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#### CHAPTER 22

### Open Government Data in Russia

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### 22.1 Introduction

Open data can be defined in different ways and based on different principles, but it generally entails that anyone can access, use, and share the data freely. For instance, according to the European Union, open government data describes "the information collected, produced or paid for by the public bodies (public sector information, PSI) and made freely available for re-use for any purpose" (European Data Portal n.d.). In the broader sense, open government data is not only datasets, but also open government initiatives, policies and strategies, data management and publication approach, and models for interaction with citizens, nongovernmental organizations (NGO) and business. The set of policies enabling open government data promotes transparency, accountability, and improved efficiency of public services. In this way, open data initiatives are closely aligned with the freedom of information (FOI) principle, which is considered a cornerstone of democratic governance (Ackerman and Sandoval-Ballesteros 2006). As a result, open data can allow citizens to develop socially significant services and applications, analyze government actions, and know how government spends their money. At the same time, open data poses important questions with regard to data collection, processing, maintenance, storage, and security.

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In Russia, the executive order to provide open government data was signed by the President Vladimir Putin in May 2012 (Decree No. 601 from May 7, 2012). In 2014, the Open Government Data Portal (data.gov.ru) was launched. According to this portal, open government data (referred to as "open data" on most occasions) is

information (including documented) created within the limits of its powers by government bodies, or received by the specified bodies and organizations, as well as by information and analytical organizations participating in the publication of its own open data in the territory of the Russian Federation, which is to be placed on the Internet in a format that ensures its automatic processing for the purpose of re-use without prior modification by a person (machine readable format), and can be used freely in any lawful purposes by any persons, regardless of the form of its placement (a simple collection of information, a database, etc.).

The initiative has been actively developed, and by the end of 2019, more than 22,500 datasets were published on it. The Open Data Portal has been tightly connected to another initiative—the Open Government—that was launched by the President Dmitry Medvedev to ensure transparency of the legislative and executive processes in Russia (for more, see Chap. 2). In May 2018, the Russian Federation Open Government initiative was abolished, and the functions of the minister of Open Government were not transferred to another portfolio, which significantly reduced the activity of government agencies in this sphere. Nevertheless, but the obligation to publish open data has not been canceled. Therefore, the study of the specifics of open data in Russia and their use in applications and services is still relevant.

This chapter proceeds as follows. First, it provides the general legal background on the freedom of information in Russia. Next, it presents the Open Government Data initiative in Russia. The following sections explore the Russian open data strategy from the policy and implementation perspectives. Next, the regional dimension of open data is discussed. The following section provides an overview on the forms of interaction between the state and the citizens based in the open data. Finally, the chapter gives examples of public, civil society, and business initiatives that were enabled by the Open Data initiative.

### 22.2 Russian Freedom of Information Act

Freedom of information (FOI) is usually considered as an extension of freedom of speech, one of the fundamental human rights recognized in the European Convention on Human Rights. FOI is the key legal concept that guarantees access by the general public to the government-held information. "From India to South Africa and Mexico to China, states of varying degrees of development, size, and political persuasion have embraced openness and FOI" (Hazell and Worthy 2010, 352). For a long time, many FOI laws—especially in non-democratic states—were criticized for lacking the implementation machinery,

so that the free access to information remained a right only on paper (Relly and Sabharwal 2009). Yet, the digital transformation has become a turning point at which FOI could be given a new substance through publishing government datasets online.

In Russia, there is a number of laws concerning the right of access to information. Article 29 of the Russian 1993 Constitution guarantees everyone the right to freely seek, receive, transmit, produce, and disseminate information by any lawful means. The list of information constituting a state secret is determined by a special federal law. Federal Law No. 149-FZ of July 27, 2006, "Ob informacii, informacionnyh tehnologiâh i o zasite informacii" (On Information, Information Technologies and Information Protection) is a key legal document in the field of freedom of information. For the first ten years of its existence, there were 25 editions of this law, demonstrating its highly sensitive and political nature. The mechanisms for implementing the Russian FOI law is regulated by a number of special laws: Federal Law of May 2, 2006, No. 59-FZ "O porâdke rassmotrenia obrasenij graždan Rossijskoj Federacii" (On the Procedure for Consideration of Appeals of Citizens of the Russian Federation), Law of the Russian Federation No. 2124-1 of December 27, 1991, "O sredstvah massovoj informacii" (On the Mass Media), Federal Law No. 8-FZ of February 9, 2009, "Ob obespečenii dostupa k informacii o deâtelnosti gosudarstvennyh organov i organov mestnogo samoupravlenia" (On providing access to information on the activities of state and local government agencies), Federal Law of December 22, 2008, Federal Law No. 262-FZ "Ob obespečenii dostupa k informacii o deâtel'nosti sudov v Rossijskoj Federacii" (On providing access to information on the activities of courts in the Russian Federation), and Federal Law of October 22, 2004, No. 125-FZ "Ob arhivnom dele v Rossijskoj Federacii" (On the archival business in the Russian Federation).

