Features Of The Formation Of Digital Platforms

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Abstract

This article discusses the formation and development of digital platforms. The concept of a digital platform and its types are given. The classification of existing platforms into instrumental, infrastructural and applied ones is considered. The established practice allows us to divide them into commercial and state. The commonalities in their activities are indicated and the differences are highlighted. The fundamental differences between public and private platforms are given. The conclusion is made about the task of developing digital platforms in the world.

Keywords: intellectual property, codification, digitalization, digital platform, digital transformation

Introduction

Digitalization acts as a global trend and "passes through" all key areas in the economy and public administration. It is safe to say that in addition to digitalization of certain spheres of public life and economic relations, it is assumed that the most complete transition to the implementation of the concept of "The State as a digital platform" as a whole is expected.

In the Strategy for the Development of the Information Society of the Russian Federation for 2017-2030, the digital economy is defined as "economic activity in which the key factor of production is data in digital form, the processing of large volumes and the use of the results of analysis of which, compared with traditional forms of economic activity, can significantly increase the efficiency of various types of production, technologies, equipment, storage, sale, delivery of goods and services"[1].

At the same time, activities for the development of digital services and platforms, being innovative, can bring both positive and negative aspects to established public relations.

Therefore, the purpose of this article was to identify the features of the formation of digital platforms and highlight the factors influencing this process. To solve it, the following tasks are solved:

1. Consider the concept of a digital platform.

2. Highlight the existing types of digital platforms.

3. To compare public and private (commercial) digital platforms. Identify differences.

4. To identify the problems of development and functioning of digital platforms in different countries.

To show the importance of digitalization for the sphere of intellectual property, state regulation and management of this sphere as a key factor of development.

The methodological basis of the work was statistical and analytical methods, including data collection, comparison, analysis and development of proposals to eliminate the identified problems.

It is worth first defining the concept of a digital platform. Rostelecom gives the following definition of a digital platform:

"A digital platform is a system of algorithmized mutually beneficial relationships of a significant number of independent participants in an economic sector (or sphere of activity) carried out in a single information environment, leading to a reduction in transaction costs through the use of a package of digital technologies for working with data and changing the division of labor system." [2]

The ISO standard ("Guidelines and Structure for the Exchange Economy") gives a similar definition of a digital platform, highlighting that it is "an information technology mechanism that facilitates the possibility of transactions between owners of goods and services and those who want to use these goods and services." [3,4]

Digital platforms can be commercial and public [3]. State platforms differ in that the state becomes the main provider of services, and the state body bears full responsibility for the activities of such a platform. If another participant of the platform is responsible, despite the participation of the state in its work, the platform is not state-owned.

Digital platforms together with digital data are the main driving forces of the value chain. The ability to collect, use and analyze data is of great importance, since after the analysis, it is monetized. And the scale of this process is growing enormously. Internet Protocol traffic "has grown from about 100 gigabytes per day in 1992 to over 46,000 gigabytes per second in 2017; by 2022, global Internet Protocol traffic is projected to reach 150,700 gigabytes per second"[5]. The development of platforms provides their owners with huge advantages in the data economy. Evidence of this may be that "seven of the eight largest companies in the world by market capitalization use platform-based business models. Digital platforms serve as mechanisms for establishing communication between multiple parties for interaction on the Internet."[5]

Public and private platforms are based on ensuring that the interaction between service providers or products and their consumers is as accessible, faster, and more efficient as possible. However, they have fundamental differences.

One of them is that commercial platforms set the main task of maximizing profits and market share, while government platforms strive to ensure equal opportunities and access for all users to social innovations. That is, commercial and government platforms have different approaches to assessing network effects. Another difference is the use of different mechanisms for monetization of solutions and services offered by the platform.

There are differences in the scale, speed of platform design and bringing projects to market. State-owned companies enter the market more slowly due to various restrictions, both administrative and legislative, on the implementation of such activities.

We add to this the presence of organizational barriers in public authorities when creating platforms (the organizational structure of state bodies, lack of coordination of efforts by various departments and departments, lack of experience of employees, etc.)

Another difference is the different conditions for entering the market for the functioning of digital platforms. For commercial projects, there are high entry barriers (you have to compete with already

functioning platforms with established relationships with suppliers and consumers), while for public ones they are much lower (their creation leads to the formation of common data exchange standards, with the help of which whole ecosystems can be created further).

