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# Introducing and Developing Digital Technologies in Lawmaking: Legal Theory Aspects

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**Abstract**

The article reviews current efforts to improve lawmaking which take place in a rapidly changing modern technological environment and are informed by the introduction of new information and digital technologies. On the one hand, the processes of digitization have an impact upon societal relations in all aspects of public life, leading to a fast growth of the volume of rulemaking. Law has an important role to play in the development of digital society and in the establishment of legal regimes necessary for the creation and development of modern technologies and for a functional business environment. On the other hand, the process itself of developing, adopting and putting laws into force changes and transforms under the impact of digital technologies. The author reviews practices of the application of IT technologies at different stages of lawmaking and examines the consequences, challenges and complexities of the introduction of digital tools. She pays special attention to the use of technologies of "digital rulemaking" by federal executive agencies in Russia and elsewhere and explores possibilities for improving them. The author also highlights the necessity to create a digital support for rulemaking, which would allow, inter alia, to automate the process of developing, and coordinating officially required cross-agency feedback for, drafts of laws/bylaws issued by the Government of the Russian Federation and federal executive agencies; the author argues that the electronic resources of the houses of the Federal Assembly should be connected to this system too. This would lay the foundation for creating a single integrated governmental system for develop-

ing and adopting laws/bylaws wherein all participants of lawmaking are connected with each other. The article reviews modern trends in developing and introducing digital services for lawmakers and technologies of machine readable law.

**Keywords**

lawmaking, information technologies, digitization, information systems, legal acts, bylaws, federal executive agencies, machine readable text, rules of administrative procedures, electronic rulemaking.

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## Introduction

By their very nature, legal acts issued by federal executive agencies are the most complex and diverse segment of legislation. Due to their sectional and functional specificity, these legal acts are the most numerous documents of its kind. According to experts from the Academic Centre for Legal Information under the auspices of Russia's Justice Ministry, at the end of 2021 the Russian Federation had more than 12 million laws and bylaws. Every year approximately one million more of laws and bylaws is added to this big corpus of regulations[1].

"A statistical analysis of legislation for mid-1990s — late 2016 shows a steady tendency for growth in the volume of adopted laws. Moreover, a low quality of laws (which is partly explained by the fast production pace) causes an exponential growth in the number of bylaws. Now it is becoming a routine practice to issue 'incomplete' laws; many of the laws adopted in recent years count dozens of attached blanket and referral provisions, delegating more and more powers to the executive" [Golodnikova A., Yefremov A. et al., 2018: 14].

Studying the dynamics of the adoption of legal acts by the executive, one can clearly see a steady trend for an increase in the number of regulations. Thus, for instance, whereas the number of legal acts issued by Rus-

[1] Sessions Using the Modern Technologies in Rulemaking held by the Digitizing Public Administration section of the Council for Digital Economy Development under the auspices of the Federation Council // "On Governmental Projects to Use the Modern Technologies in Rulemaking". Available at: URL: https://www.garant.ru/news/1491777/ (accessed: 02.11.2021)

sia's President and government annually grows by 3-5%, the volume of legal acts issued by the federal executive annually grows by 35-45%.

The development of the system of legal acts issued by the executive and, as a consequence, an accelerating pace of growth in the number of legal acts calls for a large-scale introduction of the new digital technologies in lawmaking.

The steady tendency for a growth in the volume of bylaws calls for a system to process and systematize them using the modern digital technologies. Automation of the processes of developing, coordinating cross-agency feedback for, adopting, as well as storing and using, the entire body of laws and bylaws would contribute to harmonizing regulations and introducing consistency in the corpus of regulatory requirements.

Presently digitization and the new technologies have a tremendous impact on all spheres of public life. This is also true for the organs of government and their functionaries who prepare and publish laws and bylaws. As the practice shows, the approaches, methodologies and instruments currently applied in this area are no longer fit for the purpose.

## 1. "Electronic Rulemaking"

Regularly used in international scholarship, the term "electronic rulemaking" means the use of electronic technologies for enhancing transparency of the process of adopting legal acts and administrative decision making and for ensuring direct participation of citizens in public discussions, expert appraisal, and evaluation of the regulatory impact of subordinate legislation [Coglianese C., 2004]; [Moxley L., 2016]; [Farina C., 2014].