The Russian FOI law guarantees to its subjects of the right to information by determining the basis for the realization of the right to information, and establishing the principles, forms, and freedoms for obtaining information. The right to seek and receive information is provided for both individual citizens and organizations and can be exercised through an official request to the owner of the information to provide certain information. If a citizen requests information that affects his or her rights and freedoms, the government cannot refuse such a request. The law also grants a right to request, without justification, information on (1) normative legal acts on the rights and obligations of a person or organization, (2) information on the state of the environment, (3) information on the activities of government agencies and their use of budget, (4) information that accumulates in the open collections of libraries, museums and archives, and information systems, (5) information, access to which cannot be limited by law. If requested, information must be provided without conditions and limitations. Refusal to provide information can be appealed in a higher authority, the prosecutor's office, or at the relevant court. The state can charge a fee for the provision of information only if this is expressly stated in the law. Information on the activities of the government bodies posted on the

Internet and information affecting the rights and duties of a person and in other legal cases are always supposed to be provided free of charge (Olenichev 2017).

A citizen, a journalist, a media outlet, an organization, or any other civil law entity may request information under the Russian FOI law. The request for information may be sent by regular or electronic mail or personally delivered to a government agency. Internet sites of federal executive bodies contain forms for filing electronic appeals of citizens. Some regional governments create a "single reception room" (a single form, for example, on the website of the regional government), and they themselves forward requests to the necessary regional executive bodies. In order to receive a reply, it is necessary that the request for information contains the name of the state body, the name and surname of the applicant, his or her postal or e-mail address, the date of appeal, and the signature (if the message was not sent by email). The appeal is considered for 30 days, and, in exceptional cases, the term can be extended for another 30 days. Consideration of the request ends with the direction of the response. This procedure applies to all subjects of civil law, with the exception of the media. The authorities must respond to requests from the media within seven days of receiving the request (or notify within three days that the information will be provided later, indicating the date and reason for the postponement of the deadline).

In accordance with the Russian FOI law, authorities are required to provide information not only on request, but also on a regular basis. In particular, they are obliged to publish information about their activities in the media, on the Internet, in the premises of government bodies, and in other places that they have specifically identified, to acquaint users with information on the activities of state bodies through library archives and funds, and to allow interested citizens to attend meetings of collegiate bodies.

Given the long-standing tradition of secrecy within most branches of government and state authorities in the Soviet Union that has been inherited by the Russian Federation, the 2010 FOI law has been a major legislative milestone. Yet, the discrepancy between the law and its implementation has been noticed. The Global Integrity Index 2010 revealed that while Russian citizens have a strong constitutional right to information (scoring 90 out of 100), the actual ability of citizens to utilize this right was very limited (scoring only 56/100) (Global Integrity. Global Integrity Report: Russian Federation–2010, http://www.globalintegrity.org/report/Russian-Federation/2010/). As a result, Freedom of Information Law is often left unused by members of the public as there is a lack of knowledge with regard to FOI and a lack of transparency culture (Henderson and Sayadyan 2011).

# 22.3 OPEN GOVERNMENT DATA INITIATIVE IN RUSSIA: POLICY, INSTITUTIONS, INFRASTRUCTURE

Open Government Data can be regarded as a special case of implementation of the freedom of information principles. From the legal point of view, the Open Data initiative in Russia is mainly regulated by the Decree of the President of the Russian Federation (No. 601 of May 7, 2012) "Ob osnovnyh napravleniâh soveršenstvovaniâ sistemy gosudarstvennogo upravleniâ" (On the main directions of improving the system of public administration) and the federal laws "Ob informacii, informacionnyh tehnologiâh i o zaŝite informacii" (On Information, Information Technologies and Information Protection, No. 149-FZ, entered into force on July 27, 2006) and "Ob obespečenii dostupa k informacii o deâtel nosti gosudarstvennyh organov i organov mestnogo samoupravleniâ" (On providing access to information on the activities of state and local government agencies, No. 8-FZ, entered into force on February 9, 2009), with respective amendments.

