

IDENTIFICATION OF KEY ASPECTS OF BUILDING THE IMAGE OF THE TRICITY AGGLOMERATION BASED ON THE PLATFORM USERS' ENTRIES X

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Purpose: The purpose of the presented research is an attempt to identify words that could be used by local governments to build the image of the Tricity Agglomeration, as well as the cities of Gdańsk, Gdynia and Sopot themselves.

Design/methodology/approach: The study used nearly 650 000 posts by users of Platform X, made in the full calendar year of 2022, which contained references to the Tricity Agglomeration, Gdańsk, Gdynia and Sopot in their content. Statistical methods, Big Data, Text Mining, Bag of Words and Words Cloud were used in the analysis.

Findings: The study identified the most recognizable and important places, attractions, people, events, organizations and emotions for Internet users. Elements specific only to specific cities were identified, as well as those common to pairs of cities and the entire agglomeration. The survey also identified the most intractable, because they affect the largest number of people, problems of individual cities and agglomerations.

Social implications: The results of the presented research could be used by local governments to build the image of individual cities and the entire Tricity Agglomeration. Similar surveys could also be conducted for other cities. The knowledge gained in this way could contribute to a more complete evaluation of the authorities' efforts to date in building the image of cities.

Originality/value: The presented article is a voice in the discussion on the use of Big Data methods to support management processes and decision-making. It indicates that through the use of data analysis it is possible to obtain a lot of information that can be successfully used to build marketing strategies and create the image of cities. Successful efforts in this regard are of great value to local communities.

Keywords: image, Tricity Agglomeration, Gdańsk, Gdynia, Sopot, social platform X, big data, text mining.

Category of the paper: Research paper.

1. Introduction

The posts of users of social networks such as X (Twitter) are a valuable source of information that is successfully used by many audiences around the world. The attractiveness of this information channel is due to its simplicity of use and the formulation of short and concise messages. It has a wide reach and allows direct interaction. User posts are a valuable source of information that can be used, for example, by businesses or local governments. They are a source of information about the preferences and needs of respondents. They are also a source that allows to create an image, including the image of a place. The purpose of the presented research is an attempt to identify words that could be used by local governments to build the image of the Tricity Agglomeration (Trójmiasto), as well as the cities of Gdańsk, Gdynia and Sopot themselves.

2. Image of the place – a review of the literature

The modern development of cities often leads, on the one hand, to mutual resemblance between centers, and, on the other hand, to growing rivalry between them. A positive image can contribute to numerous benefits, such as increased recognition and interest in the place, and not only by tourists, but also, for example, by potential investors. It also helps to build the trust of residents in the city authorities. Local authorities therefore consciously work to build their position and competitive advantage. This advantage is built on the basis of two groups of resources. The first group is tangible resources, and the second group is intangible resources. The second group can include the image of the place. It is not something permanent, it often changes as the views and experiences of residents or tourists change.

According to the Dictionary of Foreign Words, the term image is derived from the German word *Visierung* and means likeness, portrait, depiction (Kubisa-Ślipko, 2006). The late 1950s and early 1960s saw an increase in scholarly interest in the concept of the image of a place. In 1956 and 1958, work on this issue was conducted by K.E. Boulding and P. Martineau, among others (Boulding, 1956). At that time, the researchers suggested that human behavior may be more influenced by images than by unbiased, real information about an object, phenomenon or environment. In the following years, interest in this subject did not diminish. In 1971, J.D. Hunt published a 414-page paper entitled *Image - a Factor in Tourism*. A period also began in which published works took on an interdisciplinary character. For this reason, different definitions of the concept can be found in the literature. In the 1970s, the concept of image was combined with a set of different types of features, which were not only the sum of these features in the imagination of the place, but also a set of interconnections and interactions between them (Oxenfeldt, 1974). The image of a place was formed in the human mind, regardless of whether

the person had previous contact with that place or not (Tuan, 1975). Thus, he was an idea of knowledge, superstition, prejudice, excitement, or emotion that an individual might have about the place (Lawson, Baud-Bovy, 1977). J.D. Fridgen in 1987 draws attention to the aspect of mental reflection of a place (Fridgen, 1987), J. Embacher and F. Buttle on the attribution of ideas or concepts to a place without necessarily having knowledge of that place (Embacher, Buttle, 1989), and G.R. Dowling writes that an image is „a set of meanings by which an object is known and by which people describe, remember and refer to it” (Dowling, 1986). In the 1990s, these definitions were supplemented by the notion of a mental construction that is prepared by potential viewers, who select a number of images from the set of impressions available to them (Fakeye, Crompton, 1991). One of the more popular definitions of the term image was presented in 1993 by P. Kotler, writing that the image of a place is the sum of beliefs, ideas and impressions that people relate to a place (Kotler, 1993). Thus, to sum up, we can say that the image of a place consists of knowledge, images, experiences and perceptions of that place, but also prejudices and a whole range of positive and negative emotions. The image is the sum of one's own experiences and knowledge, as well as the result of various messages, communications that an individual has to deal with. It has an individual, personal character, which can differ significantly from one individual to another.