In recent decades, the use of electronic and information technologies by federal executive agencies in their work has enhanced the efficiency of public administration. Interactions among different public authorities now rest on a foundation of the updated informational and technological infrastructure, which includes public information systems and resources, as well as hardware that ensure the authorities' functioning, and their interaction with each other, with population, and with institutions, in the course of provision of public services.

In the early 2000s, when the electronic information resources were coming into their own, this process was greatly facilitated by the information systems (such as Garant Plus, Consultant Plus and others), which afforded an opportunity to quickly and easily access information about laws and bylaws.

Later, the introduction of information technologies and the creation of public agencies' web sites ensured informational openness and transparency of the processes of developing and adopting subordinary legislation and became a guarantee of citizens' rights of access to information about workings of the federal authorities. The federal authorities began using web sites for posting information about their activities and for unofficially publishing ministry-specific legal regulations, which significantly facilitated the search and use of the regulations.

The professional community started routinely using texts posted in the information systems and on ministries'/agencies' sites.

When www.pravo.gov.ru[2], in 2013, began to function as official electronic publisher of Russian Federation legal acts, digital versions of legal acts were no longer copies of the documents.

In view of this, this writer presently does not completely share the view, previously expressed in the scholarship, that "the formal sources of law, such as legal acts, law-making treaties, etc., now have 'virtual replicas,' 'digital doubles,' whose form and content can be an absolutely accurate copy of the official texts published, formatted and publicized by the book, but in some cases they can also differ from the original" [Khabrieva T., Chernogor N., 2017: 86].

An officially published legal act is no longer a copy but an authoritative source of law, the foundation for the establishment of, or changes in, or termination of, relations.

The matters such as digitizing legal acts, ensuring access to legislation of different countries and providing legal information online were examined in detail by Clair Germain [Germain C., 2010: 72].

Building up databases of legal acts laid the groundwork for further development of digital technologies and for transformation of the copies of legal acts — of their graphic images — into original digital documents posted on the official portal of legal information — the digital documents that sometimes come into effect more quickly than texts published in the newspaper "Rossiiskaya gazeta" or the Compendium of Laws of the Russian Federation.

Later, with the advancements in digital technologies, it became possible to make web sites of the federal executive agencies into platforms where

[2] Presidential Decree No. 88 of February 2, 2013 "On Introducing Amendments to Certain Regulations Issued by the President of the Russian Federation" // Compendium of Laws of the Russian Federation. 2013. February 11. No. 6. Art. 493.

civil society can directly participate in the development and expert appraisal of decisions adopted by these agencies.

In a major development, an era of information disclosure and public participation in rulemaking began in developed countries [Elmurzaeva R., 2013: 59].

In the USA, Australia, New Zealand and several European countries, the format of "electronic rulemaking" is used for ensuring informational openness.

Electronic rulemaking is the use of digital technologies by governmental agencies in the processes of rule-making and decision making. In the USA, regulatory agencies, before adopting new rules, must solicit comments from the public and analyze them, as well as carry out a full scholarly, engineering and economic analysis [Coglianese C., 2004: 13].

As Lauren Moxley aptly noted, "e-rulemaking — the use of digital technologies in forming regulations — has democratized the highly technical, highly consequential regulatory process, breathing life into the two core democratic promises of the notice-and-comment process that for decades languished in crowded docket rooms in Washington" [Moxley L., 2016: 661].

The Administrative Procedure Act, adopted in the USA in 1946, provided opportunities for the public to comment on draft laws prepared by the executive and to introduce their proposals, although in fact it was only in the late 1990s and early 2000s that these provisions became effectively operative. And it was only the introduction of information technologies that made the realization of this right possible.

In 2014 the USA carried out a large-scale experiment when the Federal Communications Commission used electronic rulemaking capabilities to receive and process the unprecedented 3.9 million public comments on the Commission's proposal regarding net neutrality rules.

The introduction of electronic rulemaking enables regulatory agencies to take stock of a wider array of factors and consider public opinion when making administrative decisions and adopting universally binding rules.

Similar trends are found in Russian lawmaking.

Pursuant to governmental order No. 851, August 25, 2012, "On Disclosure by the Federal Executive Agencies of Information about Drafts of Laws and Bylaws and Public Debate Thereon," all federal executive agencies began posting information about laws and bylaws in the making and

organizing public discussions about them on the portal regulation.gov.ru. This portal was launched on April 15, 2013. The USA[3], EU, Estonia, Finland and Slovakia have similar portals.