The first systematic approach in the field of open data in Russia was developed in 2012–2014, when the Concept of Open Data of the Russian Federation was adopted and implemented (Concept 2014). This Concept laid down the institutional, legal, and technological foundations of the open data system as it exists today. The Concept outlined the movement toward Open Data as a fourfold process, consisting of the development of methodological and normative documentation, adoption of the main instruments of certification, registration, and publication of open data, adoption of the plans for the disclosure of state and municipal data, and, finally, the launch of the Open Data Portal of the Russian Federation (data.gov.ru). The main effort for the realization of the Open Data Concept were concentrated within the Governmental Commission for Coordinating the Activities of an Open Government—in short, the Open Government—an expert group working within the Russian government. The official documents about the open data activities on the national level can be found in the section about the project Open Data published on the Russian Open Government website (http://opendata.open.gov.ru). The website has not been updated since 2018, however, following the resignation of the Open Government Minister Abyzov.

By law, all the federal executive bodies, including ministries, federal services, and agencies, must publish open government data on their websites. Yet, in accordance with the Order of the Government of the Russian Federation issued in 2013 (No. 1187-r of July 10, 2013), not all information is a subject to mandatory disclosure. The information that is mandatory to be disclosed in the form of open data includes seven categories:

- 1. Names of territorial bodies and representative offices (representatives) of the federal executive authority abroad (if any).
- 2. Names of subordinate organizations (if any).

- 3. Plan for conducting inspections of legal entities and individual entrepreneurs for the next year.
- 4. The results of planned and unscheduled inspections conducted by the federal executive authority and its territorial bodies within their authority, as well as the results of inspections conducted in the federal executive authority, its territorial bodies and subordinate organizations.
- 5. Statistical information generated by the federal executive body in accordance with the federal statistical work plan, as well as statistical information on the results of planned and unscheduled inspections.
- 6. Information on vacant positions of the state civil service, available in the federal executive body and its territorial bodies.
- 7. Registers of licenses for specific types of activities licensed by federal executive bodies.

The publishing of other information in the form of open data is optional.

To facilitate the implementation of the Executive Order, in 2015, the Governmental Commission for Coordinating the Activities of an Open Government created the Open Data Council (https://opendata.open.gov.ru/ sovet/about/), a consultative body consisting of representatives of federal authorities, business, and universities, headed by the minister of the Open Government. The Council has four main functions. First, it develops specific mechanisms for opening data and to help the government to solve all organizational, legal, and technical problems as efficiently as possible. Second, it was mandated to work with business and citizens, helping to measure the demand for open data, as well as to choose the priorities when disclosing government information. The third task of the Council is to collect and promote best practices, popularize the idea of open government data, and show specific opportunities for business development. Finally, it was asked to create an independent feedback mechanism to assess the overall economic and social impact from the disclosure of government databases. Meeting every two to three months, the main idea behind the Open Data Council was to discuss the questions related to different aspects of the open data, for example data about different topics or data from different federal government bodies. During the meetings, representatives of state bodies were invited to the Council to make presentations, exchange information, and help the Council to achieve its core tasks. As the Council was established with consultative functions, its recommendations have to be submitted to the Governmental Commission for Coordinating the Activities of an Open Government, which is responsible for coordinating different points of view and interests, as well as the consideration of expert opinions. Hence, the Governmental Commission, not the Council itself, had the power to issue final recommendations by governmental orders. In May 2018, after the reelection of Vladimir Putin to the presidential post and the formation of a new government, the *Open Data Council* was suspended. A new council or working group has not been created, but the need for a council or center of competence is being discussed by experts.

In course of its functioning, the Open Data Council developed recommendations on the development of the entire open data ecosystem. The action plan ("Road Map") "Open Data of the Russian Federation" for 2015–2016 (Roadmap 2014) could be considered as the main outcome of its work. The Road Map presupposed a number of concrete action points. In 2015, all federal executive bodies were to create sections of open data on their Internet resources and disclose the so-called priority datasets, or socially significant datasets, grouped into 27 thematic areas, according to a certain schedule. The legislator was, at the same time, tasked with the development of the terms. Finally, the presumption of general availability of primary statistical data was introduced as an amendment to the Federal Law "Ob oficial nom statisticeskom učete i sisteme gosudarstvennoj statistiki v Rossijskoj Federacii" (On Official Statistical Accounting and the System of State Statistics in the Russian Federation, No. 282-FZ from November 29, 2007). While the roadmap has not been legally canceled, due to the abolition of the minister of open government and the lack of a responsible person in the federal government, the roadmap has completely disappeared from the public and internal agendas of the federal government and federal executive bodies. At the time of writing this chapter, the roadmap can be considered to be suspended.

