STRATEGIC ASPECTS OF COMMUNICATION FOR CHANGING SOCIAL HABITS IN WASTE SORTING

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ABSTRACT

The article analyzes the theoretical principles and practical experience in planning communication with society to change its behavior towards reduction of waste generation and promotion of its recycling.

Research objective: Analysis of a case study, examining the communication of a Latvian regional utility service provider with customers and making proposals for developing the company's communication strategy to change waste sorting habits of community.

Within the framework of the research, waste management and communication experts were interviewed and the previous experience of SIA "Kuldīgas komunālie pakalpojumi" was analyzed. Media content analysis (2017-2019), customer survey and focus group interviews were conducted.

The analysis of the obtained results revealed that SIA "Kuldīgas komunālie pakalpojumi" lacks a unified strategic approach in its communication with customers. The company's communication strategy for 2021-2023 was developed and a follow-up analysis is planned after its implementation.

The article concludes with recommendations for developing a business communication strategy to change waste sorting habits of society.

Keywords: **communication strategy, change of habits, waste sorting.**

INTRODUCTION

How to increase collection of recyclable waste, for it not to end up in landfills, is a topical question all over the world. With the increase of population, migration to cities, and economic development, change in packaging use tendencies, we observe the rise in the amount of waste – in EU in 2016 it was 483 kg per one citizen, in Latvia – 410 kg per one citizen (Latvijas Zaļais Punkts, 2019b). Optimal waste management reduces waste production, mitigates socioenvironmental problems linked with waste, and boosts energy and useful material production.

According to the study by the European Commission, member states with the most backward waste management are Bulgaria, Check Republic, Greece, Estonia, Italy, Cyprus, Lithuania, Latvia, Malta, Poland, Romania, and Slovakia (VARAM, 2013: 5)

According to aims set by the European Union (EP and EC directive 2018/851) already by 2025, 55% of waste from households and businesses shall be processed. Until 2030 the indicator of the objective shall increase to 60%, but until 2035 – to 65%.

Amount of sorted waste in Latvia is currently significantly different from the EU objective. In February 2019 Latvia was listed 24th out of 29 EU member states with as low as 25,2% of the total waste recycled. For comparison – in Germany it amounts to 70% (Valainis, 2019).

To increase the amount of sorted waste collected in Latvia, it is necessary to develop clear guidelines and action plan, by specifying equal requirements to everyone. Prudent investment and orderly infrastructure are necessary. Society education and awareness promotion activities should be conducted to convince the public using various communication methods. One of the solutions is introduction of a deposit system to achieve the goals set forth by the EU. On February 1, 2022, a deposit system for beverage packaging will begin its operation (Depozītu sistēma, 2020).

Among the most common possible reasons why people in Latvia do not think about environment pollution (Aptauja, 2020), indifference towards property not belonging to oneself (51%) is emphasized, unwillingness to pay for waste collection (46%), and "old mindset" – a belief that others (the authorities) should take care of everything, not me (40%).

In total 22% of the respondents admitted that they do not sort waste at all (Aptauja, 2020). According to survey of the Latvijas Zaļais punkts (Latvijas Zaļais punkts, 2019a), 60% of Latvian citizens who do not sort waste, have expressed readiness to change their habits if in the vicinity of their place of residence sorting containers were available. However, apart from organizational, technological and management issues, public awareness on environmentally sound handling of resources and involvement in waste sorting remains a substantial focus.

Attention in this article is going to be drawn to targeted communication and its role in shaping the habits of society regarding waste sorting, based on the research of the experience of Kuldīga Public Utility Company (Kuldīgas komunālie pakalpojumi), upon analysis of KKP internal communication with clients, and habits of the clients in the field of waste sorting. At the end of the article, recommendations are provided which can be used in shaping the communication strategy of the company to facilitate change and improvement of public waste sorting habits.