Scientific works on place image attempt to distinguish different types of image factors. One proposal is to divide it into a cognitive factor of image and an affective factor of image (Lynch, 1960). The cognitive, or cognitive factor, refers to an individual's knowledge, facts or opinions about a place. The affective, or emotional, factor is subjective and often abstract. It reflects an individual's feelings, such as liking a place. It can also be irrational, as it is based, for example, on prejudices or fears (Burgess, 1978). Simplifying, we can say that the cognitive factor is the broad offer of a place, and the affective factor is the characteristics of that place. Therefore, between the cognitive factor and the affective factor, it is necessary to study the ongoing, changing relationship. In 1993, W. Gartner distinguished three groups of factors affecting the image of a place. In addition to the cognitive and affective factor, he proposed a conative, or behavioral, factor. This factor reflects an individual's willingness to take certain actions related to a place (Gartner, 1993). E. Glinska, M. Florek and M. Kowalewska in 2009 proposed a fourth evaluative factor, reflecting how a place is evaluated (Glinska et al., 2009). S. Baloglu and K.W. McCleary distinguished two other groups of factors that influence the image of a place. The first factor is one that describes the individual characteristics of individuals. These include the socio-demographic characteristics of individuals, such as age, gender, education, material status, and psychological characteristics, such as personality or professed values. The second factor is external, reflecting the individual's experience with a place, as well as the sources of information about the place from which the individual gains knowledge (Baloglu, McCleary, 1999). M.S. Roth and J.B. Romeo, meanwhile, adopted four dimensions of place image. The first dimension - modernity - describes a place through the use of state-of-the-art knowledge and technology. The second dimension - diversity - presents a wide, rich and attractive offer of the place. The third dimension is prestige, that is, good

reputation, high status and exclusivity. The last dimension is quality, which shows professionalism, responsibility, sustainability and efficiency (Roth, Romeo, 1992).

3. Place image and social media

Countries, regions, cities or, for example, the Tricity Agglomeration, in order to develop dynamically, should introduce and improve the marketing strategies used. The key to gaining an advantage for a place in the market is the ability to develop, implement and execute such a strategy. One of the key elements of a marketing strategy is building and creating a place's image. The development of the Internet and modern technology has contributed to the development of social media and a virtual community that uses a „keyboard” to regularly communicate with each other (Mehrabian, Ferris, 1967). Social media provides an opportunity for users to communicate, build relationships and interact with each other. 59.3% of online users aged 16-64 say they use the Internet primarily to search for information (age: 16-24 - 61.1%; age: 25-34 - 56.5%; age: 35-44 - 57.4%; age: 45-54 - 60.9% and age: 55-64 - 65.3%). 55.4% of respondents stay in touch with friends and family, and 51.2% follow news and events (Digital 2023...). Information posted on social networks such as, for example, Facebook, YouTube, Whatsapp, Instagram, Wechat, TikTok, FB Messenger and X (Twitter) have become particularly useful in the process of communication between web users (Digital 2022...). Recent surveys also indicate that entities (including businesses) most often choose sites such as: Facebook, Instagram, Whatsapp, YouTube, LinkedIn, X (Twitter), Telegram, FB Messenger, Skype and TikTok (Digital 2023...).