Reports on the implementation of the "Road Map" were submitted by all federal executive bodies to the Ministry of Economic Development of Russia quarterly to monitor the quality and timeliness of the implementation of the plan. The reports were used to monitor the progress of Open Data policy implementation. Also, the federal executive bodies annually fill out a form of self-examination of the level of development of mechanisms and directions of openness, one of the tools of which are the open data (Self-examination form 2017), and were used to compile and the "open data rating." According to the report produced by the *Open Data Council*, the openness self-perception among the federal executive organs has been growing, and new federal bodies are joining the Open Data movement (Expert Council Report 2016). The Ministry of Defense, Ministry of Energy, and Ministry of Finance occupied the top three positions in the perceived transparency in 2015.

In order to facilitate open data management, an Action Plan *Open Data of the Russian Federation* for 2016–2017 was developed, outlining the activities to be undertaken, expected results, schedule, and naming the responsible executors (Action Plan 2015). The Action Plan included actions to develop methodological support in the field of open data, the development of regulatory legal support, the development of an open data infrastructure, access to open data, the formation of an open data ecosystem, and the development of non-state institutions. There have been no follow-up action plans or other strategic documents published since then. In general, the 2015 Action Plan has been followed by the Russian Open Data Council. A significant part of the actions in this Action Plan consisted of discussions; therefore, the implementation of this plan did not lead to qualitative changes in the openness of key areas of data publication in the Russian Federation. For example, detailed data on quality of

life or a register of companies have not been disclosed. On the other hand, the data that are now most open in Russia (for example, data on public finances) were disclosed in parallel with the activities of the Open Data Council as part of the functions of the responsible public authorities.

From the infrastructural point of view, the main gateway to the open government data in Russia is the Russian Open Data Portal (data.gov.ru) launched in 2014 and maintained by the Russian Ministry of Economic Development. The portal contains datasets provided by the federal, regional, and local level government bodies, and some federal government websites are even configured to automatically upload data to the Russian Open Data Portal. The Portal is equipped through a search function that allows a user to do keyword searches. Each dataset is also assigned to a thematic category, such as "Government," "Economics," "Health," "Transport," "Tourism," et cetera, and is promoted as the core of the open data ecosystem in Russia. Most datasets currently uploaded fall within the "Government" category (almost 15,000, or twothirds of all uploaded datasets), while least data can be found under the categories "Cartography" (81), "Electronics" (29), and "Weather" (5) (data.gov.ru, December 19, 2019). While some official agencies and authorities took proactive steps to disclose their information, others fulfill the requirements in a superficial way (Henderson and Sayadyan 2011). In a recent research, Repponen (2018) investigated open data availability of 75 Russian executive organs, including federal agencies and services, ministries and funds, revealing a tendency among the studied bodies to release datasets on contact information, thereby only fulfilling the minimum requirements of the 2012 executive order to provide open government data on the Internet. In 2019, Begtin et al. issued a special report under the auspices of the Russia Audit Chamber, suggesting a new instrument—an Openness rating—as a tool to monitor and provide specific recommendations to the federal authorities. The Openness rating measures three key dimensions—the openness of information, open data availability, and open dialogue. The first results demonstrate that the federal ministries show higher results on information and open data dimensions, while only about a third of them scored high on the open dialogue criteria. Similarly, federal agencies tend to score higher on information openness, while only 24% scored high on the open dialogue dimension.

Over the past year and a half, the Russian Open Data Portal has not been developed or supported, and funding has not been allocated for it. In the fall of 2019, the Ministry of Economic Development of Russia announced tenders and concluded contracts for technical support and refinement of the Portal. The contracts also included services such as webinars and hackathons and the development of recommendations. Yet, the cost, timing, and quality of work, the results of which could be observed at the moment of writing this chapter (December 2019), raise questions from the expert community.

## 22.4 OPEN DATA MANAGEMENT AND PUBLICATION APPROACH

To facilitate open data management and publication, the Russian government developed an Open Data Standard (openstandard.ru), including the Concept for the Openness of the Federal Executive Bodies (Concept 2014), the Methodological Recommendations for the Publication of open data by state bodies and local self-government bodies (Methodological Recommendations 2014), as well as technical requirements for the publication of open data. The Methodological Recommendations have become the main applied tool for the authorities, as this 100-page document contains specific guidelines for publishing open data for government bodies. They were developed to provide a relevant, structured, and targeted tool that helps ensure compliance with the legislation of the Russian Federation by explaining the law, suggesting best practices for compliance, providing examples of with applicable national and technical standards. According to the Recommendations, open data is information placed on the Internet in the form of systematized data organized in a format that ensures its automatic processing without prior modification by a person for the purposes of repeated, free and free use. The Methodological Recommendations outline for the data owners (state and municipal employees) and their publishers (specialists of internal information technologies [IT] departments or companies involved on the basis of a contract) the requirements for the content of information resources, the technical requirements for formats for the presentation of open data, and the composition and principles of interaction of elements of the national open data infrastructure. The Recommendations are quite often criticized in the expert community for three main reasons: they are not well structured, their target audience is not clearly specified, and they do not answer some of the important questions that arise for data publishers. As a result, the experts often highlight the need to revise and update this document.