There is no consensus among Russian experts as to the efficiency of regulation.gov.ru[4]. One of the criticisms is a relatively low citizen participation level in most discussions about future regulations. This is so mainly because comments and suggestions from the public are generated by drafts of the most high-profile pieces of bills and drafts of subordinate legislation the ones with the most direct possible impact on citizens' rights and obligations. At the same time, even a superficial analysis shows that comments and suggestions from the public allow to fathom citizens' attitudes to a bill before it is passed into law and published. After a discussion of the draft of an order on potentially dangerous dog breeds[5], prepared by Russia's internal affairs ministry for the government, more than four fifths of the breeds were struck off the dangerous breeds list. Citizens also took active part in discussions on the legislative proposals concerning state control[6] and mandatory requirements[7], and many suggestions were incorporated into the final versions of the laws. Another example of comments from the public influencing bills of law are citizens' comments about the QR codes bill[8]. More than 300 000 negative comments about these bills were registered

[3] Pursuant to the decision to create a centralized rulemaking portal, the site regulations.gov was launched in 2003.

[4] 'Regulators' Actions Cause Counteraction: Experts from the Center for Advanced Governance Evaluate the Efficiency of Public Feedback on Laws and Bylaws' // RBC newspaper, № 143 (3432). 2021. Sept. 28; 'Profanation of Feedback from Common Folk: Government's Promotion of a "Digital School" Exposes the Sham of the Portal regulation.gov.ru' // Available at: rusdozor.ru (accessed: 23.12.2020); 'What's Wrong with Public Debate on Bills of Law in Russia' // Vedomosti. 2019. Dec. 12.

[5] Governmental Order No. 974 of July 29, 2019 "On Approving the List of Potentially Dangerous Dog Breeds" // Compendium of Laws of the Russian Federation. 2019. No. 31. Art. 4642.

[6] Federal Law No. 248-FZ of July 31, 2020 "On State Control (Oversight) and Municipal Control in the Russian Federation" // Rossiiskaya gazeta, 2020, Aug. 5.

[7] Federal Law No. 247-FZ of July 31, 2020 "On Mandatory Requirements in the Russian Federation" // Ibid.

[8] Draft of federal law No. 17357-7 "On Introducing Amendments to the Federal Law 'On Healthcare and Epidemiological Control'" (the section on introducing restrictions for preventing the spread of the new coronavirus infection); draft of federal law No. 17358-8 "On Introducing Amendments to Art. 107 of the Air Law of the Russian Federation and the Federal Law 'Railway Regulations of the Russian Federation'" (on measures to protect the population against the new coronavirus infection on domestic and international flights and on long-distance trains) //Available at: URL:https://sozd.duma.gov.ru/bill/17357-8 (accessed: 02.01.2022)

on the sites of the Duma and the Federation Council. As a result, the draft laws were withdrawn from the Duma agenda.

Thus, the portal regulation.gov.ru, designed as a platform for publicizing draft laws that federal executive agencies work on, a platform for citizens' input into discussions on bills of law, a platform which they can use as a convenient communication channel for delivering their suggestions and comments — this system affords citizens a chance to give feedback, in due time, on new pieces of legislation being considered by lawmakers. Citizens and businesses can trace the passage of bills, familiarize themselves with positions of ministries in charge, see comments made by other participants of public debate.

Thanks to all this, experts and interested lawmakers can be sure that their voices are heard.

First of all, when citizens can voice their opinion and provide suggestions, lawmakers have an efficient tool for gauging public opinion via so-called feedback channels. When the federal executive agencies, preparing draft laws or official decisions, take into account citizens' comments, they can prevent costly regulatory mistakes and thus enhance the quality of legal regulation. Secondly, the participation of citizens in lawmaking gives a boost to principles of direct democracy and ensures the practical realization of citizens' constitutional right to participate in the state governance.

At the same time, it should be noted that the public debate system needs improvement and fine-tuning. Enormous volumes of comments and suggestions lawmakers receive when a bill is at the stage of public debate are quite difficult to process, especially considering that some proposals radically differ from each other. In general, the present system of public discussion stands where it should. One should keep in mind that similar systems in the USA and Europe were developed in full only 30 years later after implementing[9].

