Regional marketing as a tool to overcome the digital divide in the Krasnodar Region

K.I. Tkachenko¹, E.V. Ilyasova², A. L. Zolkin³*, V.V. Pomazanov⁴, and N.P. Kozlova⁵

¹Saint Petersburg State University, 13B Universitetskaya Emb, St. Petersburg 199034, Russia
²Kuban State University, Krasnodar 350040, Russia
³Computer and Information Sciences Department, Povolzhskiy State University of Telecommunications and Informatics, Samara 443010, Russia
⁴Department of Criminalistics, Kuban State Agrarian University, Krasnodar 350044, Russia
⁵Department of Logistics and Marketing, Financial University under the Government of the Russian Federation, Moscow 125993, Russia

Abstract. The article examines the state of digital divide in the Krasnodar Region in advanced and lagging cities. The authors have selected the most relevant areas where the introduction of digital technologies is of the first priority: state and municipal administration, the banking sector, the personnel market and others. The problems of their digitalization are identified. Recommendations for the use of regional marketing as a tool to overcome the digital divide have been developed. Regional administrations, business leaders and opinion leaders shall develop digital demand, form the population's skills and competencies in the effective use of the Internet, improve the quality of human capital and a creative innovative environment, primarily by promoting existing projects, courses, various training programs to improve digital literacy, digitalization of business structures, increase the demand for infocommunication technologies. Digital technologies have become a significant factor in the overall perceived quality of the urban environment. They are becoming one of the key instruments for the competition of cities and regions on the national and global markets of human capital, helping to attract, develop and retain successful, ambitious, innovative people, those who are able to give a new impetus to regional socio-economic development.

1 Introduction

The digitalization of all areas of life is becoming an increasingly urgent requirement of the modern era. For a reason the Digital Economy has become one of the key national programs designed to determine the future of Russia. It can be confidently said that the digital transition in the economy is not a fashion, not a way to spend more budget funds, but a key tool for increasing the quality of life. The needs of an ordinary citizen shall be in the centre of this tool. The digital age opens up new opportunities for small and medium-sized cities if clear priorities are set and available resources (even limited ones) are used in a right way.

* Corresponding author: alzolkin@list.ru
Digital technologies are becoming a key driver of socio-economic development at the level of Russian regions. At each moment of time, a certain degree of the digital divide objectively exists, however, starting from a certain value it becomes socially and politically unacceptable: the situation when representatives of information-poor regions or social groups find themselves in a “different Universe” from the point of view of their economic and social opportunities is unacceptable.

2 Problem statement

As for today, marketing is not used in the management of the development of the Krasnodar Region as a tool for solving the problem of digital divide. A systematic approach to organizing regional marketing in the field of overcoming the digital divide has not been formed. The creation and implementation of a system of marketing activities at the regional level will contribute to the digitalization of the region.

3 Research questions

Research issues:
- the state of information and communication technologies in the Krasnodar Region (in the centre city and secondary cities);
- problems in the use of regional marketing as a tool to overcome the digital divide in the Krasnodar Region at the present time;
- recommendations on the use of regional marketing as a tool to overcome the digital divide in the Krasnodar Region at the present time.

Based on the research of works of scientists and leading specialists in the field of regional marketing, recommendations for reducing the digital divide in the Krasnodar Region shall be formulated and substantiated.

In accordance with the set goal, it is necessary to solve the following objectives:
- to reveal the essence of territory marketing and its main components;
- to analyze the theoretical foundations of the tool kit;
- to determine the place and importance of regional marketing in overcoming the digital divide in the Krasnodar Region;
- to identify the main components of regional marketing in the field of overcoming the digital divide and its features in the Krasnodar Region;
- to develop and justify a set of measures to overcome the digital divide using a such tool such as regional marketing.

4 Materials and methods

The analysis was based on educational literature and publications of specialists in the field of digital divide in the regional context.

The study used the following data collection methods:
- traditional document analysis - the study of documents, which allows to study the tools of regional marketing;
- materials of the secondary analysis of sociological research provided by other authors who has studied the digitalization of regions;
- statistical materials published by organizations and foundations that collect statistical information.
5 Results

According to 2020 data, the city of Krasnodar is the “most digital” city in the Russia. In Krasnodar, there is a high demand in transport, media, healthcare and trade, and healthcare. And trade and public services are supplied [1-3]. The general index is -0.64 (fig. 1).

![Diagram](image)

**Fig. 1.** The level of digitalization in the city of Krasnodar according to the primary indicators of digitalization.

It shall be noted that despite the local success of Krasnodar, the south of the country, is in the middle of the list in the index of digitalization of the regions of the Russian Federation.

In the Krasnodar Region, 7 priority areas of industry are distinguished: food products and agricultural raw materials; mineral products; chemical products and rubber; wood and pulp and paper products; metals and products therefrom; machinery, equipment and vehicles; other goods. The results of the index calculation are shown in Table 1 and Figure 2.

