

The Scorecard System for Performance Evaluation of Social Network Management at Work with Stakeholders

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Abstract. Stakeholder Theory argues that when achieving the objectives of an organization, the diverse interests of different stakeholders should be taken into account. Therefore, among the most acute problems of modern management are the use of social networks in the public communication for organizing interaction with stakeholders. This article considers in detail the problem of assessing the effectiveness of the social network management of such a rip. Despite the presence of a large number of monitoring methods, as well as professional network analytics tools, most of them are applicable to a limited number of social networks and are focused mainly on the tasks of marketing promotion. The authors proposed and tested a universal system of indicators based on the pressure-state-response model. Each of the given indicators reflects a specific measured characteristic of the state of the analyzed account, public page or specific post. It is possible to define and fix them both by means of standard functionality, represented by network platforms, and using specialized SMM services. However, it is worth noting that a number of characteristics are available only to resource administrators. In this regard, the most appropriate application of this monitoring method seems to be on a systematic basis, taking into account the availability of direct access to all the target characteristics.

1. Introduction

Modern organizations are expected to go beyond the traditional focus on their specific corporate goals and to appeal to the interests of other groups. The challenges that institutions and enterprises of any legal form face today require continuous dialogue and constant partnership with representatives of stakeholders based on transparency standards. This is possible when organizing interaction in the public communication space, which is a combination of media channels that unite the subject of management and stakeholders for the purposes of dialogue and partnership on issues of public interest. The main objectives of public communications are to ensure transparency (openness, accessibility and reliability of information), coordination of the positions of stakeholders; coordination of their activities.

2. The scientific significance of the issue with a brief review of the literature

Stakeholder Theory argues that when achieving the objectives of an organization, the diverse interests of different stakeholders should be taken into account. In particular, Russell Ackoff, who represented the organization as an open system, believed that many social problems could be overcome through the reforming of the major institutions and establishment of an effective interaction of "stakeholders" in the system [1]. The modern form of the "concept of stakeholders" has been spreading since the mid-80s of the 20th century, after the publishing of the work of Edward Freeman "Strategic management: A stakeholder approach [4]. In this work the author introduces the concept of a "stakeholder", as a set

of legal entities and individuals who are influenced by the decisions and actions of the subject of management or themselves have an impact on it. The stakeholders may have various relationships that do not always have the character of cooperation, coincidence of interests, and may be competitive. However, all stakeholders can be considered as a single contradictory entity resultant of interests of different parts of which will determine the development trajectory of the organization.

In recent years, representatives of the business and scientific community are increasingly concerned about the possibility of interacting with the company's shareholders, called "stakeholder management"[2]. This practice of interaction with stakeholders is increasingly gaining the popularity not only among companies, but also non-profit organizations, as well as state and municipal institutions. In particular, in frames of the concept of management of public values (A.V. Volkova [7], R. Rotberg [5], G. Stoker [6]).

In the everyday life of the majority of Russians, social networks play a significant role, becoming a platform for public communications. The use of social media makes it possible to reach an audience that is difficult to reach with the help of classical mass media. Having emerged as a tool for the interpersonal communication, social networks have become one of the most important representation and image tools that have a significant impact on the audience consisting of Internet users. Communication through social media differs radically from traditional mass-media communication, since they provide a high level of personalization and personal responsibility. The main advantage of social media technologies is their interactivity contributing to enhancing interaction with stakeholders.

Having in mind the high popularity of social media and the functioning of the public communication system, for the most part, it was in the network space where we raised the problem of evaluating the effectiveness and productivity of interaction between the management subjects and stakeholders in the social network space of public communications [8].

An important problem when using multimedia Internet platforms is the actual absence of a generally accepted system of indicators for assessing the performance of a subject of management in social networks. At the same time, it should be noted that currently there is a number of similar indicators in commercial SMM management, however, their full transfer to the sphere of public communications is not possible due to the direct targeting of marketing goals. We can name the work of O.G. Filatova, E.S. Shabanova, as a successful pilot project, which analyzed the activities of government representatives in the social network space based on the following indicators: the number of subscribers, the activity of a blogger, the subject of posts, the average number of comments to one post, interaction with the audience, the quality of the blog [3]. Almost every social network has specific platform features, the presence or absence of which can have a significant impact on the final result and, in practice, makes it difficult to form a unified set of indicators.