THEORETICAL FRAMEWORK

The theory of planned behavior (TBP, Ajzen, 1991; 2012) is commonly used for behavior prediction and correction, including the patterns related to changing habits in waste sorting (Setiawan, Afiff & Heruwasto, 2020; Shen, Si, Yu & Si, 2019; Abduh, Budianta, Arinafril & Erina, 2018; Russell, Young, Unsworth & Robinson, 2017; Klöckner, 2013). According to TBT (see Figure 1), attitudes, subjective norms, and perceived behavioral control are related to appropriate sets of salient behavioral, normative, and control beliefs about the behavior (Ajzen, 1991).

The intentions are predicted by attitude, subjective and social norms, and perceived behavioral control. Subjective norms are linked with perceived behavior control, awareness of consequences, characterization of responsibility, ecological worldview, and values of self-efficacy. Self-efficacy values, in turn, negatively affect subjective norms. Thus, the communication strategies (Setiawan et al., 2020) designed to promote waste sorting must integrate social pressure with a sense of moral obligation.

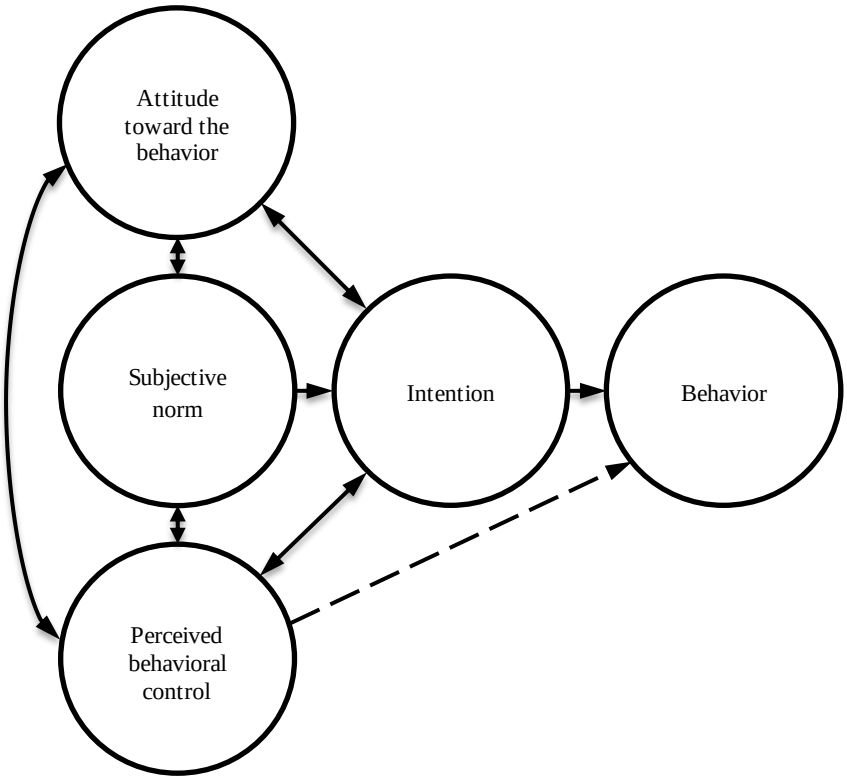

Figure No.1. The theory of planned behavior (TPB; Ajzen, 1991; 2012)

In a study (Russell et al., 2017) it was found that participants with a greater sense of control and broader regulatory support to reduce waste had stronger intentions to engage in such behavior.

It was found (Klöckner, 2013) that planning interventions to change individuals' behavior should not only include attitude change campaigns, but also focus on reducing behavior, strengthening social support, and increasing self-efficacy by providing specific information on how to proceed.

Personal moral duty, perceived behavioral control, and subjective norm have a positive effect on young people's intentions regarding waste sorting (Shen et al., 2019), but attitudes and concerns regarding the environment do not show such effect.