**Table 1.** Lafey and Balassa indices calculated according to the industry of the Krasnodar Region in 2017 and 2020.

<table>
<thead>
<tr>
<th>Industry Sphere</th>
<th>Lafey Index</th>
<th>Balassa Index</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2017</td>
<td>2020</td>
</tr>
<tr>
<td>food products and agricultural raw materials</td>
<td>-10.8152</td>
<td>-2.92885</td>
</tr>
<tr>
<td>mineral products</td>
<td>27.17479</td>
<td>13.61814</td>
</tr>
<tr>
<td>chemical products, rubber</td>
<td>-1.7021</td>
<td>-1.6245</td>
</tr>
<tr>
<td>wood and pulp and paper products</td>
<td>-1.02572</td>
<td>-0.83392</td>
</tr>
<tr>
<td>metals and metal products</td>
<td>-2.33944</td>
<td>2.163845</td>
</tr>
<tr>
<td>machinery, equipment and vehicles</td>
<td>-8.6852</td>
<td>-7.1629</td>
</tr>
<tr>
<td>other goods</td>
<td>-2.60869</td>
<td>-3.23547</td>
</tr>
</tbody>
</table>

In general, the supply of digital services in the Krasnodar Region is two times higher than the demand, this is primarily due to the low awareness of citizens about existing digital
services, as well as the insufficiently high level of literacy in the Krasnodar Region as a whole.

On August 12, 2021, the Ministry of Digital Development of the Russian Federation provided a rating of the digital maturity of the regions. Subjects included in this rating have been divided into three groups (fig. 3):
- with a high value of digital maturity (with values over 50%);
- with an average value of digital maturity (from 25% to 50%);
- with a low value of digital maturity (less than 25%).

The assessment criteria were the number of regional specialists using information and communication technologies, the costs of implementation and use of digital solutions of organizations in the field of industry, agriculture, construction, energy, financial services, healthcare and public administration. Nine advanced regions are Moscow, Saint Petersburg, Belgorod Region, Lipetsk Region, Moscow Region, Nizhny Novgorod Region, Tatarstan, Khanty-Mansi Autonomous Okrug–Yugra and Yamalo-Nenets Autonomous Okrug. The Krasnodar Region entered the subjects of the Russian Federation with an average level of achievement of "digital maturity" (from 50% to 25%).

![Competitiveness matrix of Krasnodar Region](image)

**Fig. 2.** Competitiveness matrix of Krasnodar Region.

At the moment, it is impossible to calculate the share of the Kuban IT industry in the gross regional product, since it is included in the "communications" block, which generates 2.5%. In his interview, Deputy Governor of the Krasnodar Territory Sergei Altukhov reports that the share of the Kuban IT industry is less than 1% of the GRP. The growth potential is enormous. And the initial task is to write industry standards for digitalization at the federal and regional levels and implement them in specific architectures; the role of regional marketing in this process is undoubtedly great [4-6].
The Lafey and Balassa indices are placed as data on the x and y axes of the McKinsey matrix, which makes it possible to divide industries into winners, intermediate and losers. As the x-axis, the Lafey index, which shows the presence or absence of competitive advantages of products of a particular industry of the country (territory) - an assessment of the domestic market. As the y axis - the Balassa index - the index of the identified comparative advantages - for evaluating the external market.

6 Findings

One of the topical areas of digital public administration is the reboot of the Multifunctional Centre for the Provision of State and Municipal Services and an increase in the level of use of the public services portal. There is still a disproportion between face-to-face and electronic applications for public services [7-11]. In 2020, the Krasnodar Region took 48th place in the rating for the quality of the provision of electronic public services.

From 01.09.2020 citizens and business representatives in 4 entities of the Russian Federation can apply to the Multifunctional Centre for the Provision of State and Municipal Services for 10 new services as a part of a pilot project. Examples of services:
- monthly payments to persons caring for children with disabilities of group I;
- provision of maternity capital to citizens with 3 or more children;
- provision of compensation for the costs of housing and utilities for certain categories of citizens. This practice would be relevant for the Krasnodar Region [2].

An example of the digitalization of the banking sector is the Centre-Invest Bank that is one of the banks of the South of Russia. First of all, this is work with large databases, analysis of customer behaviour, remote banking services for both individuals and legal entities through the “mobile bank” software product. Currently, Centre-invest Bank has practically created a centralized front office based on a CRM system. The cards of the Mir payment system acquire the characteristics of not only an electronic wallet, but also an identification tool, a student card and student book for marks, a pension certificate, a travel document, a social support card, and a whole range of additional functions. In particular, for the 100th anniversary of the Kuban Technological University, they issued cards that integrate banking services and a number of social services. Moreover, the cards are created according to individual designs. We have done a similar project in the Rostov region for schoolchildren.

The largest banks in the country are now actively working on drawing up a biometric portrait of clients. After completing this procedure, a person receives remote and automatic
access to a range of services, both financial and social. Centre-invest Bank has already begun to issue remote mortgages to clients. Client is identified, tied to State services, information on real incomes is pulled through the Pension Fund, and the bank makes a decision on whether to issue a mortgage or refuse it.