The Technical Requirements for the Publication of Open Data, an annex to the Methodological Recommendations, contain specifications on the requirements for the publication of the register of open data, open datasets, the passport of an open dataset (description of metadata), and the requirements for the structure of an open dataset in machine-readable form. Publication of the metadata, called a "dataset passport," is required and is relevant for the enduser, as along with the identification number (id), name, description, owner, person in charge, link, and format, it includes important temporal information, such as the date of the first publication, the date and contents of the last modification, and links to previous versions of the dataset, as well as the version of methodical recommendations to which it adheres. When an authority creates an Internet page to provide access to its datasets, it should have a heading that clearly marks the content—"Open Data"—and the following elements: a register of open data, information on the total number of open datasets, in case there are more than 20 datasets—a search tool should be provided, and a tool

for requesting information in the form of open data. Importantly, each published dataset should have both a machine-readable and a human-readable representation, with requirements differentiating the data formats (such as csv, xml, json, html + rdfa). Currently, majority of the data is published in a simple comma-separated format (CSV), which on the one hand is a format familiar to lay users, but, on the other hand, is the format most prone to formatting mistakes which makes aggregating and cleaning of large datasets into a separate, laborious task.

The conditions for the use of open data—terms of use and/or license—periodicity of updates, and the public authority responsible for publication (publisher) should also be clearly identified. Often, in addition to the current version of the open dataset, user can also download archival versions. For datasets published on the Russian Open Data Portal (data.gov.ru), a change log is available. One important feature of open data is publishing under an open license. The license or terms of use of the dataset allow programmers to understand what actions they can do with published data: can third-party applications be created based on open data, can data be used for commercial services, et cetera.

The regulatory framework created in Russia provides public authorities with requirements and recommendations for the publication of open data. The open data infrastructure, which has been created mainly between 2012 and 2014, serves the purpose of providing access to government data to a variety of actors. Accounts Chamber of the Russian Federation, the parliamentary body of financial control in the Russia, still considers open data as one of the priority areas of work. Yet, as the federal government significantly rolled back the openness agenda, government data management in Russia has shifted from a priority to ensure openness to an internal inventory of data within authorities without additional publicity to this process.

### 22.5 REGIONAL OPEN DATA INITIATIVES

In 2013, the Russian government adopted a resolution "Ob obespečenii dostupa k olisedostupnoj informacii o deâtel'nosti gosudarstvennyh organov i organov mestnogo samoupravlenià v informacionno-telekommunikacionnoj seti 'Internet' v forme otkrytyh dannyh" (On providing access to publicly available information on the activities of state bodies and local governments in the information and telecommunications network "Internet" in the form of open data, No. 583, July 10, 2013). This resolution, as already mentioned, contains rules pertaining to publicly available information placed by the federal and local government bodies on the Internet in the form of open data. Among other things, it introduces rules for the public authorities of the regions of the Russian Federation and local government bodies. The regional and local authorities are required to make publicly available information on the activities of the state authorities of the constituent entities of the Russian Federation and local government bodies established by these bodies or receive by them in the exercise of authority in the regions of the Russian Federation. The rules determining

the periodicity of publishing the open data on publicly available information on the activities of state bodies and local government bodies on the Internet, such as the timing of renewal, ensuring the timeliness of the implementation and protection of users' rights and legitimate interests, as well as other requirements for the placement of information in the form of open data, are also specified.

It is important to add that some local and regional data are collected on federal information systems. For example, each local and regional public body is required to add detailed data about their contracts on the official procurement website (zakupki.gov.ru), while each budgetary autonomous institution should add data about planned and actual performance indicators, including balance sheets, on the official website for posting information about state and municipal (local) institutions (bus.gov.ru).

Currently, the Russian Open Data Portal (data.gov.ru) has more than 9500 datasets published by the regional authorities and more than 3000 datasets provided by the local-level authorities, with more than 500 regional and about 400 local public bodies being registered on this website. These numbers suggest that the regional and local implementation of the Open Data strategy lags behind the federal implementation.