Chinese researchers found (Wang et al., 2020) that satisfaction with waste sorting is associated with indicators of engagement, enthusiasm, social interaction, and active participation. However, it should be noted that the importance of this commitment varies considerably from one region of the country to another, and there are also gender differences in these indicators. Differences in age, educational background, and monthly income of the demographics are also related to differences in population sorting behavior. A study conducted in Denmark (Nainggolan et al., 2019) shows diversity of household choices related to household waste sorting and household socio-demographic indicators. There are also differences in the distribution of self-reported time for waste sorting and treatment and use of recycling facilities. It was found (Chen & Gao, 2020) that subsidies are an important factor influencing the waste sorting behavior of municipal residents.

Interestingly (Chen et al., 2020), young individuals and people with low monthly income were found to have higher awareness of sorting behavior than others. Factors influencing waste sorting behavior of college students (Hao et al., 2020): convenience of waste sorting facilities, willingness to sort waste, knowledge of the related field, attitude towards waste sorting, peer pressure, and the existence of a reward and penalty system.

It was found in a study (Hao et al., 2020) that although mandatory waste sorting measures have been introduced and college students have a basic knowledge of waste sorting, they have difficulty categorizing some secondary raw materials (glass, hazardous waste, light bulbs, etc.).

RESEARCH-BASED COMMUNICATION

To stimulate the introduction of new habits and ensure that new activity implementation is maintained, a set of different communication methods and activities should be used. When developing a waste management policy (Chen & Gao, 2020), it should be taken into consideration that the intensity of communication and learning among the municipal population influences their decisions on waste sorting.

The study (Czajkowski et al., 2019) found that the communication of a descriptive social norm is positively related to the change of waste sorting behavior of individuals. "One of the most effective ways to motivate people is through social impact. There are two categories of social impacts. The first concerns information. The second is related to pressure from others." (Thaler & Sunstein 2009: 59).

When creating educational campaigns, work with different audiences should be different, because different habits are formed more clearly for a middle-aged person than for a primary school student (Dispenza, 2015). It is communication with young people under the age of 18 that is important for influencing the attitudes and behavior of older generations towards waste management (Kozel et al., 2019).

Group preference system (including family choice, organizational and social preference) plays a more significant regulatory role in waste sorting behavior (Chen et al., 2020). Similarly, in a study of changing the habits of people to promote cycling, the authors (Wunsch et al., 2016) found that social dynamics (motivating others or motivating others) strongly influenced participants, indicating that emotional aspects (team spirit, fun) have greater potential than more rational factors such as health or the environment.

Upon evolvement of digitalization, the opportunities occur to use smartphone apps to drive change. It was found that smartphone apps can facilitate healthy habits (Zhao et al., 2016). The authors (Hughes & Boothroyd, 2020) point out that creating positive new habits requires conscious effort, which can be created with various mobile applications and games on smartphones. A study of the attitudes and behavior of the Czech population towards waste treatment found (Kozel et al., 2019) that EKO-COM uses both online and offline communication tools and combines them to achieve the best outreach for all target groups.

To develop a strategic approach to changing people's behavior, the UK Department for Environment, Food and Rural Affairs (DEFRA) has developed a model to help plan communication that involves changing public habits. The model was developed as part of the UK Sustainable Development Strategy (WRAP, 2013). This evidence-based strategy provides strong leadership in implementing sustainable behavior change involving individuals, households, and communities.

According to the communication model developed by DEFRA (WRAP, 2013), four elements are necessary for change to take place in the behavior of individuals: opportunity, involvement, encouragement, and example.

The opportunity makes waste sorting easier. People need help to make choices, so education, skills and quality information need to be provided. Involvement means giving effective signals, choosing the most appropriate methods to promote waste sorting. DEFRA points out that involvement is the involvement of people to take personal responsibility for what they do. Example - the company demonstrates in-house recycling, reuse, and waste prevention schemes. Employees' stories of how they sort, recycle and compost waste are published. Local businesses and communities show their commitment to sorting waste. In addition, ensuring a consistent policy is important (WRAP, 2013: 115-127).