On the one hand, social media has facilitated the use of various types of marketing strategies, and on the other hand it has made it more difficult, as it has become a place of often uncontrolled emotions. Marketing strategies relating to the territory can be directed at four areas, i.e. the image of the place, the attractions of the place, its infrastructure and the people who inhabit the place. Image is understood as the overall image of a place, which includes an emotional dimension. The image, due to its emotional coloring, can be classified into positive, neutral or negative image. A positive image is associated with a set of positive associations, perceptions and opinions. It is an intangible resource, without physical form, but which allows a place to build a competitive advantage. It is also difficult to value, such as a place's reputation. A negative image is expressed in unfavorable opinions and perceptions about a place. It can hinder or impede the development of a place. A neutral image is expressed by typical, undistinguished opinions and perceptions. As a result, it can cause a place not to be quickly associated and distinguished by decision-makers. An attraction is something of particular interest, something that provides pleasure and enjoyment to the user. The word comes from the French language, *attraction*, and means, among other things, attraction. An attraction can also be something beautiful. It also allows us to get away from our

daily responsibilities and provides relaxation. It also enjoys the special interest of others. An attraction can be a lure, temptation, magnet, sensation or surprise of a place. This category can include, for example, festivals, concerts, matches, fairs, sports competitions, parks, tourist and natural attractions or, for example, the best pizzeria in Gdańsk¹. Infrastructure consists of public and private physical improvements that contribute to the attractiveness of a place. They testify to the economic potential of the place. It enables social (sports halls, auditoriums), economic and informational integration. Infrastructure also creates conditions for all acts of movement resulting from human action, i.e. spatial interaction. These include, for example, the flow of goods and information, the way to work, young people going to college, attending conferences and even the flow of knowledge. These are often very expensive investments that have been built over many years, with their own history. People, that is, specific individuals or groups of people who are identified with a place. They contribute to the fact that a place gets a human dimension. They can be as much a magnet as the attractions of a place.

4. Research methodology

For research purposes, 641 829 messages were downloaded via API X (Twitter) that contained at least one of the words in their content: Gdańsk, gdańsk, Gdansk, gdansk, Danzig, danzig, Sopot, sopot, Zoppot, Gdynia, gdynia, Trójmiasto, Trojmiasto, 3City, 3city, Aglomeracja Trójmiejska (Tricity Agglomeration), Aglomeracja Trojmiejska, aglomeracja trójmiejska, aglomeracja trojmiejska, Dreistadt. The data covered one calendar year from 01.01.2022 to 31.12.2022. The messages included entries in multiple languages. Among the 10 most frequent languages, identified automatically by X (Twitter), were (Tab. 1):

Table 1.

The most commonly identified messaging languages

No.	Language	Number of messages
1	Polish	362 880
2	English	181 515
3	German	19 010
4	Spanish	16 762
5	Japanese	7 439
6	Romanian	4 842
7	French	4 534
8	Portuguese	3 629
9	other (unidentified)	2 423
10	Turkish	2 301

Source: own elaboration.

¹ "50 Top Pizza" - the best restaurants serving pizza in Europe. In the list (as of May 6, 2023), a pizzeria from Gdańsk, Pizzeria Ostro, was ranked 34th.

Since the analysis will be looking for words that can be used to build various marketing strategies, it was necessary to tokenize the texts, that is, to change the form of the data, from a message to a string of single phrases delimited by the „space” sign. Entries posted by users of social platform X (Twitter) are in a very informal form. Their authors use only selected rules of grammar, spelling and punctuation. Emojis, links to websites and hashtags also appear in the posts (Figure 1). In order to analyze only the words that carry the desired content, it is necessary to transform the messages into a set of standardized words.

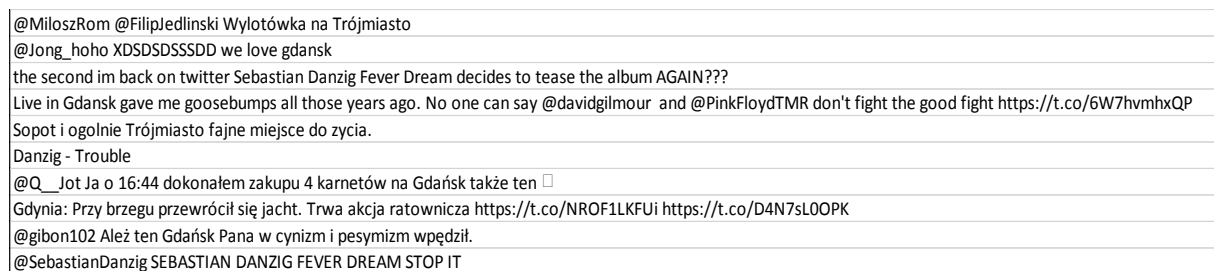


Figure 1 shows a screenshot of a Twitter thread. The tweets are as follows:

- @MiloszRom @FilipJedlinski Wylotówka na Trójmiasto
- @Jong_hoho XDSDDSSSSDD we love gdansk
- the second im back on twitter Sebastian Danzig Fever Dream decides to tease the album AGAIN???
- Live in Gdansk gave me goosebumps all those years ago. No one can say @davidgilmour and @PinkFloydTMR don't fight the good fight <https://t.co/6W7hvmhxQP>
- Sopot i ogólnie Trójmiasto fajne miejsce do życia.
- Danzig - Trouble
- @Q_Jot Ja o 16:44 dokonałem zakupu 4 karnetów na Gdańsk także ten ☐
- Gdynia: Przy brzegu przewrócił się jacht. Trwa akcja ratownicza <https://t.co/NROF1LKfUi> <https://t.co/D4N7sL00PK>
- @gibon102 Ależ ten Gdańsk Pana w cynizm i pesymizm wpędził.
- @SebastianDanzig SEBASTIAN DANZIG FEVER DREAM STOP IT

Figure 1. Example of the analyzed data.

Source: own elaboration.

First, messages written in Polish, of which there are 362 880 in the studied set, were filtered out, followed by tokenization of all messages. The tokenized dataset has 7 273 094 words². Subsequently, all letters were converted to lower case, all punctuation marks, numbers, emoji, web addresses, links to other entries and web addresses were removed.

In the next stage of data transformation, all words that do not carry the content sought in the study were removed from the set of words. These are the so-called stopwords. Since there is no standard library of such words for the Polish language, the elimination was carried out manually³, removing one-letter words such as: *i, z, o, w*, two-letter words: *from, to, for, to, on, because, that, we, him, me, tu, these, ...* In total, 560 different words were removed.

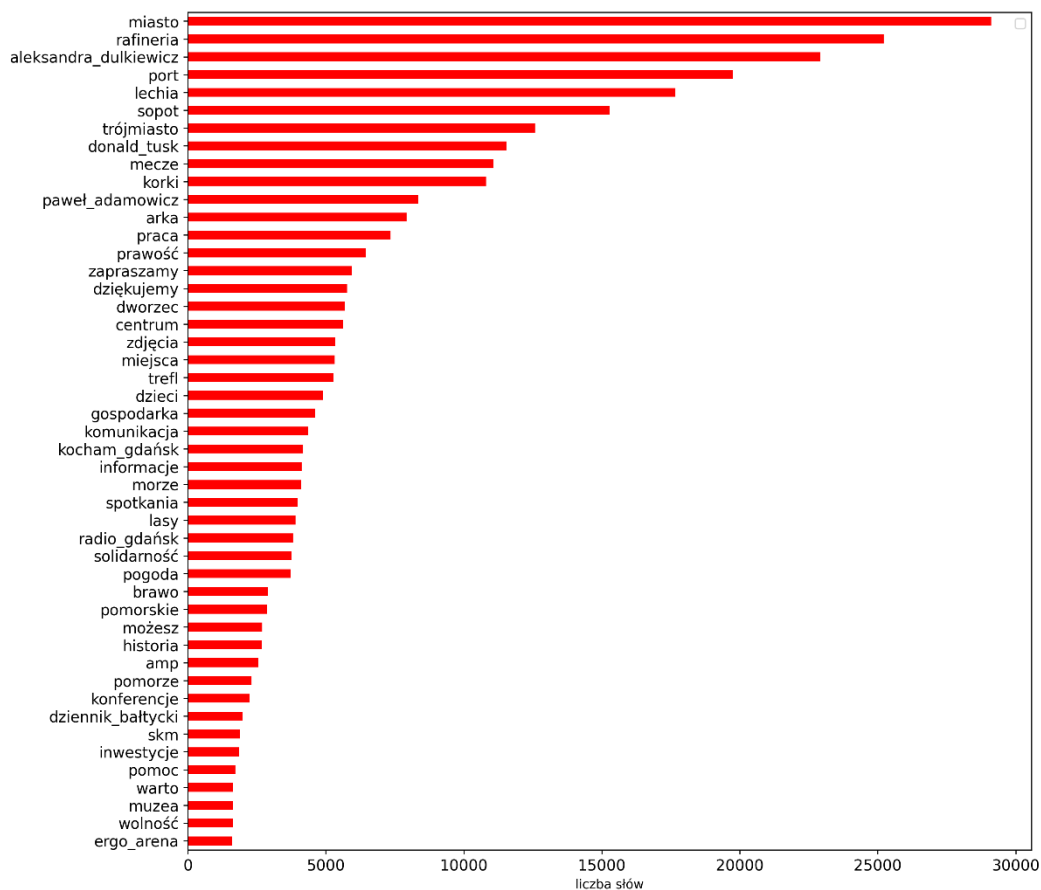
In the dataset prepared in this way, containing the cleaned entries, the notations of individual words were standardized. For example, the word "Gdańsk" was written by Internet users in a number of different ways (after converting the letters to lowercase): *gdansk, gdańsku, gdanska, gdańska, gdanskiej, gdańskw, gdańskich, gdański, miastogdańsk*. Similarly, references to specific people: *tusk, tuska, donaldtusk, donaldt, donald_tusk, donald_tuska*. All words were reduced to their basic forms and their notation was standardized. After all these transformations, 4 503 575 words remained in the dataset, which became the basis for further analysis.