A more detailed picture on the open data publication and openness of information of the federal, regional, and local authorities in Russia can be inferred from the ratings that were prepared by the Russian nongovernment project center "Infometer" (http://system.infometer.org). A distinctive feature of these ratings is the availability of links to all sites being researched and references to each assessed parameter and to the relevant legislation.

The Infometer's rating "Regional Open Data 2016" estimates open data of all Russian subnational units. This instrument measures 84 parameters, such as the following:

- The availability of a separate page (section) "Open Data" or a separate site for the placement of open data or a section on the portal of the open data of the Russian Federation.
- There is no requirement for registration and authorization on the site for the use of open data.
- Information for developers, who made applications based on open data.
- Name of the person responsible for the content of the open datasets.
- Availability of datasets "Names of registry offices," "Names of executive authorities of the subjects of the Russian Federation," "Plan for conducting state ecological expertise," "Information on the results of state ecological expertise," "State forest registry (for forests located within the territory of the regions of Russia)," "Register of Licenses for Educational Activity," et cetera.

Seventeen out of 85 regions scored less than 30%, while 16 scored more than 70%, meaning that the majority of regions were rated average in the open

data performance. The City of Moscow, Bryansk, Tomsk, Tula, and Ulyanovsk regions, as well as Khanty-Mansi Autonomous Area have all scored 100%. The City of St. Petersburg scored 91.6%.

Another Infometer's rating "Local Open Data 2017" estimates open data in cities with population of more than 100,000 people using 60 parameters. The rating does not include Moscow, St. Petersburg, and Sevastopol, as these are subnational units in their own right, or "cities of the federal status" whose governments operate at the regional level. The 166 cities were included in the 2017 rating. Despite their obligation to provide open data, the index indicated that 68 cities did not publish anything, 10 cities published more than 20 datasets, 53 cities scored more than 50%, and only 2 cities published more than 100 datasets. The cities that scored more than 80% are Tula, Novomoskovsk, Domodedovo, Taganrog, Yekaterinburg, Nizhny Tagil, Obninsk, Nizhnevartovsk, Shakhty, and Bratsk.

## 22.6 CIVIL SOCIETY, BUSINESS, AND GOVERNMENT INTERACTIONS BASED ON THE OPEN DATA

The new quality of interactions between the state and its citizens is one of the central promises of open data. It is difficult, however, to provide a systematic assessment of the level of interaction between the civil society and the federal government on the topic of open data in Russia. The starting point for such assessment would be the analysis of open data requests. As mandated by law, each federal executive body has a form for the electronic appeal of citizens on its website; some also have a feedback form or additional email for open data requests or comments. Each appeal must necessarily be examined and answered within a month. Yet, the federal authorities do not publish detailed statistics about the requests they received and responded to, so it is not possible to single out requests or appeals for open data. In addition, federal executive bodies may underestimate the relevance of open data to citizens and programmers, as programmers often do not report the use of open data in their projects and do not send requests.

In 2014–2016, the Ministry of Finance of Russia organized meetings with developers on the topic of open data several times a year (Minfin 2016). It was a unique and effective mechanism that allowed software developers to hear presentations from the ministry and its contractors about the public data, as well as to ask their questions and get answers on the same day. Competitions, such as BudgetApps (www.budgetapps.ru), the All-Russian competition "Open data of the Russian Federation." (www.opendatacontest.ru), and hackathons, for example Hackathon of the Accounts Chamber of the Russian Federation "Data Audit" (http://data-audit.ru), have provided another pathway for the programmers and the broader community to engage with the government around the use of open data.

The BudgetApps, an annual competition of projects based on open government financial data, was held by the Russian Ministry of Finance in 2015–2018. The popularity of the competition grew from year to year: whereas 45 projects were submitted in 2015, 155 projects were submitted in 2016 and 160 in 2017. The prize fund of the contest is about 500,000 rubles per year (around €7300 as of December 2019). The partners at the national level are the Federal Tax Service, the Federal Service for Regulation of the Alcohol Market, and the Federal Treasury. The NGO Infoculture acted as a contractor of the Ministry of Finance on the BudgetApps competition, providing the organizational work. In 2018, the format of the competition "BudgetApps" was changed to an independent search and selection of projects by an expert commission. It did not include hackathons, events for developers, neither activities on social networks, so the quality and quantity of projects decreased significantly.