The Berlin (Bund-Berlin, 2020) Communication Concept on Organic Waste Collection states that citizens need to be informed individually, specifically, actively, and purposefully. Furthermore, it is emphasized that information campaigns and public relations alone are not enough to ensure stable attitude towards waste sorting and to achieve behavioral change in the population. There is also no instructive warning signal with the index finger raised, instead real action algorithms must be provided via communication.

Based on the analysis of the research results, the **Research objective** was set out: Analysis of a case study, examining the communication of a Latvian regional utility service provider with customers and making proposals for developing the company's communication strategy to change waste sorting habits of community.

METHODS

To obtain broader insight into the problem, interviews with waste management specialists were conducted, focus group interviews were conducted with the most active clients on the existing problems and possible solutions.

To obtain an objective overview of publications of the last three years (2017 -2019), a content analysis of publications on waste sorting issues was performed in the municipal informative publication "Kuldīgas Novada Vēstis", and in the local newspaper "Kurzemnieks".

In February 2020, a survey of KKP customers was conducted with the help of 2603 electronic surveys. Answers were provided by 781 respondents.

SELECTION

As KKP provided opportunities to sort waste for the citizens in the city and in the country are substantially different, it is important that the respondents represent opinions of the citizens from both the city (48,2%), and the 13 parishes of Kuldīga municipality. The respondents mainly live in private houses (86%), but 14% in apartment buildings.

Most of the respondents (67%) were women.

The questionnaire was mostly answered by the respondents with higher education (55.9%), slightly less respondents with secondary education (40.9%), but in the minority - with basic education (3.2%).

25.3% of respondents are aged 41-50, 24.6% of respondents are in the age group 51-60, 23.2% - aged 31-40, 17.2% - aged 61-70. The least represented group are the respondents - people aged 21-30 (6.5%) and respondents older than 71 (2.9%).

People aged 21-30 make up only 6.5% of respondents. To find out the involvement of this part of the audience and their opinion about the recycling of waste, it is possible to conduct another survey targeted specifically to this target audience.

RESULTS

Table 1 shows that in Kuldīga municipality from all the waste collected in 2019 only 11% were submitted to recycling. As mentioned previously, directive 2018/851 of the European Parliament and European Commission provides the obligation to recycle up to 55% of waste produced in households and companies.

Table 1

KKP COLLECTED AND SORTED WASTE AMOUNT BY YEARS

Type of waste	2017	2018	2019
Sorted waste and submitted for recycling (tons)	380	310	655
Landfilled municipal and construction waste (tons)	5487	5346	5358
Total household, construction, and sorted waste (tons)	5861	5656	5867
Sorted waste and submitted for recycling from total (percentage)	**6%**	**5%**	**11%**

In Kuldīga municipality, waste management is provided by Kuldīga municipal utility company SIA "Kuldīgas komunālie pakalpojumi". There are 23,383 people living in Kuldīga region and there are a total of 67 waste sorting places. Thus, one sorting point has been established for an average of 349 people, which is twice as dense as required by the regulations of the Cabinet of Ministers of the Republic of Latvia.

Residents can also deliver sorted waste - plastic, paper, metal, glass - to the sorted waste reception area free of charge. For several years now KKP has been supplying 240-liter containers to private house residents in Kuldīga free of charge for the separation of recyclable waste from municipal waste. Since the second half of 2018, when the KKP provided customers with separate containers for separating glass in private homes, the volume of collected glass has increased. If in 2018 90.87 tons of glass were collected, then in 2019 - 235.88 tons of glass were collected.

Binding regulations of Kuldīga Municipality Council No. 2011/23 stipulate that collection of a 240-liter municipal waste container costs 4.16 euros, but collection of sorted waste - 2.21 euros.