The transformation of the personnel market in the Kuban is being implemented in the professional retraining program within the framework of the Digital Economy national project. The initiative will allow Kuban residents to master new and demanded digital technologies: web analytics, mobile development and others. The training takes place in an online format, students over 16 years old are given a 50% discount, the rest is compensated by the state. The duration of the course is at least 250 academic hours. Based on the results, students will receive diplomas of professional retraining of the established form. By 2024, at least 110 thousand people will be able to use this program.

The transformation of information infrastructure is being implemented in the Digital Economy project. The digital economy is a service with an affordable connection for data transmission and at a good speed [12-13]. According to the regional program, by 2024 it will be necessary to cover 97% of the territory of the region with stable communications (today it is 68%). The program assumes that about 2 thousand objects of social importance will be connected to the Internet. The third most important task, which has already formed into the current project, is "Information Security". Without this direction the digital economy cannot be built and we understand this. In the context of the voiced tasks, a proposal to amend the order of 35 federal laws that simplify certain procedures and the availability of paper documents has already been made.

7 Discussion

Thus, the mass character, coupled with the “digital” feature, increases the availability of the service. In the Krasnodar Region the sea, a sanatorium-resort complex, and digital field create conditions for greater uberization of recreational services, their reduction in price, and more efficient use. As well as transport and logistics complex, which, after digitalization, will give a huge boost to the economy of both the city and the region.

In the Krasnodar Region, a regional law has been adopted to support the IT industry. It provides for subsidies to reimburse part of the costs while paying interest on loans, creating new jobs, and improving the qualifications of specialists.

In addition, the region came out with an initiative to amend the federal legislation. The innovations are designed to allow the regions to support the industry from the regional budget. Now this is possible only while implementing IT programs (projects) in small and medium-sized businesses or investment projects [14].

But there are significant difficulties in motivating the population to consume digital services and to overcome the digital divide. The Krasnodar Region has a high potential to take a leading position among the constituent entities of the Russian Federation, if the level of awareness and involvement of citizens in the digital transformation processes is increased.

In the Krasnodar Region, the Autonomous Non-Commercial Organization "Agency for Digital Development and Communications of the Krasnodar Region" is implementing its work. Thos agency has united 52 companies there are more than a thousand IT specialists, there are unique solutions and problems associated with the implementation of these solutions. This agency is interested in working both with the authorities and with investors and the real sector of the economy. Those who are interested in "digital" will be helped to get used to it. On the other hand, we are ready to become an intermediary between regional IT companies and major federal players in this area [9].

In the Krasnodar Region, the Digital Platform of Small and Medium Enterprises (SME) is implementing its work [5].
Right now on the Digital Platform in the catalogue you can find a suitable thematic service or support measure:
- financial;
- property;
- support for innovation and industrial production;
- educational;
- informational;
- consulting.

In order to submit an online application, receive a service or a measure of support in electronic form, you must apply for special financial products of banks. Next, you need to find information about public procurement and go to the electronic platform for filing an application. You can also take training courses on educational platforms of partners [7].

Marketing tools, with the help of which, you can promote existing courses and projects in the field under study, on the territory of the Krasnodar Region:
- Radio;
- Media (local newspapers, local TV programs, local channels);
- Internet resources (first of all, websites of universities, colleges and schools, social networks) [4].

8 Conclusion

The solution of emerging threats is possible due to the realization of the competitive advantages of the region: the progressive development of transport and logistics infrastructure, the active promotion of regional producers in world markets under a strong brand, the use of skilled labor resources, the creation of an effective support system for export-oriented manufacturers engaged in deep processing of raw materials and creating innovative products.

Thus, bridging the digital divide is not a cherry on the cake, something that can be done after solving pressing socio-economic problems, but an integral part of a comprehensive response to the challenges that are faced by each Russian region. There is a need for motivation to increase the level of digital literacy of the population. There are many free educational portals in Russia: "Tsifrovaya Gramotnost.rf (Digital Literacy.rf)", "Babushka i Dedushka Online (Grandmother and Grandfather Online)", "Digital Literacy: A Basic Course on the Development of Competencies of the XXI Century" - a free advanced training course for teachers from uchi.ru, "Internet for All Ages" - a digital literacy portal from MTS and others, but the problem lies in the low activity of using these portals. At the level of schools, universities and at places of work it is necessary to motivate citizens to take these courses. A tool such as regional marketing can help to maximize the involvement of the population in digital processes. Engaging local communities in digital processes can help minimize the digital divide.

References

3. Residents of the Kuban will be able to get "digital professions" with the financial support of the state: Komsomolskaya pravda. https://www.kuban.kp.ru/online/news/4461105/

4. A.V. Polyanin, A.P. Soboleva, V.V. Taranovskiy, Management consulting 4, 80 (2020)


8. Agency on digital development and communication of the Krasnodar Region. https://acrskk.ru