² This is not the number of different words, but the number of consecutive words that appeared in the messages.

³ Since it is impossible to manually analyze 7000000 words, the 250 most frequent words were observed. After removing some of the words, the 250 most frequent words were determined again, until 250 words remained on the list, which were considered to be content carriers. This may mean that there were a number of words outside the analysis that were content carriers, but their number is a very small fraction of the total number of words.

5. Tricity agglomeration through the eyes of users of social network X – results of the research

The analysis of the words in the analyzed set made it possible to distinguish the most frequent words. 47 of them are shown in Figure 2. The words gdańsk, gdynia and polska (Poland), which appear much more frequently than the others, were initially removed from the list, which would reduce the readability of the figure. The frequencies are as follows: gdańsk – 237 980, gdynia 52 928, polska 43 022.



Legend: miasto – city, rafineria – refinery, port – seaport, trójmiasto – Tricity, mecz – match, korki – traffic jams, praca – work, prawość – righteousness, zapraszamy – welcome, dziękujemy – thank you, dworzec – train station, centrum – center, zdjęcia – photos, miejsca – places, dzieci – kids, gospodarka – economy, komunikacja – public transport, kocham_gdańsk – I love Gdańsk, informacje – information, morze – sea, spotkania – meetings, lasy – forests, solidarność – solidarity, pogoda – weather, brawo – bravo, możesz – you can, historia – history, amp - Polish Academic Championships, pomorze – pomerania, konferencje – conferences, dziennik_baltycki - Baltic daily, skm - Rapid Urban Railway, inwestycje – investments, pomoc – help, warto – it's worth it, muzea – museums, wolność – freedom.

Figure 2. Structure of typical words associated with the Tricity Agglomeration.

Source: own elaboration.

To summarize the frequency of occurrence of the studied words, a so-called word cloud was constructed. In Figure 3, the word that occurs more often is written in a larger font and a more intense color. This makes it easier to focus on the most important words when analyzing the figure. It is also easier to interpret the content behind these words. It is easy to see, keywords

related to places: gdańsk, gdynia, poland, tricity (trójmiasto), refinery (rafineria), train station (dworzec), ergo_arena, people: aleksandra_dulkiewicz, donald_tusk, paweł_adamowicz or emotions: righteousness (prawość), bravo (brawo), thank you (dziękujemy). You can also identify words indicating the most important attractions for the authors of the news, such as those related to sports clubs: lechia, trefl, arka or problems, such as traffic jams (korki). The word cloud shown in the figure contains names in Polish. The structure of typical words associated with the Tricity Agglomeration is shown in Figure 2.

Among the most common words are those identifying the four studied marketing strategies related to the territory, which are directed at: place image, attractions, infrastructure and people. These are shown in Table 2. Among the words that can be associated with the image aspect of a city are the cities themselves: Gdańsk, Gdynia, Sopot, Tricity, as well as broader terms: Pomerania (Pomorze), Poland (Polska), Europe (Europa) and the world. Many words are related to values and emotions: work (praca), economy (gospodarka), investments (inwestycje), righteousness (prawość), freedom (wolność), solidarity (solidarność), self-government (samorządność), help (pomoc), and love (miłość), you can (możesz), thank you (dziękujemy) or it's worth it (warto). Some of the words are related to the seaside or holiday destination for tourists: weather (pogoda), weekend, safety (bezpieczeństwo), interesting (ciekawe), super, culture (kultura), welcome (zapraszamy).



Figure 3. Word cloud associated with the Tricity Agglomeration.

Source: own elaboration.

