was also built here; this is the section of the Által-ér valley cycle path between Tata and Tatabánya. It would be worthwhile to install a community cycling system on these popular routes, and the possibility of this should also be examined in larger cities.

In addition to the communal use of vehicles, in small settlements it occasionally occurs that an expensive garden machine is used by the whole community: in Úrhida Fejér County, for example, a branch grinder as a garden tool was purchased by the municipality and can be used by the whole local population on demand.

Various food sharing groups can also be mentioned as community initiatives, with a total of 1,000 members. One of them in the region operates in Székesfehérvár and around Lake Velence, and the Dunaújváros-based but nationally operating Elemorzsia food exchange site with approximately 4,200 followers. In these communities, members offer their unnecessary but good quality and consumable food, which is offered free of charge or on exchange basis by agreement. The Hungarian Food Bank is a non-profit organization operating since 2005, which saves food surpluses from stores, food industrial and trade companies and redistributes them among those in need. This system aims to reduce food wasting and the amount of waste originating from food surplus (elelmiszerbank.hu, 2019).

12. Mobile apps to help in donating or collecting products (Q13)

We know of two mobile applications in Hungary in the field of reuse or waste collection and processing, but unfortunately neither of them directly and effectively serves the spread of reuse. The Repair Workshops Database is an application created by the Humus Association that contains a simple search engine for product groups and settlements. Its rural database is smaller and unfortunately there is no possibility for users to set up workshops. In addition, however, there are no Hungarian-language applications developed in Hungary on the topic. By downloading the Waste Hunter application developed by the JÖN Foundation, we can take part in the elimination of illegal waste: we can report if we find one, and we can follow community events and garbage collection campaigns. Maybe this app is closest to our topic, but it's also limited to waste. It is recommended to develop an application for the previously mentioned online platforms (tulsokcucc.hu, veddberbe.hu, and the food sharing communities), with the help of which users anywhere, anytime can easily find the places and opportunities available on these websites.

13. The most popular and the least common products in reuse (Q14, 15)

According to the questionnaire survey, the most popular types of recycled products for the region's population are clothing and furniture. By clothing we mean not only garments, but also home textiles, bedclothes and piece goods. The popularity of clothes is supported by the fact that there is no need for a guarantee or protection of users, there is no need to check the operation of the product, the quality and condition can more easily be assessed. This is the easiest way to get it, most reuse stores deal with clothes in the region, but it is important to emphasize that in Hungary, not only environmental awareness, but saving money is the most important aspect when buying used clothes. There is a need to develop an approach in this area, so that not only savings but also environmental aspect would gain space and even those social groups that otherwise can afford new clothes would prefer choosing recycled garments.

The second most popular category was furniture. Not only shopping, but also inheritance and emotional attachment play a role here, many people are happy to save and renovate family pieces of furniture, or acquire ones that evoke pleasant, nostalgic memories. Waste avoidance is often an aspect as well, existing or even damaged furniture is repaired or repainted, in which case reuse is motivated by waste reduction. Another group consists of those who are already moving along a purely environmentally conscious line, looking for vintage but saved and professionally refurbished pieces sold as new furniture. They no longer consider frugality as primary importance in this field but willing to pay higher prices for a more environmentally conscious choice and for the work and materials spent on renovation.

The least popular products are electronic devices, as they carry more risks - there is no way to have the product examined by an expert in terms of operation or protection against electric shock - so you need more confidence when buying second-hand. To make matters worse, reuse centres do not deal with mains-operated appliances either. Such products are mostly available in local communities or online. In addition to electronic devices, there is another "other" category in which books, toys, sports equipment, baby-mama products and vehicles, as well as jewellery and accessories and items made of very special porcelain were mentioned. These are the product groups that are not available in the region's thematic second-hand stores. These products are more typical in the offerings of donation shops and reuse centres, though there are no reuse centres available in the region and the number of

donation shops is also small. By expanding their network, we could open up more space to the above-listed products that are used less frequently.

Summary

Looking at Central Transdanubia region as a whole, we can state that reuse is still in its infancy, and the programs associated with it are implemented by businesses or individuals and communities only. In general, the awareness of reuse is not widespread in Hungary either, only its material aspect - the price of reused products is usually more favourable than that of new ones. Budapest, the capital, is at the forefront of environmentally conscious proposals, there are already implemented projects in municipal maintenance, but both these and private initiatives are stuck at the borders of the capital. Environmentally conscious ideas spread to the countryside with much greater difficulty, thus to our region as well, its mass base as well as the broad involvement of the population are still missing.

Our study shows that the field of reuse within waste management is in a serious disadvantage both in terms of legislation and financing. Although there are plans and intentions, many people are aware of the problem but the thing as a whole does not get to the point of implementation and legislation. However, reuse is such an important behaviour and approach having a major impact on the amount of waste and pollution with relatively little energy investment and expenditure that it cannot be left to the public and business sector alone. Perhaps the most important thing is to ensure that decision-makers also realize the importance of this and steer our country and our region towards reuse with the right regulations and funding instruments.

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Annex

List of gift shops in the region:

- Gift shop Székesfehérvár
- Adomány Kuckó Velence
- Álomvár Gift Shop, Várpalota
- Venőke Charity Gift shop, Veszprém
- Charity Community Shop, Pápa
- Baptist Aid Charity Shop, Esztergom