In Kuldīga municipality, a "Waste Sorting Instruction" has been developed, which was repeatedly delivered to all residents. In addition, information is regularly published in Kuldīga Municipality newsletter "Kuldīgas Novada Vēstis" (hereinafter - KNV), on the municipal website www.kuldiga.lv and Facebook profile, in the local newspaper "Kurzemnieks", and on the KKP website www.kkp.lv, as well as its Facebook profile.

In April 2019, for the first time, an educational campaign "Let's put our efforts together, but waste separately" was organized, during which more than 1,200 children and young people from general education schools and kindergartens in Kuldīga region were educated about waste sorting in presence in the utility company.

The KKP was one of the first in Latvia to respond to the campaign of the World Wide Fund for Nature and the Nature Protection Board "Going in nature, what you bring, take it!" With the campaign launched in 2018, these institutions called on every organization that manages natural objects and organizes events in nature to place information signs instead of waste bins.

WASTE SORTING HABITS OF KULDĪGA RESIDENTS

More than half of the KKP respondents (63.3%) answered convincingly that they participate in waste sorting. On the positive side, 12% of respondents who do not currently sort waste still plan to do so.

Summarizing the views of the KKP clients on what hinders waste sorting, 3 groups of factors were distinguished (see Table 2): organizational factors, factors related to lack of information and communication, and factors related to habits.

Table 2

FACTORS INFLUENCING WASTE SORTING MENTIONED BY KKP CUSTOMERS

Organizational factors	Factors related to lack of information and communication	Factors related to habits
Insufficient frequency of glass container collection	Households lack information about the availability of containers, about the possibility to hand over electrical goods free of charge	Additional time is needed for sorting
Insufficient frequency of collection of municipal waste containers (especially dissatisfied residents of apartment buildings with sorted waste containers)	Lack of knowledge about proper waste sorting	Need to reorganize the environment to be able to store sorted waste
It is not possible to dispose sorted waste in parishes on the spot	There is a lack of knowledge about possible discounts that can be obtained if a household sorts waste	It is necessary to change one's and family members' habits
Necessity to pay full price for municipal waste container even if it is not fully filled during agreed period	Fake news or myths related to lack of knowledge	It is necessary to overcome the daily routine
	Opportunity to order collection of sorted waste container only by telephone	

Information on the organizational factors influencing waste sorting updated during the study (see Table 2) and the suggestions of the citizens on how to prevent them (see Table 3) was passed on to the responsible KKP specialists responsible. One of the most important aspects promoting non-sorting of waste is the problem indicated by 50.6% of respondents in Kuldīga municipality (mostly residents of rural areas) that waste sorting containers are not available in their place of residence. The KKP plans to increase the amount of sorted waste, which will be communicated to the population.

From 2017 to 2019, KKP published a total of 57 newsletters (17 in 2017, 12 in 2018, 28 in 2019) related to recyclable waste.

KKP communication with the public is considered understandable by 71% of respondents. Most of the residents have indicated that the information is sufficient and understandable, emphasizing that "whoever wants, understands". However, 24% of clients have indicated that they have not gotten into details of this issue at all. Here it is necessary to find the most appropriate communication tools that would also address and motivate these people to draw their attention to waste sorting.

Those residents who noted that the information was insufficient and incomprehensible to them (5%) indicate that: there is a need for constant reminder of information; there is generally no clarity about the sorting of the plastic packaging of the various foodstuffs; more detailed explanations are needed on which polyethylene products are suitable for sorting, etc.

Most of the population is aware of the possibility for the household to save financial resources by sorting waste, but 37% of respondents do not know it yet. Communicating additional information on financial savings (or losses) to citizens can encourage them to become more involved in waste sorting.

In the future, when creating newsletter content, attention should be paid to the fact that only 17% of the population know that batteries and accumulators, electrical appliances, light bulbs can also be disposed for free at KKP, Dārzniecības iela 9, Kuldīga.

Particular attention should be paid to the myths and fake news mentioned by KKP respondents regarding the lack of knowledge about what happens to waste after collection, the costs of washing glass containers before transfer, and the fact that waste sorting is useless, etc.