Aspects related to the attractions of the Tricity Agglomeration are mainly words related to sports clubs: Lechia, Arka, Trefl, matches, Polish Academic Championships, Ergo Arena, Baltic Arena. And also related to leisure: sea, places, forests, museums, Westerplatte, parks, culture and Tricity media: Dziennik Bałtycki, Radio Gdańsk, gdańsk.pl. Elements of urban infrastructure most often indicated by Internet users were: the refinery, seaport, Rapid Urban Railway, Ergo Arena, Baltic Arena, the shipyard, the Pomeranian Voivodeship Office and the Gdansk Road and Greenery Management and culture in the broadest sense. Users of the X

(Twitter) portal also wrote frequently about well-known people in the Tricity. Most often about Aleksandra Dulciewicz, Donald Tusk, Paweł Adamowicz, Kacper Płażyński, Krzysztof Skiba and Jacek Karnowski. A group that was very often associated with the Tricity Agglomeration were children. The Tricity Agglomeration is a participant in a competitive market game. This means that local governments should strive to use various media, including social networks, to monitor and analyze the insights of Internet users (Tab. 2).

The central part of the Tricity Agglomeration consists of three cities: Gdańsk, Gdynia and Sopot. Cities that lie next to each other so close that it is often difficult to see the internal boundaries between them. But they are three different cities, with different histories, their own pace of development and life, their own successes and failures. If so, can you see the image differences of these cities in text messages? What words do Internet users associate with a particular city? Which concepts that build the image of a place are common to the three cities? In Table 3, the main diagonal shows words that are specific to a city, e.g. Gdańsk is associated with righteousness, Westerplatte, equality or culture. Sopot is primarily Trefl Sopot, beach, Sopot molo, sunrises and sunsets. In text messages dedicated to Gdynia, you will find such words as Arka Gdynia, Navy, Gdynia Orłowo, Swedes or PKP (Polish National Railways).

Table 2.

Breakdown of typical words into four types of marketing strategies for the Tricity Agglomeration

IMAGE OF THE PLACE	ATTRACTIONS
Gdańsk, Gdynia, Sopot, Tricity, Poland, traffic jams, work, righteousness, welcome, thank you, economy, public transport, love Gdańsk, information, solidarity, weather, bravo, pomorskie, you can, history, Pomerania, investments, help, it's worth it, freedom, weekend, safety, summer, love, interesting, self-government, super, administration, see you, world, ecology, Europe, culture	Gdańsk, Gdynia, Sopot, Lechia, match, Arka, center, photos, places, Trefl, sea, meetings, Tri-City Landscape Park, Radio Gdańsk, Academic Championships of Poland, conferences, Baltic Daily, museums, Ergo Arena, Baltic Arena, gdańsk.pl, Westerplatte, parks, flowers, culture
INFRASTRUCTURE	PEOPLE
Refinery, seaport, train station, Rapid Urban Railway, Radio Gdansk, Baltic Daily, Ergo Arena, Baltic Arena, gdańsk.pl, Pomeranian Voivodship Office, shipyard, Gdansk Road and Greenery Management, culture	Aleksandra Dulciewicz, Donald Tusk, Paweł Adamowicz, Kacper Płażyński, Krzysztof Skiba, Jacek Karnowski, children

Source: own elaboration.

Words common to the city pairs were placed in Table 3 off the main diagonal. Common words appearing in text messages about Gdańsk and Sopot are, e.g: Tricity Landscape Park, history, sea, Ergo Arena, self-government. The similarity of Gdańsk and Gdynia is expressed by the words, e.g.: seaport, traffic jams, matches, work, shipyard, public transport, summer. Gdynia and Sopot are linked by words such as welcome, thank you, festival or you can. In Table 3 you can also see an interesting breakdown of text messages containing words: Germans, Swedes, Scandinavians and refugees. From the context of the content of these messages, it is all about Ukrainians. It is clear that in the messages about Gdańsk, Germans are

mentioned. In news concerning Gdynia about Scandinavians, including Swedes and concerning Sopot about refugees.

Table 3.