## 2. Digital Services for Lawmaking

In 2016 Russia's President in his address to the Federal Assembly set the goal of developing a digital economy[10]. As a result, in 2017 Russia's govern-

[9] In the USA the federal government has taken interest in electronic rulemaking for nearly as long as the world wide web has been in existence, writes Cynthia Farina in Achieving the Potential: The Future of Federal e-Rulemaking. Available at: http://scholarship.law.cornell.edu/facpub/1237 (accessed: 02.01.2022)

[10] On Dec. 1, 2016 it was issued Presidential Directive to prepare a plan for and start, using the present potential and the accomplishments in the creation of information

ment approved the program "A Digital Economy of the Russian Federation"[11] and produced a Concept of Gradual Digitization of the Legal System Using Modern Artificial Intelligence-Based (AI-based) Technologies.

In accordance with this concept, the first stage would be identifying dated provisions that are no longer functional and dealing with them. These efforts can result either in amending specific provisions or in developing general recommendations for "quality rulemaking."

The next step is creating "electronic codes," "framework regulatory documents with different parts adopted by governmental agencies of different levels, in line with particular agencies' purview" [Rukavishnikova I., 2021]. The case of France is given as an example. The plan is to create governmental electronic legal information systems: provisions currently in force, it is proposed, should be cataloged as templates, and online codes of law should become in the future an official platform for publishing new regulations. The next move would be creating an automated AI-based regulations support system, including automated document generation tools. [Tikhomirov Yu., Nanba S., Gaunova Zh., 2019: 132].

The USA has practiced something similar. The portal govinfo.gov features the United States Code of Federal Regulations (CFR), the compendium of general and permanent regulations published in the Federal Register by the executive departments and agencies of the federal government of the United States. The CFR comprises 50 titles, each covering a broad subject area of legal regulation. This portal is distinctive because it not only features an advanced search engine based on metadata but also has records management. The components of the integrated management of electronic information include public access (the portal uses cutting-edge metadata-based search technologies to ensure the highest quality of search), content management (ensuring that digital documents are authentic and presented in their entirety), digital safety (guarantees of preserving the content for future generations despite any possible technical breakdowns and hardware amortization).

infrastructure, the realization of a large-scale systemic program of the development of the economy of the new technological generation – a digital economy // Presidential Directive PR-2346, Dec. 5, 2016. Available at: URL: http://www.kremlin.ru/acts/assignments/orders/53425 (accessed: 02.01.2022)

[11] Governmental order No. 1632-p (July 28, 2017) "On Approving the Program 'A Digital Economy of the Russian Federation'" // Compendium of Laws of the RF. 2017. Aug.7. No. 32. Art. 5138.

The third stage of the Concept of Gradual Digitization of the Legal System envisaged the creation of an AI-based automated regulations support system, including services that automatically generate documents pertaining to typical court cases. At the same time, there is a need for a risk management system that would carry out automated analysis of court decisions to identify errors and signs of corruption[12].

So far, however, these plans, unfortunately, have not been duly acted on, and this significantly slows down lawmaking and creates certain difficulties for legislative process.

In late 2017 issues of digitization were discussed at a joint session of the executive committee (praesidium) of the Academic Experts Council under the aegis of the Chairman of the Federation Council and the executive board of the Integration Club under the auspices of the Chairman of the Federation Council. The meeting ended up with a resolution containing several recommendations for Russia's government. In particular, one of the recommendations was to include in the Program a project for digitizing public administration: this project should involve the creation of an electronic platform for rulemaking, which would, inter alia, use electronic resources of the houses of the Federal Assembly to help automate the development of, and cross-agency feedback for, drafts of regulations, prepared by Russia's Government and federal executive agencies, which are necessary for the exercise of federal constitutional laws.

Another recommendation was to prepare, heeding suggestions from federal executive agencies, proposals as to the creation of an automated platform for rulemaking that would enable implementation of amendments to the legislation.

Since 2018 Russia's ministry of economic development, contributing to the efforts to create a single digital space for governmental agencies, has worked on producing a Single National Platform for Interaction of All Participants of Rulemaking in the Course of Producing Regulations[13]. Currently in the making, this single national information system for developing and adopting regulations will optimize the development, cross-agency feedback, and approval of drafts of regulations, the processes of introducing principles of teamwork, and the use of the system's instruments by all participants of rulemaking. The system would produce a sophisticated

[12] Kommersant. 2017. Nov. 13.