One of the projects submitted for the 2015 BudgetApps competition was, for example, the Russian Schools project (https://goodschools.ru), a social service that accumulates in one place all the basic accessible information and knowledge about the activities of schools. The service is based on open data on state institutions, government contracts, exam results, and public reports of schools, providing an overview and rating of schools based on their funding, exam results, and personnel. It can be used by a variety of actors; for example, it can help parents to choose a school for their children, teachers—find out which schools are better paid, or provide public activists with information on how effectively taxpayer money is spent in the educational sphere. The Russian Schools project is still supported and developed.

The All-Russian competition "Open data of the Russian Federation" was planned as an annual competition of projects based on open data. Some federal ministers and federal agencies developed tasks for participants, including the Federal Treasury, Ministry of Culture, Ministry of Industry and Trade, Ministry of Transport, Ministry of Construction, Ministry of Labor, Ministry of Finance, Rosacreditation, Roslesinforg, Rosnedr, Rospatent, Rosstandart, Rosstat, Rostrud, Rosturizm, Open Data Council, and the Federal Tax Service of Russia. It has been held by the Russian Open Government in collaboration with the Ministry of Economic Development of Russia and in partnership with the Analytical Center under the Government of the Russian Federation in 2015, 2016, and 2017, but not repeated in the subsequent years.

Russian Open Data Summit was first held by Russian Open Government in 2015. It was supposed to become an annual conference and a platform for communication of representatives of the state among themselves and with the developers. At the end of 2016, it did not take place and was moved to the beginning of 2017. In early 2017, it was postponed to the end of 2017 and was not carried out. Thus, the Open Data Summit was held only once in 2015 and now it is impossible to say whether it will be held in the future.

Interactions between the representatives of the open data community and the government can also occur at various conferences and in online communities, for example the online community for open data in the Telegram messenger (https://telegram.me/opendatarussiachat) and on a platform called Slack (https://opendatarussia.slack.com). Federal executive bodies often issue press releases on their websites about the publication of new open datasets, which is a helpful way for the interested party to receive the latest updates. Another tool for interaction is public pages, maintained by federal executive bodies in social networks (VKontakte and Facebook). For example, the Russian Federal Antimonopoly Service and the Russian Audit Chamber not only maintain the pages, but also actively respond to user comments (although it is impossible to determine how much of this interaction revolves around open data).

Attention has also been paid to the capacity-building. In September 2016, the Russian Open Government has launched an online course "Open Data. Theory and Practice" (https://open.gov.ru/events/5515416/). The program is designed for both civil servants and IT service developers, as well as a wide range of other professionals, who want to learn how to work with open data. In order to gain access to video lectures, text, and test materials of the course, equivalent to 72 academic hours, it is necessary to register on a specially created website (the registration is free). The main requirement for attendees is knowledge of the basics of computer literacy. Based on the results of the training, certification is provided for two main profiles: "civil servant" and "IT specialist." When it comes to the nonprofit sector, periodically different teams conduct webinars and hackathons with educational content on how to work with open data. For example, the NGO "Infoculture" in cooperation with the Open Government developed the "Open Data School" in 2013–2014 with offline lectures, seminars, and workshops.

### 22.7 OPEN DATA IMPACT IN RUSSIA

There are several cases of how open data can have an effect on increasing transparency and accountability, positive impact on the economy, and creation of new companies.

### 22.7.1 Increasing Transparency and Accountability

Open data could lead to improvements in government transparency and accountability in a number of ways: for example, supporting journalism and data journalism which uncovers wasteful spending, corruption, or other wrongdoing by government departments or officials; supporting the creation of applications which allow citizens to report on their experience of government services; supporting scrutiny of government decision-making; supporting greater citizen engagement in policy-making (Open Data Charter 2015).

In Russia, several examples of services based on open data related to state finance and public procurement are worth mentioning. "Government Spending" (https://clearspending.ru) is a nonstate project to increase public awareness of spending public funds. The automatic monitoring system allows

a user to study, understand, find violations, and reuse data on public spending, in particular, on grants and on state and municipal contracts. The aim of the project is to encourage the authorities to search for and implement ways to solve problems in the sphere of public spending and to eradicate abuses in the state procurement industry. The project has been featured in the news multiple times, and it regularly organizes webinars and open lectures for journalists to enhance their awareness of the service and the opportunities it provides. Opening of public procurement data also allowed Transparency International Russia to produce several influential research reports, including "How do the largest donors of political parties make money on government contracts?" (2017), "How do heads of state theaters pay themselves?" (2017), and "Siberian roads: how roads were repaired in six Siberian cities" (2017), all pointing out problematic patterns in using taxpayers' money and the mechanism of state contracts. For instance, "Siberian roads" report was based on the open data on 575 contracts for road repairs in six Siberian cities—Barnaul, Irkutsk, Novosibirsk, Omsk, Tomsk, and Chita. The authors have identified schemes by which cartels and affiliated firms take more than 50% of all contracts. Another project, Open NGO (https://openngo.ru), aims at showing citizens how Russian nonprofit organizations are organized and funded from state sources by bringing together open data on subsidies from the federal budget, state contracts, grants of the presidential grants fund, and the register of nonprofit organizations of the Ministry of Justice.