Individuality and similarities of the cities of the Tricity Agglomeration

	Gdańsk	Gdynia	Sopot
Gdańsk	Aleksandra Duliewicz, refinery, Lechia Gdansk, Donald Tusk, Paweł Adamowicz, weather, righteousness , I love Gdańsk , Radio Gdańsk, children, Baltic Daily, Krzysztof Skiba, SKM - Rapid Urban Railway, investments, Pomeranian Voivodship Office, Westerplatte, conferences, museums, Baltic Arena, freedom , help , Kacper Płażyński, it's worth it , equality , Gdańsk Oliwa, see you , super , <i>Germany</i> , we're waiting , culture , Lech Wałęsa, airport, Academic Championships of Poland, flowers, Gdańsk Roads and Greenery Management, gdańsk.pl, safety , heartily	Poland , seaport, traffic jams, matches, welcome , work, train station, <i>bravo</i> , thank you , sea , economy, center, solidarity , public transport, meetings , history , shipyard, <i>cooperation</i> , summer, weekend, transport, Ukrainians	Poland , Tricity Landscape Park, welcome , thank you , sea , solidarity , meetings , history , Ergo Arena, <i>self-government</i> , Ukrainians
Gdynia		Arka Gdynia, PKP - Polish National Railways, Pendolino, Navy, Gdynia Orlowo, madness , <u>Swedes</u> , <u>Scandinavians</u> , Wojciech Szczurek, opportunities , Gdynia Chylonia	Poland , welcome , thank you , sea , solidarity , meetings , history , festival, <i>you can</i> , Ukrainians
Sopot			Jacek Karnowski, Trefl Sopot, Sopot Kamienny Potok, beach, Sopot molo, sunny , menu, tastings, sunrise , sunset , briskly, accommodation, concert, <u>refugees</u> , righteousness , pubs, recommend , friends , welcome , Europe , Grunwaldzka Street

Source: own elaboration.

In the text messages analyzed, words were identified that are common to the three cities, and thus can be a **starting point when building the image of the Tricity Agglomeration**. Let's call these words „common”. They are: **sea**, **meetings**, **welcome**, **thank you**, **history**, **Poland**, **solidarity** and **Ukraine** (Figure 7). In addition to the „common” words, Figure 7 shows the words connecting the text messages for the 3 pairs of cities analyzed, i.e. Gdańsk and Gdynia, Gdańsk and Sopot, and Gdynia and Sopot. Let's call these words „partially common”. They are:

1. Gdańsk - Gdynia: **bravo, economy, cooperation, weekend, public transport, center, seaport, train station, work, transport, shipyard, matches and summer.**
2. Gdańsk-Sopot: **Tricity Landscape Park, self-governance and Ergo Arena.**
3. Gdynia - Sopot: **festival and you can.**

Figure 4 shows a word cloud associated with the city of Gdańsk, Figure 5 with the city of Gdynia and Figure 6 with the city of Sopot. The words shown are written in Polish. In Table 3 in Legend, the same words are translated.



Figure 4. Word cloud associated with the city of Gdańsk.

Source: own elaboration.



Figure 5. Word cloud associated with the city of Gdynia.

Source: own elaboration.



Figure 6. Word cloud associated with the city of Sopot.

Source: own elaboration.