[13] Available at: URL: https://www.economy.gov.ru/material/directions/gosudarstvennoe_upravlenie/cifrovizaciya_normotvorchestva/ (accessed: 02.02.2022)

solution to introduce additional capabilities for enhancing the efficiency of rulemakers. The information system would digitize the existing processes of developing, coordinating cross-agency feedback for, and approving regulations prepared by the authorities.

Presently there are already various governmental information systems containing information on lawmaking. In addition to the earlier mentioned official portal of legal information[14] and the federal portal publishing drafts of federal regulations[15], there is another important digital service — Automated Lawmaking Support Platform [sistema obespecheniya zakonodatel'noy deyatel'nosti] of the State Duma[16]. Yet in 1997, developers started developing a software for a digital platform with information about lawmaking, drafts of federal laws and other documents related thereto. Since the launch of the Legislative Portal in 2006, the automated lawmaking platform has been available on the web. Since 2017 the federal information system for deputies of the State Duma and the Federation Council has been used as the Integrated System for Automated Legislative Process Support (Russian abbreviation: SOZD GD)[17]. SOZD GD automates the processes of federal lawmaking, as well as routine lawmaking at Russia's regional legislatures; it is also an instrument for keeping citizens better informed about legislative process because it provides a convenient access, including access via mobile applications, to detailed information about subject matters of draft laws under consideration[18].

In fact, SOZD GD is a realization of an idea [Arzamasov Yu., 2016]; [Tikhomirov Yu., 2009] academics have long advocated — creating "laws' case files", an information database containing records of parliamentary hearings and round table discussions; international legal documents and other countries' pieces of legislation pertaining to particular bills of law; reviews of pre-revolutionary, Soviet and international legislative experiences; analyses of Russia's regions' efforts to handle problems addressed in particular bills of law, explanatory notes to federal bills, opinions of the government; problems addressed by particular bills, presented through figures and facts, etc.

[14] Available at: URL: http://pravo.gov.ru/ (accessed: 12.01.2022)

[15] Available at: URL:https://regulation.gov.ru/ (accessed: 4.12.2021)

[16] Available at: URL: https://sozd.duma.gov.ru/ (accessed: 12.01.2022)

[17] Directive No. 2-96 of the Head of the Central Office of the State Duma "On Test Run of the Single Digital Lawmaking System at the State Duma of the Federal Assembly of the Russian Federation." Available at: URL: http://duma.gov.ru (accessed: 02.02.2019)

[18] Available at: URL: https://ppr.ru/projects/sistema (accessed: 02.11.2021)

For more than 20 years of SOZD GD's functioning, the system has accumulated an immense theoretical and practical experience in organizing an information platform for supporting lawmaking process, and this experience should be used as the basis and taken into account by developers of the similar legislative information platform serving the federal executive agencies.

In order to accelerate the introduction of digital technologies, Russia's government came up with a national program called A Digital Economy of the Russian Federation, an instrument for putting into practice presidential order No. 204 (May 7, 2018) "On National Goals and Strategic Objectives for the Development of the Russian Federation Until 2024" and Presidential order No. 474 (July 21, 2020) "On National Goals in the Development of the Russian Federation Until 2030" [19].

The national program "A Digital Economy of the Russian Federation" includes a federal project "Digital Public Administration" — a roadmap for gradual automation of certain rulemaking processes and establishing case law, including the introduction of mechanisms for creating and using machine readable regulations and for using the capabilities of modern promising technologies of artificial intelligence and processing big data sets, blockchain technologies, and other promising technologies.

In conjunction with the federal project "Digital Public Administration," Russia's Ministry of Economic Development since 2019 has invested a lot of resources in automating separate lawmaking processes and using the capabilities of modern promising AI technologies.

According to deputy minister of economic development, A. I. Khersontsev, his Ministry is working on three major projects: digital services for rulemakers; creating automated regulations tools; developing a template for digital descriptions of mandatory requirements[20].

Presently that Ministry essentially uses a complex approach to digitization rulemaking.