3. Practical development and application results

Having in mind the specifics of network space of public communications, a system of indicators is proposed based on the pressure-state-response model, which allows assessing the media impact of the control subject, changes and processes that occurred directly in the space after the media impact on them, as well as the reaction of users of social network platforms to this impact. At the same time, the media impact is understood as the purposeful production and distribution of information (informational message), which has a direct impact on the sociocultural regulators of human behavior.

Considering the presented model in relation to the wide spread group of estimation indicators on the basis of qualitative and quantitative characteristics, its more universal character is worth noting (Table 1).

When measuring indicators, both internal social network counters and additional metrics provided by third-party resources can be used. Most indicators of internal statistics are able to assess the visits, audience coverage, gender and age structure of users, devices used, distribution geography and to track feedback indicators. Additional professional network monitoring resources, such as Yandex Metric, Google Trends, LiveDune, are used to assess the effectiveness of the joint use of social networks and other sites. In particular, they can be used to assess the number of transfers, their quality and

depth, time of use of a resource and identify the most viewed sections. In addition, considerable attention should be paid to IT surveys, which allow to obtain a subjective opinion of a network user, that is, his attitude to this situation, vision of it. We shall note that in some cases objective indicators (for example, the number of page visits) can be recorded even if the user of the network does not perceive this resource as popular (the user visits some, but considers others as popular). But at the same time, we note, the use of IT-surveys will be justified to a greater extent for the accounts of social and political leaders, which occupy leading positions precisely on objective indicators.

Table 1. Description of indicators of the pressure-state-response indicator system

	Indicators	Description
Pressure	Indicator of posting activity (posts).	Quantity and quantity change of published material
	Presentation Activity Indicators	The number of different types of actions of a leader of public opinion to attract the attention of the target audience
	Indicators of artificial raising of popularity.	Number of added followers (views) of the target account or group
	Indicator of presence in a social network*	Evaluation by the users of the social network of the presence of the leader of public opinion
	Indicator of dynamics of number of users	The number and quantitative changes in the target audience of users in each specific account or group.
	Indicator of the dynamics of the number of views of content.	Number and quantity changes in the viewing of target content by the audience
	Indicator of the dynamics of gender-age structure of the audience	Changes in the distribution of the audience of a resource on gender and age
Condition	Leader account popularity indicator *	Evaluation by users of the social network of the popularity of the opinion influencer account
	Confidence Indicator *	Evaluation by users of the social network of confidence in the leader's account
	Indicator of new users attraction	The number of new unique Internet users who visited the target resource
Re-sponse	Indicator of interest in the promoted content	the number of users transfers to the target page from other resources.
	The indicator of changing depth of the page viewing	the number of user views of the content of the target resource per one session.
	Indicator of users feedback.	The number of manifestations of user likes or dislikes, reposts and comments.
	Indicator of users dislikes.	The number of special actions to limit the distribution of specialized content
	Devirtualization indicator*	Evaluation by users of the social network of content discussion level in the community

Note * marked Indicators are formed on the basis of IT surveys in social networks.

The group of indicators of "pressure" includes parameters aimed at analyzing the media impact on the network space of public communications. The following indicators can be highlighted: posting activity; presentation activity; artificial popularity adding; general presence in social networks.

From the point of view of replication of target content, indicators of posting and presentation activity, which in practice reflect the quantitative change of the posted material, as well as the implementation of special actions by the subject of management to attract the target audience, are among the "aggressive" technologies. Exactly these tools serve to the direct filling of the information space (pressure).

The use of artificially popularity adding is usually short-termed. Modern SMM-management tools allow to artificially increase almost any of the existing indicators of social media, ranging from the usual "likes" and ending with viewing the target content. For a standard user, such an adding of statistical indicators is not noticeable, but experienced experts are able to identify it without much difficulty.

The indicator of presence in a social network is given as an assessment by social media users of the level of presence of an organization in a social network. It is a necessary supplement to objective indicators of pressure, since it makes it possible to assess how "wide-spread" is the one or another subject of management in social networks.

One of the results of the pressure implemented is the change in the state indicators of the network space. This group has a more generalized nature, on the basis of which is applicable directly to the subjects of the social network space. From the standpoint of assessment of the activities of the socio-political leader, the following indicators can be distinguished: the dynamics of the number of users; the dynamics of the number of content viewing; the dynamics of the age and gender structure of the audience; leader account popularity; level of confidence.