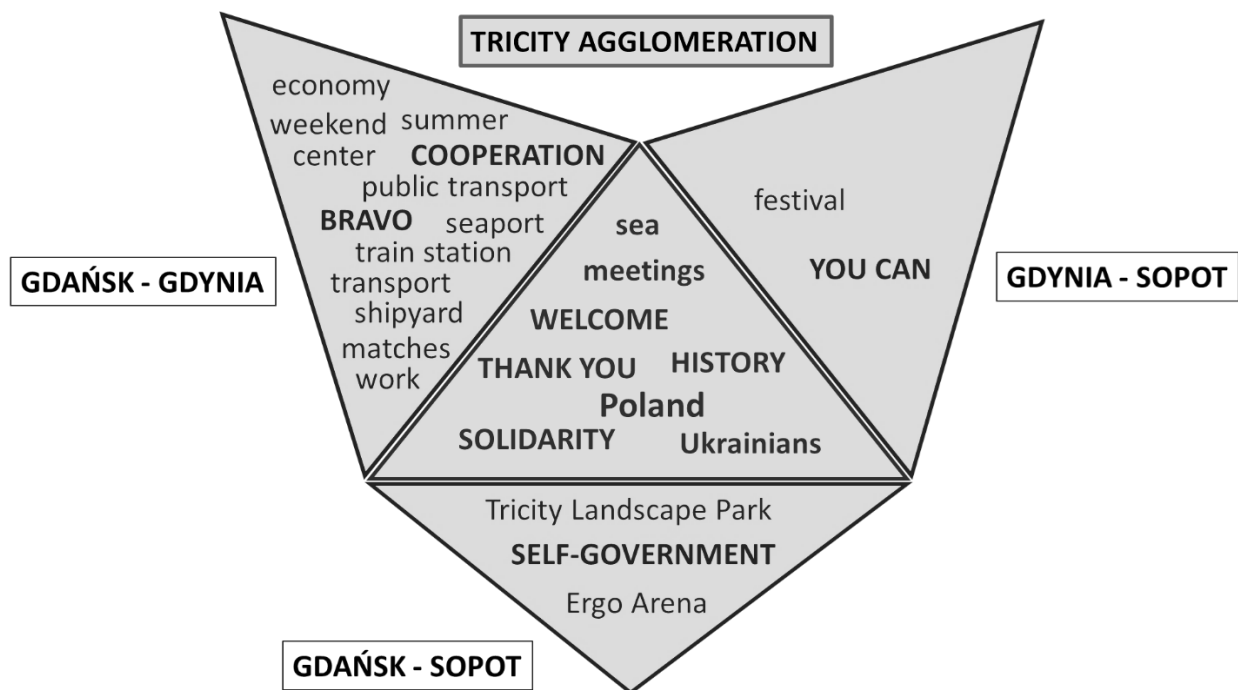


Figure 7. Image of the Tricity Agglomeration expressed by the words „common” and „partially common”.

Source: own elaboration.

The cities of the Tricity Agglomeration have for years been running campaigns to promote these centers. These include, for example, advertising slogans that often emphasize the greatest assets of these cities. Gdynia and Sopot advertise specific places and events. Gdańsk most often focuses on building the city's brand. Gdynia and Sopot conduct promotional campaigns in Poland using primarily such slogans as: "Welcome to Gdynia", "Smile, you're in Gdynia",

"Gdynia for children", "Poland's Riviera" or "Discover Sopot with us". Gdańsk attempts to promote itself in many places around the world. It uses such slogans (words) as: "Gdańsk is alive here!", "Gdańsk releases energy", "Let's get to know each other in Gdańsk", "Welcome to Gdansk", „It's nice to have you in Gdańsk” as well as "Time together in Gdansk, Sopot and Gdynia". One of the most recent advertising spots of the city of Gdansk contains two words that were included in the list of words supporting the process of building the image of cities and the Tricity Agglomeration (see Table 3). These words are: freedom and sea. The content of the presented spot about Gdansk is:

*People say that this is where it all began, that there is always a smell of freedom, the sea and something else that is hard to name in the air. To smell it, you have to be here. People say it's the smell of the north, the sea and mystery. How to tell the story of this city? How to describe the smell of mystery? Maybe like this: This magical city has guarded its secret for a thousand years. People say that despite this, it generously bestows gifts on those who have the courage to reach for it. All you have to do is extend your hand. **Gdańsk can be yours. For a while, or forever.** How to tell the story of this city? How to describe the smell of mystery? How to describe the smell of the north? People say that this is where it all began, that there is a smell of freedom, the sea and something else in the air. What is hard to name.*

An image analysis of the spot ([https://visitgdansk.com/...](https://visitgdansk.com/)) made it possible to highlight even more words. These are: beach, shipyard, port, center, Tricity Landscape Park, Gdańsk Oliva, museum, flowers, festival, solidarity and weekend. If we add the words freedom and sea to the set of these words, we get 13 words, which the authors also identified and presented in Table 3. However, there are many more words that could be used in future promotional strategies of the studied region, as indicated above.

6. Conclusion

The analysis indicates that careful observation of social media can assist local governments in building city marketing strategies. The study identified the most recognizable and most important places, attractions, people, events, organizations and emotions for Internet users, which could be used by local governments to build the image of individual cities and the entire Tricity Agglomeration. This knowledge can contribute to a more complete evaluation of the city government's promotional activities to date. The survey also indicated the most onerous, because they affect the largest number of people, problems of cities and agglomerations. Traffic jams turned out to be the dominant problem. They appear in the analysis at the 10th place of the most frequent words. It should also be remembered that the image of a place is dynamic. The opinion of the place may change with social media users, along with the acquired knowledge and experience of these people. It can also change as a result of a well

and consistently prepared marketing strategy, which, based on the information obtained from the users themselves, will provide the desired image of the area. Such observations should be carried out systematically in order to react quickly and make adjustments in the construction of the perception of a place, if necessary. It will be good practice to combine various types of research techniques to deepen the knowledge of the studied place. Therefore, it seems reasonable that today's local governments should use the results of research conducted in the area of social media with greater intensity.

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