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[19] Approved at a meeting of the board of the Council for Strategic Development and National Projects under the auspices of the President of the Russian Federation, protocol no. 7, June 4, 2019 // Available at: URL: https://base.garant.ru/72296050/ (accessed: 02.11.2021)

[20] Sessions "Using the Modern Technologies in Rulemaking," held by the Digitizing Public Administration section of the Council for Digital Economy Development under the auspices of the Federation Council // "On Governmental Projects to Use the Modern Technologies in Rulemaking" //Available at: URL: https://www.garant.ru/news/1491777/ (accessed: 02.12.2021)

The ministry has at its disposal an information system containing information about essentially all directives for developing regulations that the ministry receives. This system records objectives and deadlines for achieving them.

Importantly, the system can trace the progress of draft laws at every stage, from its initiation, development, discussion, cross-agency feedback to approval, signing and publication. This augments transparency of the process of adopting legal acts. Paper records do not let you trace the progression of particular draft laws or show officers responsible for failures to meet deadlines, etc. The system in the making is based on paperless cross-agency coordination and interaction among main contributors to the development of regulations.

This information system enables users to directly trace the entire process of cross-agency feedback on drafted regulations and documents attached to them. Normally, the process of drafting a law involves not one but several federal executive agencies. The use of electronic formats for discussions and cross-agency feedback on drafts of regulations enables participants to receive expert opinions in a timely manner and settle disagreements promptly.

At the same time, experts believe that "electronic paperwork exchanges between federal ministries and agencies have yet to be fine-tuned, and in regions these capabilities are introduced only fragmentarily. One ministry can refuse to recognize a document from another one, and there are big problems with conversion"[21].

Creating a switchboard for decision makers would allow to trace in real time the progress of a draft, as well as check current statuses of a particular regulation at different stages of its progress.

Experts from the ministry of economic development estimate that this system can cut by one third the time necessary for the preparation of a legal regulation.

The use of the information systems by rulemakers and lawmakers simplifies interaction between agencies of the executive branch and enhances transparency and openness in the processes of developing and adopting legal acts, as well as improves oversight of lawmaking processes.

[21] Opinion of M. V. Larin, director, the Russian National Institute for Archive and Document Research // Available at: URL: https://ar.gov.ru/ru-RU/presscentr/materialMedia/view/332 (accessed: 05.02.2022)

Presently the finished information system is being tested at the ministry of economic development. Later the successful experience can be emulated by other agencies of the executive branch as well.

When the Ministry of Economic Development finishes fine-tuning the information system for lawmakers, the next step to take would be creating a platform integrating the already existing information portals[22]. If the information systems of the government, the Federal Assembly, and the federal executive agencies are consolidated, all public authorities will be able to work in a single information space.

## 3. "Machine Readable Law"

"Machine-readable law is provisions of law expressed in a formal language. In other words, in the languages of computer programming and markup applicable to electronic computing machines. Besides, machine readable law includes instruments for applying such provisions of law — information systems and software. These technologies convert law to a computer code."[23]

Transformations in lawmaking taking place in an environment dominated by digital technologies call for a revision of and changes in the methodological approaches. The automation of law requires a special technological and organizational structure, as well as an understanding of legal aspects of changes in the technologies of recording, understanding and applying provisions of law. In the context of discussions on algorithmization of rulemaking, the formation of a digital legal language is especially important.

Many corporate lawyers are already using automation and introducing various technologies in their work. Like email and the internet changed the way law firms work, the introduction of AI is bound to push the boundaries of law.

In Russia, often used technologies include electronic documents (for instance, electronic employment history records [trudovye knizhki] have been in use), legal documents automation software, smart contracts, etc.

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[22] The State Duma's lawmaking digital platform (https://sozd.duma.gov.ru), the official portal of legal information (http://pravo.gov.ru/), the information portal on regulatory impact assessment (http://orv.gov.ru), the federal portal of drafts of laws and bylaws (https://regulation.gov.ru/).

[23] Available at: URL: https://www.economy.gov.ru/material/news/v_pravitelstve_utverdili_koncepciyu_razvitiya_tehnologiy_mashinochitaemogo_prava.html (accessed: 02.12.2021)

Lawmaking, however, is a complex, multi-layered process. In view of this, the question of using the new technologies for solving non-standard lawmaking problems remains relevant.

The current legislation already contains provisions regarding the integration of provisions of law into the functionality of information systems offering various automatic services.