The first two indicators are purely quantitative in nature and are actually aimed at tracking changes in the level of audience coverage. Changes in the distribution of user characteristics, as well as estimates of the parameters of popularity and level of confidence are more particular and are usually monitored during large information campaigns for the further implementation of subsequent targeted influence.

The group of response indicators serves as a summary of tracked characteristics that actually reflects the audience's perception of the implemented pressure methods. The following indicators could be named: attraction of new users; interest in replicated content; changes in the depth of viewed landing pages; feedback from users; negative user reaction; devirtualization.

As a rule, increasing the number of unique visitors to a landing page / account is one of the priority goals of most information campaigns. Accordingly, if Internet users approve the activities of a socio-political leader, then, most likely, they will "subscribe" to updates of his/her main network resource. A similar reaction is reflected in the number of user transfers made to the landing page, the number of views of the content, as well as the actual manifestation of user likes or dislikes (likes, dislikes, reposts).

A special place in this list is occupied by the indicators of negative reaction, which are expressed in performance by users of actions aimed at restriction of the distribution of content related to the activities of the leader of public opinion. It is worth noting that the "claims" can be applied as a tool of pressure directly on the target resource, doing the replication of information, which can lead to its total banning.

Among the factors confirming the effectiveness of the applied methodology, the ability to track key indicators in dynamics and taking into account the characteristics of specific social networking platforms shall be named. In particular, individual characteristics may be more significant within one social network and less significant within another. For example, VKontakte and Facebook significantly limited the importance of posting tools, using the functionality of the so-called "smart news feed". If previously users could view all interested content of target resources on the basis of historical parameters, now social networks actually prioritize the displaying of specific information. In the Twitter and

Instagram such algorithms are used exclusively by the user's decision, which only increases the significance of the quantitative indicators of content placement.

The ability to accurately measure the "pressure-state-response" indicators creates all the necessary conditions for processing and analyzing the data obtained, what can result into the formation of reliable forecasts for the implementation of media activities of opinion leaders in social networks. Based on the availability of statistical indicators of the distribution of homogeneous content, it becomes possible to improve the methods used for its replication, which ultimately can lead to an increase in the coverage of the target audience and increase the authority of the socio-political leader in the social network space.

It should be noted that the universal nature of the presented system of indicators suggests the possibility of its use both within different social networking platforms and taking into account the specific activities of the subject of management that owns the accounts (political party or public organization; commercial structure; state or municipal authority; individual businessman or official, etc.). To check the pressure-state-response model, a comprehensive monitoring of the network of official accounts of the Government of the Russian Federation, the Civic Chamber of the Russian Federation, and Sberbank of Russia was conducted for a fixed period of time from February 1 to April 30, 2019. These structures were chosen due to a number of conditions:

- subjects are leading / among the leading in their field of activity;
- subjects use social media to solve various media tasks;
- they are represented on different social media platforms;
- regular content update;
- subjects regularly generate their own original content.

We emphasize that each of the subjects of monitoring uses social media to solve fundamentally different media tasks, which is reflected both in the generated content and in the applied methods of social network promotion. In particular, the state structures prioritize the timely notification of citizens about current changes in the sphere of state and municipal administration, while public organizations use social networks to organize direct communication with citizens to discuss acute social problems, and the subjects of the commercial sector use them to promote own products and services.

According to the monitoring results, the most popular social networks were VKontakte and Twitter. Notable is that these platforms have a universal functionality for the information promotion and are most often used, including by the media. Less wide-spread, but no less popular among the users, were the Odnoklassniki, Facebook and Instagram.

The analysis of the statistics obtained from the accounts of the Government of the Russian Federation, the Civic Chamber of the Russian Federation and Sberbank of Russia using the pressure-state-response model revealed the presence of active media pressure on the audience. At the same time, the generated material has of high quality, is adapted to the specifics of individual network platforms and contains graphic and video content that attracts attention. Sberbank accounts also recorded the use of advertising methods of promotion, which allowed the promoted posts to achieve a much larger audience coverage. In total, all subjects generated 1,895 units of media messages (excluding individual responses to users in the comments) in the given period, and the accounts of the Government of the Russian Federation (784 units) and the CC of the RF (782 units) were most active. While the most "productive" platforms were Twitter and VKontakte, the least was Instagram.

An important component of the presentational activity of the studied subjects is the presence of original and branded content, as well as a reference to its own information resources. The most diverse and eye-catching material is presented in Sberbank accounts, where, in particular, there are polls and surveys, videos, and the communication with the audience is interactive.