### 22.7.2 Economic Impact of Open Data

Open data may impact on the economy, for example, through supporting existing businesses to lower their costs or become more efficient or through supporting better economic planning. Open government data can be used by entrepreneurs to make commercial or nonprofit services.

There are successful examples of companies earning money using government open financial data (Begtin 2016). According to the Open Data Impact Map, a project of the Center for Open Data Enterprise in partnership with the World Bank Group, there are 39 companies in Russia whose business is based on open data, while the Russian Open Data Portal enlists links to 255 applications based on open data, including both nonprofit and commercial uses. To name a widely known example, YandexTaxi, a taxi application run by the Russian tech giant Yandex, was launched after the registering of taxi licenses was made openly available. Another example includes technical solutions, which use and integrate the data of the Federal Tax Service of Russia (the register of legal entities), financial statements, and data of the Federal State Statistics Service Rosstat, such as *KonturFocus* and *Spark Interfax*. These applications allow users to perform due diligence checks. For example, the revenue of the company *KonturFocus* in 2016 amounted to 8.6 billion rubles.

Open Data can also be seen as beneficial in a wider economic context. The National Research University Higher School of Economics (HSE) estimated

Factor	Annual saving (bln rub)
Higher public transport coverage and more efficient use of equipment	3,668
Reducing travel time for passengers on public transport	8,890
Reduction of travel time by private transport	41,515
Decrease in waiting time at stops	11,967
Reducing gasoline consumption and revenues from its sale (negative	7,287

Table 22.1 Cumulative effect of using applications based on open data in Moscow's public transport system

Source: Author based on Artamonov et al. (2015)

economic effect)

the cumulative economic effect of using applications based on open data in public transport in Moscow (Artamonov et al. 2015). According to the study, the cumulative economic effect of using applications based on open public transport data in Moscow could amount to 58,753 billion rubles a year (Table 22.1).

#### 22.8 Conclusion

The open government data has been developing in Russia since 2012. Within a short amount of time, the necessary regulatory framework was created, guidelines for the publication and management of open data were developed, an open data portal was launched, and an increasing number of government agencies, not only at the federal but also at the regional and local levels, were involved in the creation and publication of open data. Being a practical tool to the implementation of the Freedom of Information principles, open data in Russia has become a basis for a large number of public projects that provided tools for obtaining information from government agencies and interacting with them. Also, a community of data journalists has appeared.

Since 2018, a rollback in the area of open data has begun. Since May 2018, for the federal government the topic of open data has been replaced by an inventory of government data. The increasing internal and external economic challenges, domestic political changes, a decrease in Russia's interaction with international organizations that focus on an open data agenda, and a loss of Russia's interest in joining the Organization for Economic Co-operation and Development (OECD), all had a negative effect on the open data ecosystem development. And vet, open data movement in Russia continues both thanks to the regional and municipal authorities and especially to the community of developers and citizen activists. Also for some government agencies, the topic of open data remains not only relevant, but also a priority. The publication of open data by the Federal Tax Service of Russia, the launch of the project spending.gov.ru by the Audit Chamber of the Russian Federation, the use of open data for interaction between the Ministry of Culture and its subordinate organizations and cultural institutions can all serve as illustration of the continuity in open data development.

Currently, maintenance of the open data agenda is largely undertaken through the activities of the community and nonprofit organizations aimed at including open data in the federal government's data management agenda. The priorities for open data experts and NGOs are training public servants to work with open data, lobbying for the inclusion of open data topics in the created legal acts, and interacting with authorities to improve the quality of data and the convenience of its publication. Open Data Day (http://opendataday. ru) is a prime example of a community-driven annual event that brings together open data experts, activists, and developers in Moscow and other large Russian cities. State authorities often and actively participate in the Open Data Day as speakers in discussions and workshops, despite the decline in interest at the governmental level. As a result, despite the fragmentation of open data initiatives and the lack of a unified federal agenda, the open data movement in Russia remains in existence, and the ecosystem has fair chances to be further developed in the future, even if the speed and scope of the development are somewhat limited.

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