Table 3 summarizes the factors mentioned by respondents that could facilitate sorting. Factors related to habit change which could facilitate waste sorting, are not mentioned by the respondents.

Table 3

KKP CLIENT MENTIONED FACTORS WHICH COULD FACILITATE WASTE SORTING

Organizational factors	Factors related to information and communication
Ensure the collection of separate waste from each household in the form of a campaign, for example once a year	Educational campaigns
To make bags of different colors and hand them out to the residents so that they can sort waste already in the apartment	Informing the public
Improvement of containers (difficult to throw waste through small openings, it needs to be further flattened, crushed)	
Even more containers need to be placed closer to households	
Deposit system	
The law shall stipulate mandatory waste sorting	
Increased tariffs for not sorting waste	

Several respondents indicated that they have a "Waste sorting instruction" at home that is easy to follow when sorting waste. As this is a communication tool that is easy to use and provides information in a clear way, it needs to be repeatedly sent in paper format.

Although almost half of the residents of Kuldīga municipality still do not sort waste, 71% of respondents indicate that the information is sufficient, understandable, and accessible. Some of these respondents commented: "If there is a desire to sort waste, a great deal of information can be found. The problem is the desire or unwillingness to do so", "No need for additional information, everything is already clear", "I do not need additional information, everything is clear", "We are aware of the importance, there is no need to spend resources on information campaigns". The opinion of these respondents should be taken into consideration when compiling the newsletter, indicating separately which news are of a general nature and which are topical, new news, to which special attention should be paid.

The vast majority indicate that the most accessible information for them is on the internet, including KKP website www.kkp.lv and Facebook profile. However, 24% of respondents obtain information: together with a monthly invoice for waste sorting, from personal e-mails addressed to the customer, from posters outdoors, from information stickers on containers, from radio and television, from newspapers.

The reasons given by the population can help to improve the provision of the service by revising the frequency of container collection at publicly available sorted waste collection points and by finding an opportunity to order waste removal electronically. Explanatory information is needed on what determines the density of containers, which materials can be sorted, why it is not proposed to sort a more diverse range of waste, why containers with hatches are chosen instead of hinged lids, that glass containers do not have to be washed but simply emptied, that every resident has the right to dispose of the sorted waste at any publicly available collection point for sorted waste, including apartment residential buildings, that the sorted waste collected by KKP is not taken to a landfill for disposal, but is handed over for recycling.

The analysis of the KKP previous communication with customers and customers' waste sorting habits showed that so far, the work has been done more in a campaign-like manner, no systematic media monitoring, content analysis, determination of the level of involvement has been performed. KKP communication strategy developed will optimize the existing communication, making it planned, targeted, and measurable.

DISCUSSION

The KKP communication strategy for convincing the public of the importance of waste sorting has been developed for the next three years - from 2021 to 2023, based on the strategy structure proposed by O. Kazaka (Kazaka, 2019): description of the field; goals; tasks; description of the target audience; positioning; communication directions; communication plan; criteria for evaluating the effectiveness of communication.

KKP is a capital company of Kuldīga municipality, which, as a good governance company, really cares that the residents of Kuldīga city and 13 parishes of the municipality live in a clean, tidy and well-managed environment. In addition, Kuldīga, with its unique old town in the ancient valley of the river Venta, which is a UNESCO World Heritage Site, has an unwritten obligation to take care of the environment. Being on the UNESCO World Heritage List gives the place a quality mark. This would enable the city to attract additional resources in the fields of education, science, and culture, stimulate the preservation and protection of the historical center of Kuldīga, attract tourists, promote high-quality development of the city and the well-being of the population. In addition, KKP, as a municipal capital company, has access to extensive and diverse information channels and resources for communication with the residents of the municipality to reach the public as much as possible to promote waste sorting.