An important difference between government and commercial platforms was that there was a different interaction with the participants of the platforms. For government it is mandatory, when such a platform is introduced, participants are added automatically, and for commercial, attracting new participants requires significant spending and effort.

All digital platforms can be divided into three types: instrumental, infrastructural and applied.

Tool platforms, whose participants are the developers of the platform and the developers of the products offered to it, create tools (software or hardware and software) for information processing. An example would be WebGL, iOS, etc.

Methods

The study is based on data from 2019 to 2021, including use of statistical data studies in the Russian the formation of digital platforms usage field. In the preparation of the material an author used methods of analysis, comparison, conclusion, generalization.

Results

Infrastructure platforms form an ecosystem of "informatization market participants, the purpose of which is to accelerate the introduction to the market and provide consumers in economic sectors with solutions for automating their activities" [5]. Their main participants may be information providers, platform operator and developer, IT service developers, and IT service consumers. [3] As an example, we can cite such platforms as Yandex Maps, Google Maps, etc.

Application platforms are aimed at making an exchange between participants of a given market. The participants of such platforms are suppliers of goods or services and production resources; consumers; platform operator and regulators. An example could be platforms such as UBER, Yandex Taxi.

The revolution in creating new value on digital platforms has led to the fact that "several global firms in the United States of America, as well as China, account for 90% of the market capitalization of the 70 largest global digital platforms. The share of Europe is 4%, and the share of Africa and Latin America combined is 1%. On seven super platforms, namely Microsoft, followed by Apple, Amazon.com Alfabet (the parent company of Google), Facebook, Tencent Holdings and Alibaba account for two-thirds of the total market value." [5] This suggests that most of the wealth generated is concentrated in the hands of a small number of countries, organizations, and individuals, which undoubtedly leads to problems in different countries. These problems are especially relevant for developing countries. These include:Отличиерынковтехнологийпоемкостиитребованиям, предъявляемымкним.

1. Different opportunities for access to new technologies due to differences in the baggage of knowledge, in the number of qualified personnel, in the cost of labor, in access to sources of financing.

2. Different rates of digital transformation.

3. Changing the value chain and the emergence of new channels of value creation and structural transformation

4. The dominance of global digital platforms capable of maintaining control over the received data.

5. The difficulties of developing and competing their own platforms of developing countries with global players.

All this leads to increased concentration and consolidation of competitive opportunities by digital platforms, which in turn can increase inequality between and within countries, violates the proportions of sustainable development of society. [3,5] Therefore, the main task of the development of platformization in the world is to equalize these imbalances so that everyone equally has the opportunity to use the advantages and potential of the digital economy.

Considering the issues of integrating digital platforms into the field of intellectual property, one can pay attention to the model of relations between Rospatent, applicants and their representatives, called the "IP Integrator Model".

Discussion

Here, the initial digital architecture in relation to its product is built by the business and includes such competencies as the development of internal platforms, including the development of local documentation, maintenance of an intelligent product, implementation at all stages of its life cycle. In this case, we are talking about the product Owner, who is directly interested in interim measures to support the intangible component of projects – goods, works, services. The role can be performed both independently by the company's employees and through the specialists involved, however, it is worth noting the need for collaboration - professionals from both the IT (IT) industry and the intellectual property (IP) sphere. Outside of digital solutions, the modern implementation of any business process is hardly possible, since ubiquitous automation is beginning to dominate, including when interacting with the state.

The "IP coordinator" model is no less functional. Here, the traditional locomotive is the state, which determines the relationship of all participants involved in the creation, protection, protection, promotion, maintenance of the results of intellectual activity (equated means of individualization) and rights to them. The state builds system connections by the method of point-based decision-making on the vectors of the ratio of the participants in the relationship, provides a favorable legislative "climate" by unifying, improving and revising the legal framework governing the sphere of intellectual property – for example, its codification.

It should be noted that Rospatent [6] has actively engaged in the digitalization process, presenting new electronic services that allow interacting with the Patent Office in a simpler and more accessible form on the principle of a single functional platform. At the same time, projects under development related to the use of artificial intelligence technologies, neural networks, object recognition systems will contribute to a significant improvement in the quality of expertise, the possibility of identifying risks or potential violations, speeding up administrative procedures, transparency of interaction with expert divisions of the patent office, and will also ensure the attractiveness of the system as a whole for the end user-the user of Rospatent's public services.

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