Thus, the amendment[24], introduced in late 2020, to Federal Law No. 210-FZ (July 27, 2010) "On Organizing the Provision of Public Services at National and Municipal Levels," as well as the new rules for developing and approving administrative procedures for public services[25], contain provisions for making rules of administrative procedure machine readable. The law also provides that information about public services converted to a machine readable format can be used for automated implementation of a set of rules of administrative procedure when these rules come into effect.

Pursuant to the above mentioned provisions, the federal Ministry for Digital Technology, Communication and Mass Media [MinTsifry] is now completing the creation of the administrative rules automation software[26]. Unlike ordinary rules of administrative procedure, digital rules are developed and approved in the digital rules automation tool. The provision of services in this system is centered on information, rather than documents; and this process would be customized thanks to a choice of options. Developers of the digital rules system build internal capabilities to customize services for different groups of applicants.

The plan is that when particular services will be provided in a format adjusted to their users, and the choice of formats will be made based on the users' personal data gleaned from their member areas on the public services portal. So, the list of documents, the payment amount, the deadline for the provision of the service, as well as reasons for turning down the request for the service, would be determined individually for every applicant. The

[24] Federal law No. 509-FZ (Dec.30, 2020) "On Introducing Amendments to Some Legal Acts of the Russian Federation" // Compendium of Laws of the Russian Federation. 2021.Jan.4. No. 1 (part 1). Art.48.

[25] Governmental Order No. 1228 (July 20, 2021) "On Approving the Rules for Developing and Approving the Rules of Administrative Procedure for Providing Public Services, on Introducing Amendments to Some Legal Acts of the Government of the Russian Federation, and on Repealing Some Legal Acts and Some Provisions of Legal Acts of the Government of the RF" // Compendium of Laws of the Russian Federation. 2021. Aug.2. No. 31. Art. 5904.

[26] Available at: URL: https://kcr.gosuslugi.ru/kcr (accessed: 02.11.2021)

customized menu-based provision of services would ensure that demands from each category of applicants are clear and easily understandable.

Moreover, the use of this system is certain to reduce the time necessary for developing the digital rules themselves. The principle of one-off input of data, a wide use of reference tools, and control over format and logic are certain to reduce the amount of errors. The system's capabilities and the new rules are good not only for developing, but also for cross-agency feedback, expert evaluation and approval, and even for the official registration of a legal act at Russia's Justice Ministry.

Another track in the creation of e-government is directly related to the oversight reform. Pursuant to Federal Law No. 247-FZ (July 31, 2020) "On Mandatory Requirements in the Russian Federation," which requires a systemic approach, there are efforts underway to create a register of mandatory requirements, which would contain a list of such requirements, information about laws/bylaws that establish them, their time in force. In pursuance of the mentioned provision, the Governmental order No.128 (February 6, 2021) "On Approving the Rules for Compiling, Maintaining and Updating the Register of Mandatory Requirements."

The role of pioneering the use of the Register is assigned the ministry of labor, the ministry of construction, the Russian Federal State Agency for Health and Consumer Rights (Rospotrebnadzor), and Russian Accreditation (Rosakkreditatsia). Presently these agencies are feeding data into sections reserved for them and already added to the register more than 120 thousand requirements. This is an immense amount, considering that so far there have been only five agencies using the register. The ministry of labor had already added more than 110 thousand requirements. Labor protection rules are enshrined in quite lengthy industry-specific documents, so requirements outlined in them need to be revised.

In addition to the content of mandatory requirements, contributors to the register must add at least 20 items for each requirement: information about the requirement's target group; the requirement's in-force period and status; sanctions for non-compliance; a large volume of additional information (check lists, reports from oversight agencies on progress towards goals pursued by particular requirements, names of governmental agencies responsible for issuing non-compliance reports and sanction orders, etc.).

The creation of the register of mandatory requirements has highlighted the problem of blanket/referral provisions. Without systematizing in the

manner described, one has no way of knowing how many requirements are established by a particular legal act. A mandatory requirement established by a legal act can reference another act, which contains 500-600 requirements in relation to a particular type of activity.

Such register of mandatory requirements would ensure mutual connection with information systems of governmental oversight agencies and with the integrated register of monitoring measures. When the object and findings of a monitoring measure are recorded, the system will show which law/bylaw, which provision, which clause has been breached. This is how statistical data on the most often breached requirements would be compiled. This statistics would be based not on reports of oversight agencies containing information about the most common violations but on an official aggregation of statistical data from a single register of monitoring measures.