The KKP vision is in line with the company's positioning - "Citizens' Partner No. 1 in improving the environment and everyday life, and in service innovation". KKP's mission is to be a team of experts, always one step ahead of everyone, providing versatile and innovative services to every customer, but the vision is to be the number one partner of citizens in improving the environment and everyday life, and in service innovation. Company values: professional employees, quality services, attitude of masters, educated customers.

The aim of KKP's corporate communication is to persuade the public to sort waste so that citizens can sort waste voluntarily and happily, without throwing it all together for disposal in landfills.

The goal of the communication strategy is to transfer 20% of the total amount of waste collected for recycling by the end of 2021, 30% by 2022, and 40% by 2023 by improving the availability of waste sorting infrastructure and carrying out planned public information and education.

The main segments of target audience: KKP clients who already participate in waste management; Kuldīga municipality pre-school education facility senior group pupils, who should develop interest for waste sorting already at early age; Kuldīga municipality general education school students; various company teams, and seniors.

Several tasks have been set. As the greatest audience coverage is provided by mixing of communication types, it is necessary to use several communication channels. Information on waste sorting should be distributed: on the internet (including KKP website www.kkp.lv and Facebook profile), together with a monthly invoice for waste removal, in personal e-mails, radio and television, newspapers, information stands, as well as lectures should be organized for on -site training. Make the most of social media, which enables two-way communication - the opportunity to have a dialogue with customers. In cooperation with the newspaper "Kurzemnieks" to regularly create thematic pages on waste sorting.

Communication direction. Promotion of waste sorting among potential and existing customers. It is planned to organize waste sorting trainings for all KKP employees and to involve those employees in organizing various educational events and campaigns. Attract well-known people who share their experience in waste sorting. Regularly publish opinion leaders who can influence the decisions of the target audience - educators, children and young people, doctors, environmentalists, animal friends, religious leaders, municipal leadership, athletes. Good examples need to be communicated of how people sort waste, such as people who collect paper and dispose it in paper waste collection campaigns, disposal of batteries in special containers in supermarkets, put plastic bottles in a deposit system in Lithuania, and compost bio-waste in their backyard garden.

Organize educational events for schools, kindergartens, and business teams. Especially work with the younger generation, who are responsive to waste sorting and pass on the acquired knowledge to their families, relatives, and friends.

In order to evaluate the effectiveness of communication, it is planned to carry out various activities: customer survey (gives an opportunity to find out what is happening), focus group discussions (gives an opportunity to find out why it happens and how it can influence the current situation), analysis of publications (using qualitative and quantitative content analysis), evaluate the effectiveness of communication on social media on Facebook (level of coverage, size of the audience, tonality, content, level of involvement - “Like”, commentary, sharing the publication or other activities related to the profile of the organization). Media monitoring, content analysis, and level of involvement will be measured every week. In turn, the overall picture of waste sorting habits and views on the importance of sorting is measured once a year or according to the need for a specific campaign/event.

Considering the set communication goals and target audience, tasks, positioning, and communication direction, KKP communication plan for 2021-2023 has been developed to convince the public of the need for waste sorting. For each activity, the implementation time, theme, and content summary, target audience, communication channels/tools to be used, and feedback are defined. The communication action plan does not include various day-to-day tasks, such as preparing press releases, creating information schedules, and other types of illustrative materials. The persons responsible for the implementation of the action plan have been determined.

In developing KKP's communication strategy, great care was taken to make it flexible. It is important not only to implement the developed strategy, plan, timely implement the planned measures, involve appropriate people, use appropriate communication channels

and tools for each target group, but also to feel the situation in society, market, and the world. For example, due to the state of emergency declared in the country, the implementation of educational activities unfortunately had to be postponed, but during that time schools in the region were invited to submit works to a drawing competition on participant's family contribution in waste sorting.

The developed KKP communication strategy implementation will optimize current communication, making it planned, targeted and measurable.