It is important to note that the adjustment of posts for the specifics of each individual social media platform predetermines the final reaction of users. Thus, a "viral" post from VKontakte or Facebook may literally not fit in the Twitter format, where messages contain only 280 characters, while in microblogs widely use direct links to the source of information, and the links posted in Instagram will not be clickable.

The final response indicators for the impact performed are expressed both in the form of a response to the content (repost, “like”, comment, claim), as well as indirectly to the source of information (subscription / unsubscription, following the link in the publication). The results of our three-month monitoring show that the greatest interest among users was caused by posts in Sberbank accounts (338,752 responses), followed by the accounts of the Government of the Russian Federation (141,906) and the Civic Chamber of the Russian Federation (14,528) with a significant gap. As mentioned earlier, such a significant leadership of the subject from the commercial sector is connected, among other things, with the use of advertising promotion methods.

Analysis of the final response indicators also allows us to determine social media platforms, the use of which is the most promising and reasonable for each of the structures. To do this, we will compare the average level of user reactions to the posts in each specific social network (Table 2).

Table 2. The ratio of response indicators to the number of posts of accounts of the Government of the Russian Federation, the Civic Chamber of the Russian Federation and Sberbank of Russia in various social networks

Structure	Social network	Month	Average posting re- sponse indicator
The Govern- ment of the Russian Fed- eration	VKontakte	February	229.3
		March	200.2
		April	172.9
	Twitter	February	70.5
		March	40.7
		April	40.5
	Instagram	February	1,273
		March	1,865.6
		April	1,579.9
The Civic Chamber of the Russian Federation	VKontakte	February	23.9
		March	32.9
		April	21.9
	Twitter	February	2.9
		March	7.9
		April	4.6
	Facebook	February	15.5
		March	21.8
		April	18.4
Sberbank of Russia	VKontakte	February	992.2
		March	1,135
		April	2,362.9
	Odnoklassniki	February	414.9
		March	928.1
		April	1,252.1
	Twitter	February	34.4
		March	83.6
		April	51.5
Facebook	February	775.4	
	March	112.9	
	April	463.3	
Instagram	February	2,493.3	
	March	2,577.3	
	April	2,448.2	

The table shows that the greatest resonance among the audience of the accounts of the Government of the Russian Federation found the posts in Instagram, CC of the RF - in Facebook, Sberbank - in Instagram, and VKontakte. The lowest response among all subjects was recorded in the microblogging service Twitter, however, the average number of posts in this resource exceeds that in other social networks. Final conclusions on the effectiveness / inefficiency of the implementation of goals of the studied subjects within specific network platforms can be made if there is information available about the average number of views of each post, but they are not publicly available, and network monitoring tools can provide distorted information.

The presence of user comments and the nature of interaction with the audience through this network promotion tool was separately studied. As in the previous case, Sberbank accounts occupied the leading position (31,521 comments), followed by the Government of the Russian Federation (9,434) and the CC of the Russian Federation (2,514).

This result can be considered logical in view of the active network communication organized by the bank with users, while the SMM specialists of the RF Government have even completely denied the users the option to comment the posts in VKontakte. The most commented platforms were VKontakte, Facebook and Twitter.

Thus, the results of the analysis of media impact using the pressure-state-response system of indicators allows to draw the following conclusions:

1. The most effective tools for network promotion of Sberbank of Russia in official accounts find application in Instagram, VKontakte and Odnoklassniki. It should be borne in mind that the final assessment of the effectiveness of ongoing media campaigns will depend, among other things, on the financial investments involved, since the use of methods of advertising promotion were recorded for this subject.

2. In our opinion, the final assessment of the effectiveness of actions in social media accounts of the Government of the Russian Federation must also be carried out from the standpoint of fulfilling the goal of informing citizens about current ongoing activities. Despite the fact that Twitter posts received fewer user feedbacks, their total number is more than 2 times higher than the number of posts in other social networks combined.

3. The least popular among users, and directly the subject of network promotion, was the account of the Civic Chamber of the Russian Federation on the social network Twitter.

4. Conclusion

Thus, the proposed system of indicators based on the pressure-state-response model allows us to evaluate the information impact by the target accounts / publics on the network space of public communications, changes and processes directly in the space after the media impact on them, as well as to track the reaction of users of social networking platforms to this impact. The system of indicators is based on both objective indicators obtained using social network metrics and general Internet metrics, as well as subjective indicators obtained in the process of IT surveys in the network space.

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