Later, at a stage of pre-trial appeal, the single register will provide information as to which requirements complainants ask to review — in other words, which requirements are most problematic. This information will help identify reasons why particular requirements are either ignored or appealed. Requirements under appeal can be difficult to accomplish, redundant, unclearly formulated or have some other problems.

The Concept of Development of Machine Readable Law Technologies[27] (hereinafter referred to as the Concept) is a blueprint for the development of electronic lawmaking platforms.

According to the Concept, machine readable law is a compilation of legal norms, based on the ontology of law and expressed in a formal language (including a language of programming, a markup language), as well as machine readable law technologies (instruments for applying such regulations, such as the requisite information systems and software).

Machine readable law can include a set of legally important metadata necessary for formulating and describing regulations in quantities sufficient for handling practical tasks, as well as algorithms applicable to particular formats of handling legal documents or regulations.

One of the important conclusions in the Concept is that machine readable legal regulations require a specially adapted legislation because it is

[27] Approved by the governmental commission for digital development and the use of information technologies for improving living standards and business environment. The text is on the site of Ministry of Economic Development. Available at: URL: http://www.economy.gov.ru (accessed: 6.10. 2021)

very difficult to make ordinary laws/bylaws machine readable. In view of this, of special importance is a Russian software evaluating complexity of sentences in the texts of legal acts adopted in Russia [Kuchakov R., Saveliev D., 2020:17].

It is noted in the Concept that obstacles to the use of machine readable law technologies generally include sheer novelty of such tools, a lack of standardized approaches to their use, and lawyers' lack of skill in using machine readable law.

The main challenge in introducing machine readable law is finding programming languages suited for the task and creating specialized information systems to make legal regulations machine readable.

The Concept references the following types of software:

software for processing natural language (capable of analyzing and creating logically consistent texts; such systems are used in chat bots);

software for processing knowledge graphs (capable of extracting facts from text and creating new logical statements the same as the human mind can; capable of storing and systematizing information; this software is used for training AI);

software for coding legal norms as a mathematical model (various markup languages; the systems are used to electronically process legal regulations);

software packages for automating legal transactions (used for autofill in legal documents, compiling documents using document automation tools, searching and systematizing laws/bylaws);

technologies of compiling and analyzing machine readable records of account (information databases; they reduce the volume of accounting in situations when the same information has to be submitted to regulators several times for different purposes).

As a review of international practices included in the Concept shows, technologies of machine readable laws have not been widely used across the globe so far.

## Conclusion

To sum it up, Russia presently has quite a big potential for introducing new information and digital technologies in lawmaking. The automation of rulemaking, the use of electronic legal information systems, the creation

of legal information portals will undoubtedly contribute to improving and optimizing the processes of developing and adopting laws/bylaws.

The procedures for public debate on drafts of laws/bylaws have to be significantly revised. The first stage — setting up a platform as such for the public forum — is already finished. The next step is using information and digital technologies to put in place tools for qualitative processing of comments, automatic analysis of suggestions, and production of final versions of documents convenient for lawmakers.

One of the important areas is automation of law practitioners' "workplace." In this area, the things to do include ensuring fully-featured electronic exchanges among agencies; establishing a paperless electronic flow of documents and a single mechanism for coordinating lawmaking efforts among agencies; creating general governmental information resources; introducing software to simplify and automate routine, recurrent processes (document automation tools, document generation services, search engines, automated processing and analysis of documents, the use of cloud technologies for remote access, the creation of telecommuting jobs, etc.).

Digitized lawmaking would prevent not only grammar mistakes but also replication of provisions from other laws/bylaws; it would identify in timely manner flaws in bylaws and ensure consistency of legal terminology. The use of digital services in rulemaking will reduce administrative costs of, and the impact of human factor on, the creation of texts of laws/bylaws; it will reduce the routine volume of work for the federal executive agencies and eliminate certain procedural obstacles that arise in the course of coordinating cross-agency feedback.

When digital services are integrated in lawmaking to the maximal possible extent, we shall come close to achieving the goal of creating a single governmental system of developing and adopting laws/bylaws which would be used by all lawmakers.

The ultimate objective of the lawmaking digitization project which scholars and practitioners, lawyers and experts on information technologies have to achieve is developing and introducing technologies of machine readable law.

However, before human lawmakers are replaced with AI-based software, one should pay attention to digital technologies already available, in order to start simple.

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