CONCLUSIONS

Studies (Hindawi, 2018; Adomavičiūtė et al.,2012; etc.) mention the following as the main obstacles to waste recycling: 1) government plan and budget: insufficient government special regulation and a budget for municipal solid waste management, 2) insufficient education of households: households are unaware of the importance of recycling, 3) technology: lack of efficient recycling technologies, 4) management costs: high costs of manual waste classification. In Latvia, the main reason for not sorting waste is mentioned as incomplete waste sorting infrastructure, but the role of strategic and purposeful communication in this process is not questioned.

Solving the organizational problems identified during the research is largely hindered by the uncertainty about the national level policies. Only on January 22, 2021, the Cabinet of Ministers adopted the National Waste Management Plan for 2021-2028, which envisages expanding the system of separate waste collection, developing the institutional system of waste management, creating stronger waste management regions, and implementing the principles of circular economy to significantly increase waste recycling and reduce the amount of waste going to landfill. (Minister Plešs: the national waste management plan will ensure the development of the sector, 2021). The plan implies supporting the reform of municipal waste management regions proposed by the MEPRD and will move from 10 waste management regions to five waste management regions (Cabinet Order No. 45, 22.01.2021)

KKP communication strategy for 2021-2023, developed in the course of the study described above, will be reviewed based on the official information received regarding the National Waste Management Plan for 2021-2028.

Communication strategy of Kuldīga municipal utilities aimed at changing of public habits in waste sorting is based on the conclusions made in the analysis of the situation, envisaging specific purposeful activities for each of the identified target audience segments. However, it should be noted that the KKP budget does not allow to develop special video sequences corresponding to the respective groups with the involvement of people popular not only in Kuldīga region, but throughout Latvia, who could address more effectively the respective target groups. Neither budget nor resources allow the development of mobile applications or games (for smartphones) specifically targeted at each of the target group, the effectiveness of which has been demonstrated by recent studies (Zhao et al., 2016; Kozel et al., 2019; Hughes & Boothroyd, 2020; etc.). It is important that such activities are developed on the state level, based on the state-wide policy of waste management developed by the Ministry of Environmental Protection and Regional Development.

Developed KKP strategy implies conduction of a survey of the population on their waste management habits at least once a year. Based on the results of research (Chen & Gao, 2020; Wang et al., 2020; Shen et al.,2019; Abduh et al., 2018; etc.), it is preferably in a survey to also include questions about the psychological criteria characterizing the respondents, which

would allow for more purposeful segmentation of client groups, to develop more precise methods of communication with them, including purposeful training methods.

Special attention should be paid to the age group up to 18 years, because according to research results (Kozel et al., 2019) it is this group that has a great influence on the attitudes and behavior of older generations in the field of waste management.

The influence of social groups must be taken into account when developing a communication strategy for changing public habits in waste sorting. "If an individual cares about another's thoughts about himself (perhaps based on the misconception that others are paying attention to what he/she is doing), the individual could follow the crowd to avoid anger or to gain favor" (Thaler & Sunstein 2009: 59). By purposefully creating environment in which it is possible to gain positive emotions together, by performing socially desirable activities (waste sorting), it is possible to increase the motivation of individuals. Studies (Chen et al., 2020; Wunsch et al., 2016) show that emotional aspects (team spirit, fun) have more potential than more rational factors such as health or environmental considerations.

In conclusion, we would like to emphasize that waste sorting is a complex problem that must be addressed globally, across Europe, on the national level, regionally, on municipal and individual levels. It is important to solve not only communication and education issues, but also organizational problems. British communication specialists (WRAP 2013: 7) also recommend considering the impact on the company's resources and capacity, to determine whether it will be sufficient for successful communication: will the company's employees be able to collect additional collected material, or will there be enough containers and vehicles to collect additional material, or the company's employees will be able to be polite and answer the questions asked by the residents, whether the customer service specialists will be ready to answer additional questions, or whether all the necessary information will be available on the website.

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